United States Environmental Protection Agency

Summary of Public Comments and Responses for:

Commercial and Industrial Solid Waste Incineration (CISWI) Rule

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February 2011

Summary of Public Comments and Responses for: Commercial and Industrial Solid Waste Incineration (CISWI) Rule

U.S. Environmental Protection Agency
OAQPS/Sector Policies and Programs Division
Natural Resources and Commerce Group (E143-03)
Research Triangle Park, North Carolina 27711

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FOREWORD

This document provides EPA's responses to public comments on EPA's Proposed Commercial and Industrial Solid Waste Incineration (CISWI) Rule. EPA published a Notice of Proposed Rulemaking in the Federal Register on June 4, 2010 (75 FR 31938). EPA received comments on this proposed rule via mail, e-mail, facsimile, and at three public hearings held in Arlington, Virginia on June 15, 2010 and in Los Angeles, California and Houston, Texas on June 22, 2010. Copies of all comments submitted are available at the EPA Docket Center Public Reading Room. Comments letters and transcripts of the public hearings are also available electronically through *http://www.regulations.gov* by searching Docket ID *EPA-HQ-OAR-2003-0119*.

Each section of the document provides the verbatim text of comments extracted from the original letter or public hearing transcript. For each comment, the name and affiliation of the commenter, the document control number (DCN) assigned to the comment letter, and the number of the comment excerpt is provided. In some cases the same comment excerpt was submitted by two or more commenters either by submittal of a form letter prepared by an organization or by the commenter incorporating by reference the comments in another comment letter. Rather than repeat these comment excerpts for each commenter, EPA has listed the comment excerpt only once and provided a list of all the commenters who submitted the same form letter or otherwise incorporated the comments by reference in table(s) at the end of the document.

EPA's responses to comments are generally provided immediately following each comment excerpt. However, in instances where several commenters raised similar or related issues, EPA has provided a single response after the first comment excerpt in the group and referenced this response in the other comment excerpts. In some cases, EPA provided responses to specific comments or groups of similar comments in the preamble to the final rulemaking. Rather than repeating those responses in this document, EPA has referenced the preamble.

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1.0 OUT OF SCOPE COMMENTS ON OTHER RULES

1.1 Out of Scope: Non-Hazardous Solid Waste Definition

Commenter Name: Sherilyn Coldwell
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0074
Comment Excerpt Number: 2

Comment: I encourage EPA to discard its overly narrow definition of "solid waste" for purposes of these rules, which allows many waste-incinerators to escape the stringent regulations prescribed by the Act. In light of the health dangers posed by waste incineration, EPA should ensure that all facilities burning waste are subject to the most effective available controls.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Sarah Markham
Commenter Affiliation: Southern Company
Document Control Number: EPA-HQ-OAR-2003-0119-0073.1
Comment Excerpt Number: 2

Comment: Additional Time Necessary to Evaluate the Impact of Proposed Rules on Biomass Sources

Sources with biomass-fired units or planning construction of new biomass-fired units have been subject to considerable uncertainty regarding the applicability status of the IB-MACT and CISWI Rules. This uncertainty is largely due to the fact that EPA had not finalized a revised definition of non-hazardous solid waste prior to proposing these rules. While the proposed DSW Rule may clarify applicability [Footnote: Such units would be affected under IB-MACT rather than CISWI since unadulterated woods would be classified as "traditional fuels" rather than solid waste] for units burning clean woods, many units that burn or plan to burn adulterated woods may be affected under the CISWI Rule. The uncertainty for these sources still remains and is further complicated by EPA's proposed alternative definition of non-hazardous waste, which may increase the number of CISWI-affected units.

For biomass sources and the numerous industrial boilers that co-fire potentially non-hazardous solid waste, the implications of the proposed rules are significant and require careful evaluation in order to develop the best long-term strategy for the facility. This is particularly true for sources that are considering the construction of new biomass-fired units, as the classification could determine overall feasibility of the project.

Unfortunately, the proposed rulemaking requires that these sources evaluate all four rules simultaneously since the implications are interrelated. This raises an additional level of complexity by requiring sources to develop a number of contingencies in their evaluation that would not have otherwise been necessary if the rules had been developed sequentially. At the very least, EPA could have minimized this effort by finalizing the DSW rule before proposing the other rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Shirley Hao
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-0072
Comment Excerpt Number: 2

Comment: I am deeply concerned, however, that your agency's proposed Solid Waste Definition Rule will allow untold numbers of facilities across the United States to burn scrap plastics, used chemicals, and other industrial wastes without emission controls, air monitoring, or reporting requirements. This will create unacceptable risk for communities across the country, who may be exposed as a result of this rule to unconscionable levels of toxic air pollution that can cause cancer and other serious health effects.

The EPA is setting a dangerous standard and damaging its reputation as a protector of communities by proposing to exempt facilities that burn waste on-site for energy recovery from the strong Clean Air Act protections that Congress intended to apply to all waste burners.

The same scrap plastics, used chemicals, and other industrial wastes that this proposal would allow to be burned on-site without meaningful controls would undeniably be regulated as "solid waste" if shipped off-site and burned in an incinerator. To call these wastes "fuel" and thereby exempt them from highly protective standards for controlling, monitoring, and reporting emissions amounts to regulation by semantics, an utterly irresponsible approach that jeopardizes the health of my family, friends, and neighbors.

Municipal waste incinerators, medical waste incinerators, and hazardous waste incinerators recover energy from combustion but are all subject to the Clean Air Act's protective rules for waste combustion. Facilities that burn industrial waste shouldn't be treated any differently, regardless of where or why the waste burning is taking place.

If finalized, this rule would permit more than 180,000 facilities nationwide to burn industrial wastes without any requirements to control, monitor, or report their emissions. And since the EPA made no effort to determine how many of these facilities may already be burning industrial waste, neighboring communities will be unable even to find out if waste burning is occurring nearby and if they are being exposed to toxic air pollution as a result.

Administrator Jackson, don't let big polluters trash our lungs. Please strengthen this rule to adequately protect our health from unregulated waste burning. The lives of many Americans literally depend on it.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Stanley Jones-Umberger
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0075
Comment Excerpt Number: 1

Comment: I am writing in support of EPA's proposed rule regulating hazardous air pollutants from industrial/commercial/institutional boilers and process heaters, and commercial and industrial solid waste incineration units. Quit screwing around. Drop the narrow definition of "solid waste". Do not exempt any polluters.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kristine Krause
Commenter Affiliation: We Energies
Document Control Number: EPA-HQ-OAR-2003-0119-0274.1
Comment Excerpt Number: 2

Comment: We Energies is currently planning the construction of a new biomass-fired unit and has been subject to considerable uncertainty regarding the applicability status of the IB-MACT and CISWI Rules. This uncertainty is largely due to the fact that EPA had not finalized a revised definition of non-hazardous solid waste prior to proposing these rules.

While the proposed DSW Rule may clarify applicability [Footnote: Such units would be affected under IB-MACT rather than CISWI since unadulterated woods would be classified as "traditional fuels" rather than solid waste] for units burning clean woods, much uncertainty still remains and is further complicated by EPA's proposed alternative definition of non-hazardous waste, which may increase the number of CIS WI-affected units.

For biomass units and the numerous industrial boilers that co-fire potentially non-hazardous solid waste, the implications of the proposed rules are significant and require careful evaluation in order to develop the best long-term strategy for the facility. This is particularly true for sources,

such as We Energies, that are considering the construction of new biomass-fired units, because the classification could determine overall feasibility of the project.

Unfortunately, the proposed rulemaking effectively requires that all four rules be evaluated simultaneously since the implications of the rules are interrelated. This raises an additional level of complexity by requiring an applicant to develop a number of contingencies in their evaluation that would not have otherwise been necessary if the rules had been developed sequentially. This effort might have been lessened if the DSW had been finalized before the other rules were proposed. Nonetheless, the comment period provided for the four rules is more consistent [Footnote: Notwithstanding data quality issues] with the timeframe allotted to a single MACT rulemaking effort and does not provide an adequate amount of time to make the much more complicated assessment of four interrelated rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 3

Comment: In the non-hazardous secondary material rule, EPA should define secondary material, biomass materials like resonated trim, urban wood, pulp paper, and wastewater residuals as fuels and promote their use, which displace fossil fuels as consistent with the President's call for greater use of renewable fuels.

We recommend EPA complete the definition of non-hazardous solid rule making first and then proceed with the promulgation of the other three rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 14

Comment: ACC believes that EPA should encourage as much as possible the burning of fuel as non-hazardous secondary materials as this will preserve virgin materials and result in greater diversity of fuel sources.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 23

Comment: I'm here today representing the Portland Cement Association, where I am Director of Regulatory Affairs. Founded in 1916, PCA's 28 cement companies operate 102 manufacturing plants in 34 states, with distribution centers in all 50 states. PCA members account for 97.5 percent of domestic cement making capacity. Portland cement is an essential ingredient in concrete.

Thank you for this opportunity to address this panel. The focus of my talk will be on the identification of secondary non-hazardous solid waste.

The rule, as proposed, could greatly narrow the scope of secondary materials currently in use as alternative fuels and ingredients during cement processing, or, at the very least, subject those facilities using secondary materials to Clean Air Act Section 129 incinerator emission standards. Cement plants, like many industrial facilities, are not incinerators.

Moreover, cement plants are already regulated under stringent emission standards pursuant to Clean Air Act Section 112 authorities, which when developed were crafted to reflect the industry's long-term practice of using secondary materials.

Among common alternative ingredient materials used by many cement manufacturing facilities are foundry sand, mill scale, and steel furnace slag. Among alternative fuels, scrap tires provide the best example due to the industry's long-standing use of this secondary material. In the United States where more than 300 million scrap tires are generated annually, Portland cement plants use more than 50 million as fuel and ingredient, thereby diverting those materials from landfills. Furthermore, almost 700,000 tons of scrap tires were consumed in cement kilns in the United States in 2007. Of those, whole tires comprised approximately 75 percent versus 25 percent for shredded tires.

The environmental benefits of utilizing scrap tires as a supplemental fuel in the Portland cement process are multifold. When whole tires are combusted in cement kilns, the steel belting becomes a component of the clinker, an intermediate product. This steel belting may replace some or all of the iron required by the manufacturing process. Pound for pound, tires have more fuel value than coal, and the use of tires as fuel can actually reduce certain emissions.

EPA states that tire-derived fuel contains about the same amount of energy as oil and 25 percent more energy than coal. This means that each ton of tire-derived fuel used by a Portland cement plant has the potential to replace 1.25 tons of coal. The United States Department of Energy has estimated that the combustion of tire-derived fuel produces less CO_2 per unit of energy than coal. Furthermore, when compared to many U.S. coals, the tire-derived fuel results in lower NOx emissions. This advantage is also acknowledged by EPA.

EPA has also indicated that the proposed rule could lead to more tires being dumped, rather than incinerated or burned as fuel. Indeed, the use of byproducts such as tire-derived fuel conserves natural resources used for fuel and raw materials and is a practice widespread in the cement industry and other manufacturing sectors here and around the world.

The EPA solid waste proposal, if implemented, would stigmatize the practice of reusing byproducts, jeopardizing their future use and contravene the very intent of RCRA. Moreover, the rule would have the effect of classifying cement plants as solid waste incinerators, as I mentioned previously.

We do not believe that Congress intended for Clean Air Act Section 129 to be used for regulating industrial manufacturing facilities. Congress developed Section 112 for this purpose.

Incinerators are not for production vessels. They're designed primarily to destroy waste. Therefore, it would be misguided and damaging to the cement sector if EPA were to group cement kilns and similar fuel-burning systems under the regulatory requirements designed for incineration of waste material. Our industry recovers useful energy and utilizes ingredients that would otherwise be mined.

We believe the proposed rule is a significant step back from what the Agency proposed in January ANPRM with regard to the following: the concept of discard; the narrow application of the term processing; uncertainties surrounding the non-waste determination petition process; establishment of certain legitimacy criteria for both fuels and ingredients; and the alternative approach.

All of these areas, among others, represent issues that jeopardize the future use of non-hazardous secondary materials as fuels and ingredients. Our written comments will provide more detail in support of the industry's views and concerns on these matters.

In conclusion, we request that EPA construct a final rule that reflects the realities of the industry while encouraging existing beneficial use practices that reduce emissions and improve energy efficiency. These environmentally beneficial practices have been employed in the cement industry for many years and in many countries around the world and should be enhanced rather than discouraged.

Diverting potential secondary materials from fuels –- excuse me, from landfills is a major benefit of the alternative use practices employed by the cement industry today and should not be stigmatized by enforcement under Clean Air Act Section 129. The cement industry is appropriately regulated in -– under Clean Air Act Section 112, and we believe the rule, as proposed, provides no environmental or economic gain to the industry or general public. Failure to remedy the flaws in the proposed rule will do material harm to our industry and its employees and will worsen the world's most intractable environmental challenges.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking

(NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 24

Comment: Our reading and understanding of the non-waste -– non-waste determination petition process as described in the proposed rule, we feel there are a lot of uncertainties associated with it. And like I said, we'll go into a lot of those in detail, but it –- you know, there are questions about the frequency of how this petition process may be applied. I mean, how often would a company have to undergo such a -– you know, such a rigorous requirement? You know, how many -– how do vendors play into this thing?

We just feel that there are a lot of questions associated with it that have not been addressed in the proposed rule; and for that reason –- other than the fact that we feel it's really unnecessary because we're dealing with non-hazardous materials; so we really feel just right off the bat that that whole process is really a system that doesn't have to be applied to these materials.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 32

Comment: I am President of VEXTOR Technology. We are a non-hazardous processing facility located in Medina, Ohio.

We have –- today I want to talk about the secondary non-hazardous waste as an alternate fuel.

VEXTOR developed a method of making what we call an engineered fuel whereby we are combining many different types of non-hazardous industrial commercial solid waste into what we would call an engineered fuel -– in other words, a fuel designed to meet the specification of a fuel to the end user. Our main market target initially has been the cement and lime kilns.

The process basically includes a 100 percent QC of all material coming in, both, most importantly to make sure it's non-hazardous waste, and secondly, to determine whether it qualifies an ingredient in the processing of the fuel to meet the end spec.

The processing basically includes the QC, inventory management, ingredient, and the qualification, formulation, and then into a shredding, blending, mixing operations to reduce particle size to make a homogenous material that meets an energy spec, and a chemical spec, and a physical spec.

In the cement kiln industry in particular the fuel substitutes were called, but also, since there is no residue left over, the residue from the engineered fuel is included in the cement clinker, and hence, it has to meet not only the fuel and energy spec but has to meet a product spec. It also cannot do any physical damage to the cement kiln itself, the refractory brick, the feeding systems, et cetera.

What we look for is organic content, low moisture, a non-detect mercury, low halogen, low sulfur, and very little metals. Of course, the material's already been prequalified as a non-hazardous waste.

Some of the examples of the ingredients would include non-recyclable paper and plastic, and cardboard, mixed wood, types of sawdust, shredded consumer products, latex adhesive waste, MRF debris -- municipal recycling facility debris –- oil debris, Banbury or ring oil sludges. These are waste streams from the tire manufacturing industry –- resins and gels, carbon black, and non-recyclable plastic, soy based inks.

The final spec that we have to meet is on the order of 10,000 plus BTUs, less than two-tenths a percent chlorine, less than 10 percent moisture, no mercury -– non-detect mercury -– small particle size, and it also must be physically conveyed either by conveyer or pneumatic.

The experiences we've had so far are with cement and lime kiln testing. We have -– we were delivering this engineered fuel to a long-dry kiln in Pennsylvania for about a year and a half. We did a 50 percent replacement of coal on an equal BTU basis. There was -– we qualified for air emission; the cement kiln qualified for air emissions under PA DEP. There has been no negative effect on the clinker or the kiln itself.

And I guess my purpose here today is to just show that there is an example -– a practical example of being able to take non-hazardous solid waste and convert them into a product that we have sold. We sell it confidentially, but on the order of about 50 percent of the value of coal. It has –- it's been used up to about 50 percent replacement of the coal. The spec will vary depending on if it's used in a pre-calciter, a cement kiln, or the hot end of the cement kiln, or in a lime kiln. Particle size reduces accordingly.

This engineered fuel provides a landfill avoidance to the generator and lowers our liability, replaces fossil fuel. It can -– our fuel contains about 56 percent biomass, have a lower operating cost to the cement and lime industry, and lower emissions.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 33

Comment: I'm here to address the non-hazardous materials portion of this program.

I'm here as a citizen, and I have attempted to address citizens health and environmental concerns when sewage sludge is land applied for almost 15 years.

I have participated in EPA USD aerosol studies. I have served on the Virginia Expert Biosolids Panel. I have served on the Virginia Department of Health's Advisory Committee on Biosolids as well as the same advisory committee for the Virginia Department of Environmental Quality.

I reviewed earlier comments on the advanced notice of proposed rulemaking as well as EPA's responses. I was intrigued by the industry's efforts to convince EPA that sewage sludge was not a solid waste in spite of clear language to the contrary in Section 1004(27) of RCRA and 40 CFR Sections 257.2 and 258.2 where solid waste clearly is identified as sludge from a wastewater treatment plant -– as well as 40 CFR 257.1(11) where EPA actually excluded sewage sludge for land applied this waste under Part 503 from RCRA's minimum criteria.

In its June 4th response to comments received, EPA properly pointed out that sewage sludge has long been considered a solid waste by EPA. Sewage when land applied under Part 503 also fails to meet the legitimacy criteria listed in EPA's response.

For example, just as sewage sludge fails to meet the legitimacy criteria for contaminants and fuel when incinerated, sewage sludge fails to meet those same criteria for contaminants in fertilizer when land applied.

Unfortunately, EPA added in its response that it was not addressing other secondary material end uses. However, EPA's responsibility does not end when it identifies a particular material as a solid waste. It must also ensure that the disposal methods used actually comply with RCRA requirements.

Since Part 503 does not ensure that RCRA requirements are met, it is important for EPA to now remove that unlawful exclusion of land-applied sewage sludge under Section 257.1(11).

According to a 2005 article published by Dr. Caroline Snyder in the International Journal of Occupational Land and Environmental Health, the sewage sludge exclusion was put in place at the demand of Thomas Jorling, then Assistant Administrator for the Office of Water, to be consistent with EPA's policy at that time of promoting sludge -– land application of sludge as the management of -– method of disposing of this particular sludge. However, that was never a lawful basis for failing to impose RCRA requirements.

As pointed out by Dr. Snyder, this exclusion was put in place over the warnings of EPA's own William Sanjour who wrote that this action was –- quote – illegal and inconsistent with the Agency's Congressional mandate to protect human health and the environment –-unquote.

In any event, the stated basis of this exclusion is now moot as EPA long ago stopped promoting land application over other disposal options. In spite of repeated complaints from citizens residing close in proximity to sewage sludge application sites, citizens whose health and well being have been and are currently being negatively impacted, no effort has been made under Part 503 to establish buffers to protect health sensitive individuals, to identify pollution-sensitive sites, and preclude applications on those site, or even to limit at the time of application

constituents known to harm water quality -- for example, excessive phosphorous. And, of course, there is no enforcement to ensure compliance with RCRA requirements because they're not there.

Since the Office of Water was not directed by EPA to ensure that RCRA requirements were put in place, it is not surprising that the Office of Water failed to do so. Moreover, I can assure EPA, after years of experience, that sewage sludge land application regulations in states like the Commonwealth of Virginia fall far short of providing the protections to health and in the environment as provided by RCRA.

It is important for EPA to look at the big picture. Think of the Agency as being responsible for plugging many leaks in a dam and to reduce the adverse impacts from those leaks. In the process EPA simply cannot ignore some of those leaks, especially when such action would encourage other leaks.

In this case, as long as EPA refuses to remove the unlawful exclusion of sewage sludge from compliance with RCRA's requirements when it's land applied, simple economics will dictate that the sewage sludge generators will stay with or gravitate to the less stringent land application disposal method and away from the more protective incineration, which is what -– you know, if you put it in place, it doesn't help if you allow it to leak out on the other side.

And I think it's imperative as part of this rulemaking or some other process that this be addressed because identification is just step one. Step two is making sure that the next part is complied with and people are protected.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 39

Comment: The American Lung Association urges EPA to strengthen the proposed rule for incinerators and for the definition of solid waste. The definition of solid waste proposed here is narrow -– so narrow that any facility could burn practically any substance as solid waste and not have to follow the requirements, opening a huge loophole that threatens public health. They would also never have to tell the public what they are burning or how much. That is wrong.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 41

Comment: I'm with the Rubber Manufacturers Association, and I'm here today representing our manufacturer members and primarily our tire manufacturer members who manufacture most of the new tires sold in this country.

Our member companies, both our tire members and our non-tire members will be affected by both the Boiler Major Source Rule and the Minor Source Rule; but I'm not here to speak on those today. I wanted to use this time to address the solid waste rule instead.

Since 1990 our members have worked hard to increase the rate of scrap tire management and recovery in this country. In 1990 when we first became involved, only about 11 percent of tires went to end-use markets -- and primarily in tire derived fuel markets.

Today, almost 90 percent of tires do go to end-use markets. That means that tires are not landfilled at the rate they once were. And more importantly, they're not in illegal stockpiles that have fire and other challenges.

We are very proud of the success that we have achieved, both with –- in partnership with the EPA and in partnership with the states. And here I wanted to speak on a challenge that we see coming forward looking at the solid waste rule because we are concerned that this market really is in jeopardy.

Tire derived fuel is a -– is a market that's very important to the tire –- I'm sorry, to the scrap tire management field. It serves as basically an anchor market which enables other markets for scrap tires for both recycling and recovery to flourish. It's an economical market that achieves environmental benefits, including greenhouse gas reductions as cited by EPA in the proposed rule.

We are concerned that how the rule is drafted, particularly the tires that are consumed as whole tire derived fuel, will not be able to be treated as fuels, but instead deemed waste, absent a successful petition through the petition process laid out by EPA.

We're, by the way, very pleased to see that EPA has included a petition process as a process of last resort for facilities that are consuming waste -– or, I'm sorry, consuming fuels that would otherwise be classified as waste; and they can show that these materials have not been previously discarded.

However, we believe with tires in the first instance when tires are coming from annually generated sources of tires, they're not coming from landfills or stockpiles, but instead, coming off of people's vehicles treated with value, that these materials have not been discarded and should not be considered waste.

We urge EPA to go back to the approach that you took in the ANPRM. We felt that approach set the proper balance, looking at annually generated tires separately from those tires coming out of stockpiles.

As I mentioned, tires that are annually generated, left at tire dealerships through –- enter in an established infrastructure where those tires are treated as valuable commodities. They are then to a processor who delivers them to the end user. And we feel that at no time have those tires been discarded.

When we look at the plain language test that the courts have laid out for determining whether a material has been discarded, clearly tires in this context do not meet that definition. And we urge EPA to really go back to the approach that you set out in the ANPRM.

We feel that when you look at tires from stockpiles, yes, those tires were discarded in the first instance and understand the processing requirement that has been set forth for materials that have been previously discarded.

We would urge, though, an expanded definition of processing to really look at what processing is appropriate for the given end use and not require processing that would go beyond what might be appropriate in that case.

For example, in the cement kiln context, tires would -– if they were coming stockpiles, would be required to be processed and have the metals removed. Interestingly, the metal in tires in the cement kiln process do not -– the metal is not serving as a contaminant. Instead it's serving as a raw ingredient, requiring additional processing and requiring that material to come out of tires would really just require increased energy use, increased emissions, and really be completely opposite of what this rule sets out to do.

So we would urge that the level of processing really be geared towards the end use and not sort of a one-size-fits-all approach to processing.

Now just quickly turn to what would happen if facilities decided to stop using tire derived fuel instead of being regulated under Section 129 of the Clean Air Act.

We see about 50 million scrap tires going into cement kilns every year. And if these markets evaporate, truly we will see a landfilling crisis in this country with tires and increased stockpiling across the country. That's a big concern to us as tire manufacturers. We want these materials to be used appropriately and as fuels so that we don't have a solid waste problem.

Some states could increase use in other markets, but many states could not. And we would see additional ripple effects beyond the loss of those markets because tire-derived fuel does serve as a primary economical market.

So we really urge you to go back. Look at the ANPRM again. And we wholeheartedly approach that approach.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 46

Comment: I'm a breathing citizen of the United States. I am the Executive Director of NORA, An Association of Responsible Recyclers. We are formally known as the National Oil Recyclers Association.

Today NORA offers a general statement concerning the rule recently proposed by the U.S. EPA to promulgate regulations governing solid waste-derived fuels. NORA will submit much more detailed comments on or before the August 3rd, 2010 deadline. TO provide you with some background on the oil recycling industry, NORA's more than 240 members provide collection and recycling services in each of the 50 states and the District of Columbia. Our members collect and recycle used oil, antifreeze, waste water, oil filters, absorbents, and parts cleaning chemicals, and comply with stringent regulatory safeguards for used oil recycling pursuant to 40 CFR Part 279 and many other sets of environmental regulations, including the Clean Air Act. The basic components of Part 279 were adopted by EPA in 1985 and strengthened in 1992 pursuant to a clear Congressional mandate to encourage legitimate methods of used oil recycling.

The legislative history of used oil regulation should not be ignored in the present rulemaking effort. In 1980, 1984, and 1986 Congress directed EPA to develop regulations that protect human health and environment while encouraging legitimate used oil recycling. In other words, Congress recognized that if over-regulation kills a recycling market, the adverse environmental consequences may be severe.

A set of balanced regulatory controls emerged that, for all practical purposes, accomplished Congress' goal. NORA members collect and manage vast quantities of used oil as a valuable product in compliance with EPA's regulations. If, instead of a balanced regulatory approach -– if used oil had been declared a hazardous waste, as had been seriously considered, far less used oil would be recycled and the system for handling used oil would be extremely expensive without any environmental protection benefits. The history of used oil regulation in the United States provides a valuable lesson and blueprint for policy makers who genuinely care about environmental protection.

NORA's basic perspective on the proposed rule is very straightforward. NORA agrees with EPA's conclusion that on-specification used oil fuel does not constitute a solid waste because it is not abandoned and otherwise discarded. It constitutes a legitimate and traditional fuel. NORA contends that for precisely the same reasons off-specification used oil does not constitute a solid waste. The facts demonstrate that off-spec used oil is a legitimate and traditional fuel. It should be emphasized that the distinction between on-spec and off-spec used oil fuel had nothing to do with its heating quality. Both categories of used oil fuel will generally have the same BTU content. It's roughly 140,000 BTUs per gallon, the equivalent of virgin petroleum oil – if the water content is the same.

The distinction between the two categories of used oil fuel is a somewhat arbitrary one, created by EPA in 1985. If any parameter of four metals exceeds a specified concentration, the used oil is classified as off-specification. If total halogens are greater than 4,000 parts per million, the used oil is off-specification.

Also, if the flashpoint of the used oil is lower than a hundred degrees Fahrenheit, the used oil is classified as off-specification. NORA's collective experience in the nearly 25 years since this

rule was adopted by EPA is that the metals rarely exceed the specified concentrations. We have some detailed information which are in our written comments on that.

Rather, used oil is –- used oil fuel is off-spec because of total halogens or flashpoint. However, neither of those factors adversely affects the quality of this type of used oil as a fuel. The market for off-spec used oil under the current regulations is strong and reliable.

There are, according to the EPA's Material Characterization paper on used oil for this rule making, approximately 750 industrial fur4naces and boilers that burn off-spec used oil fuel. These are primarily cement kilns, boilers for utilities, furnaces at steel mills, and other major industrial burners. All these burners are stringently regulated by the Clean Air Act, and each utilizes and maintains expensive pollution control equipment.

There is absolutely nothing in the preamble to any of the proposed rules that suggests that when burning used oil fuel, these industrial burners or boilers emits halogens in quantities greater than would be the case if the off-spec used oil fuel were burned in facilities with Section 129 permits. This point needs to be carefully considered by EPA because there would be no justification of this proposed rule as it would apply to off-specification used oil fuel if no environmental benefits are to be achieved.

It is also worth pointing out that Exhibit 6 of the Material Characterization paper shows that the principal benefit of combustion of used oil are associated with upstream production offsets, include substantial reduction of NOx, CO, and CO_2 emissions.

In terms of combustion-specific emissions, use of used oil results in notably lower NOx emissions, in particular, when compared to residual fuel oil. The term upstream –- this is in quotes -– upstream production offsets is a shorthand way of recognizing some of the benefits of used oil recycling. It means that when a quantity of fuel is produced from used oil that is collected and recycled, the adverse environmental impacts would have been created by producing the same quantity of virgin fuel have been eliminated. Unfortunately, these benefits are threatened by the proposed rule that, perhaps unintentionally, could effectively destroy the market for off-spec used oil fuel.

Currently, there is a steady and reliable market for off-spec used oil fuel. Off-spec used oil is collected and marketed in much the same way as on-spec used oil. The difference is in the number of end users -– approximately 750 industrial furnaces and boilers –- versus a more limited number of Section 129 solid waste incinerators. Fewer outlets will result in dramatically increased transportation costs from the geographically diverse generator locations to these limited facilities.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 47

Comment: The traditional fuels definition -– I'll skip ahead to the alternative approach.

The traditional fuels definition for the alternative approach is apparently changed from the traditional fuels we have identified earlier to specifically exclude on-spec used oil. And this could change or should have been addressed in the above statement.

Again, it's in my written comments here; but as we had some going back and forth regarding the alternative approach –- and it appears that they are going to be including on-spec oil as a solid waste.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 49

Comment: I'm the Director of Government and Business Relations for the Tire Industry Association, known at TIA. We're an international association representing all segments of the tire industry, including those that manufacture retreaded tires, repair, recycle, sell, service, or use new or retreaded tires, and also those suppliers or individuals who furnish equipment, material, or services to the industry. Our recycler members collect over a hundred and thirty million tires annually.

We're testifying today to register our concerns with the rulemaking governing the use of tires as fuel in cement kilns and other combustion units. I will more than likely echo many comments heard today, so I'm going to be brief –- specifically from RMA.

We worry about the consequences of any changes in the classification of tires as fuel. We are simply unable to fathom the dawning prospect of millions of tires suddenly appearing on the landscape, both literally and figuratively.

Our industry has forcefully dealt with one of the most significant environmental issues that our country ignored for many years as scrap tire piles are finally coming to an end in this industry. The existence of these piles created numerous health hazards as vast breeding grounds for disease-carrying insects and the aftermath of a tire fire is now labeled as a toxic superfund by this Agency. We will be disappointed if this were -– if this environmental success story were reversed by this ruling.

Closer to home –- and this may be one of the more important points I'd like to make –- our retail members have by and large come to understand the importance of recycling tires in the correct manner, and any change in the pattern of this cycle could set back retail behavior for years.

Our processor members have certainly come to depend on the economies of scale that maintain the value of this commodity and regulate this market. As new industries form around the constant innovation that we see for recycled rubber, the market must remain stable to support this research and development.

And lastly the point I want to make is that the states will be left with the burden of dealing with these growing tire piles with little resources to utilize. As we have heard from our state affiliates, that many state tire recycling funds have been raised by -– have been raided by state treasuries desperate for general funds.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 50

Comment: These comments will be on the solid waste rulemaking.

I'm with the American Petroleum Institute, API. API is a not-for-profit trade association representing all segments of the oil and gas industry.

In terms of API's waste advocacy, we have participated in all rulemakings and litigation involving the definition of solid waste since RCRA was first promulgated in 1980.

We will be submitting detailed written comments on the solid waste proposal -– non-hazardous solid waste proposal before the comment due date. We're still reviewing the proposal, but today we'll offer a few key comments.

A summary of API's key points follows. Based on our review of the proposal, the principles underlying the proposed rule are generally consistent with the statutory definition of solid waste, and from our perspective, encourage a greater role of energy recovery from secondary materials in meeting energy needs, both today and in the future.

Second, the proposed definition of secondary material differs from the understanding of that same term under Subtitle C. If codified, the definition in the proposal from our perspective would result in challenges in implementing RCRA. The proposed definition of secondary material needs to be reworked.

And our third main point is that the proposal recognizes that traditional fuels are not solid wastes when burned in a combustion unit. Certainly, fuels are not discarded when combusted and are not solid wastes. This premise is promising. It's in the proposal in the preamble, and we think that EPA can do a little more in the final rule to bring that out further.

API's interest in this rulemaking follows: We're interested in this proposal primarily for two reasons: Because -– and this is no surprise. There's one definition of solid waste, concepts that EPA advances in the proposal logically should, in the long run, influence further development of the Subtitle C definition of solid waste.

And all of API's members either produce, collect, or process various hydrocarbon-bearing second materials that are non-hazardous and that are highly suitable for legitimate use as fuels or as ingredients in combustion units. Accordingly, our members will be affected by this proposal.

Now, for the most part, Point one, the principles underlying the proposed rule are consistent with the statutory definition of solid waste. For RCRA to be a solid waste, the material must be discarded. And this is where the lawyer comments come in. API does not believe that it is possible to apply a plain-English meaning of discard to a situation where materials are neither disposed nor abandoned but retained and legitimately burned as fuel for energy recovery or used as an ingredient in a manufacturing process. With a few exceptions that we'll highlight in our written comments, EPA's proposed rule appears to conform with this principle, which is good.

We believe that the proposed rule represents an improvement over the current Subtitle C definition of solid waste. The Subtitle C definition has historically reflected a bias against burning for energy recovery. That bias is far less evident in today's proposal.

In the proposal EPA acknowledges and moves beyond the historic association of combustion of secondary materials with disposal. This position seems like a common sense interpretation of the term solid waste, per RCRA.

Moreover, the proposal is quite forward-thinking by acknowledging both advances in technology and the potentially much greater role of energy recovery from secondary materials in supplying future energy needs.

Our second comment, the proposed definition of secondary material needs to be reworked.

The proposed rule initially presumes that non-hazardous secondary materials that are combusted are solid wastes. The proposal then provides exclusions for materials or fuels used in a combustion unit and that also meet the legitimacy criteria. The term secondary material is thus very important to the scope of the rulemaking. The proposed rule would define secondary material as any material that is not the primary product of a manufacturing or commercial process and can include post-consumer material, off-spec commercial chemical products or manufacturing chemical intermediates, post-industrial material, and scrap.

We question why EPA is proposing a definition of secondary material that is different than the common understanding from the usage of that term in the RCRA Subtitle C regulations. Now although the Subtitle C regulations do not spell out and define secondary materials or even employ the term, we note that EPA did explain in the preamble to the 1985 revisions to the Subtitle C definition of solid waste that -– quote -– the rule itself refers to the following types of secondary materials: spent materials, sludges, by-products, scrap metal, and commercial chemical products, recycled in ways that differ from their normal use.

In short, there are two different interpretations and definitions looking at this proposal and what's in RCRA Subtitle C. We think that this can lead to unnecessary confusion in implementing RCRA; and we question why there are different definitions.

At a minimum, the proposed definition could be amended to avoid inadvertently capturing materials EPA does not intend to capture. For example, the definition refers to a material that is not the primary product of a process. This makes no allowance for the concept of co-products that is familiar to most RCRA practitioners.

As another example, the definition refers without qualification to off-spec commercial chemical products or manufacturing chemical intermediates. Under Subtitle C only such products or intermediates burned in lieu of their normal manner of use are considered secondary materials. Under the proposal here, off-spec traditional fuels could be considered secondary materials, but that is not clearly consistent with EPA's intent.

And our final point is with regard to the fact that traditional fuels are not solid wastes when combusted, and we think that's self-evident.

Again, this principle is stated in the preamble of the proposal. Particularly because of the potentially confusing definition of secondary material that I just discussed, we would encourage EPA to include regulatory language in the final rule that clearly excludes traditional fuels from the scope of the rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 55

Comment: Now let me switch to the definition of solid waste issue. This is a completely different set of comments, unfortunately, because this rule is dangerous and irresponsible.

Let me just say that the rule defines as fuel things like spent plastics, used solvents, waste chemicals, used oil, industrial sludges. And it allows these wastes -– and EPA refers to them as secondary materials. These are wastes by anybody's -– any real person's standards – allows these wastes to be burned in boilers and process heaters that are not subject to any meaningful pollution controls, or monitoring requirements, or reporting requirements.

Now, the rationale in this proposed rule for this exemption is a legal argument. EPA claims not that it is a good thing to have all of these unregulated incinerators operating in people's back yards. It claims that it's forced to this result by the law.

That argument is wrong. In fact, this exemption is not just not required, it violates the law. At a minimum –- and this is what I think what's really important for Administrator Jackson to take home with this. This is well with Administrator Jackson's authority. She can define used oil, waste plastics, spent chemicals as waste. Hiding behind a legal argument to do otherwise is a very dangerous precedent.

We urge her to recognize that this is a stark choice; it is in her court, and she can either choose to let these facilities continue to poison the communities next to them or control them.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512

Comment Excerpt Number: 58

Comment: The solid waste definitions EPA has set has the potential to restrict which types of biomass may be burned for their carbon-neutral energy value which may be pushed into the waste stream and consequently within the confines of CISWI standards. This concept defies logic and simply cannot happen due to the standardized components of processing.

In the non-hazardous secondary materials rule EPA should define these secondary biomass materials like resonated trim, pulp paper, waste water residuals, and promote their use which displaces fossil fuels and is consistent with the President's call for greater renewable fuels.

For example, recycled process residuals must be considered a fuel because they are critical to the feed stocks for pulp and paper mills. They have inherent heat value. They are intentionally recovered from the manufacturing process and are processed before being burned.

As defined, RPRs are materials that are removed during the repulping of recovered fiber to generate fibers which can be used to make new pulp, paper, and paperboard products. The recovered fibers are obtained through various commercial and residential recycling programs and are never discarded, given their value.

EPA has long determined that recycled paper is not a solid waste. They are secondary materials generated on site as part of the manufacturing process. The preparation process for recovered fibers, removing non-paper components such as inks, which is what we do in our processes, is equivalent to the way trees are processed to remove non-papermaking components such as bark and ligament. Both processes are used to provide consistent fibers to make products from common feedstock.

It must be understood that RPRs are secondary materials from recovered fiber repulping process. They are processed to enhance heating value. They do not materially contribute to excess air pollutants. They serve a fundamental part of the fuel mix used by pulp and paper mills. Therefore, RPR should never be considered a solid waste and burned for energy recovery.

EPA's assumption that non-hazardous secondary materials that are used as fuels and are managed outside the control of the generator are solid wastes unless they are processed –- unless they are processed into non-waste fuel products is patently inaccurate.

This narrow view of recycling is not based on any record showing that non-hazardous materials that are transferred to other entities are discarded. Case law does not support the sweeping assumption that any material that leaves the control of the generator is per se solid waste.

The record compiled by EPA for this rulemaking demonstrates that biomass residuals are legitimately recycled by being burned for energy recovery. The record does not demonstrate any discard occurring from this practice or any adverse impacts to human health or the environment.

These materials never enter the waste stream and never become part of the waste disposal problem. Accordingly, it would exceed EPA's authority to promulgate regulations that would bring these materials under regulation under the solid waste and RCRA.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 61

Comment: Looking at the definition of non-solid hazardous waste from major source boilers is still troubling to environmental justice communities. By defining industrial waste as a fuel, that will allow all but a few facilities to burn spent chemicals, spent solvents, scrap plastics, industrial sludges, coal mining waste, and used motor oil, and other waste in boiler process heaters with no obligations to control or monitor their toxic pollution and no obligation to quantify or identify their toxic emissions to EPA or to the public at large.

So whatever the adverse public health impacts of those exposures of burning those fuels in those sources in those facilities will be we won't be able to measure that because we are not requiring that they identify how much of those sources they're burning and that they're not required to inform the public at large or EPA for that matter, what they're burning. And, therefore, how do you quantify what those emissions are and how those emissions are adversely affecting those who live closest to the plants.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 86

Comment: The one piece that is of special concern in the Public Health Community and also the environmental community is the definition of solid waste. Essentially, for us, we find this a fairly irresponsible rule and actually illegal.

And I know Jim Pew testified earlier today and talked a little bit more about why exactly that's illegal, looking at RCRA and also the Clean Air Act. And so, for me, I really wanted to talk a little bit more about the stories of communities that I've been in terms of there are all kinds of things that are thrown in boilers that are small, medium-sized, large, and essentially exempting facilities across this country from having to install protective controls on those facilities, has continued to put those communities at risk.

The technology is available off the shelf for all of those size boilers; and yes, it will cost a little bit of money to do it, but it essentially is going to -– hopefully, even in doing a cost-benefit analysis you look at our toxic rules and the CBAs actually show that there are tremendous values to having protective rules.

And so I think it's really about creating a rule that's genuinely protective and at the very least having an inventory of all the facilities across this country of what they're burning, in what quantities they're burning.

Right now we have no idea what the universe of incinerators, boilers are across this county. Even thinking about some of the small ones are –- I think it's estimated that 180,000 of these may be out there; and we don't know exactly what they're burning. We don't know what the control technologies are there. We don't know what the impacts are in communities across the country.

So, really, for me, it's a public health issue. It's something that can hopefully save us billions of dollars, lots of health visits, strange cancers that have been linked to toxic air emissions across the country, looking at petrochemical companies, looking at refineries, especially –- and it's really encouraging, certainly, to see the MACT rule come out in a protective way; but it is concerning to a number of people in communities across the country -– the solid waste rule. And I think especially at the hearings in LA and in Houston you will get a much, I think, more robust representation of stories that are going to come out and kind of talk about this particular issue.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 89

Comment: And then I want to speak briefly on the definition of solid waste, EPA-HQ-RCRA-2008-0329.

I appeared last year to testify on behalf of the Sierra Club on the revisions to the definition of solid waste. Again, we are please to testify to say although EPA's rule for major source boilers deserves applaud, EPA's definition of non-hazardous solid waste is dangerous and irresponsible.

By defining industrial wastes as fuel, the proposal will allow facilities operating in communities across the country to burn spent chemicals, spent solvents, scrap plastics, industrial sludges, coal mining waste, used motor oil, and other wastes in boilers and process heaters without no obligation to control or monitor their toxic pollution and no obligation to report the identity and quantity of these toxic emissions to EPA, state permitting authorities, or the public.

Which the facilities that are exempted include boilers and process heaters operated in area source facilities like the one –- like one of our nation's 1,700 area source chemical plants.

About how many facilities are we talking about? There is one of the shocking aspects of this rulemaking.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 91

Comment: If this proposal is finalized, it will hurt people in communities across the country by allowing them to be exposed to toxic pollution from uncontrolled waste incinerators and by depriving them of any way to identify the toxics they're exposed or hold the polluters accountable. It will badly damage this Agency's credibility as a protector of communities.

So, Administrator Jackson, we are hoping that you don't let this issue be obscured by arguments that are misguided, that it's well within your authority to bring toxic emissions under control in these industrial incinerators. We are very, very happy with the way Administrator Jackson is working on many issues, including Montauk removal, which we work on, including, again, the review of definition of solid waste from last year.

And we work closely with her -– I was just on a call today with –- she came on with the National Environmental Justice Advisory Commission on the BP oil spill and has dedicated the Agency to resolve –- to work on that issue. So we're hoping that this won't be an aberration, not to protect –- so to protect the communities.

And on behalf of the members of the Sierra Club, we respectfully request that EPA withdraw this rule, which will significantly weaken the public's protection from millions of tons of non-hazardous waste. And we hope you'll consider seriously how this rule endangers the public and our environment that would go counter against her environmental justice priority and so we want to make sure that the –- no community is unfairly burdened or endangered.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 92

Comment: PANALIST: Which of the four rules were you asking us not to finalize?

COMMENTER: The last –- the EPA-HQ-RCRA-2008-0329.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: James Carr
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0879
Comment Excerpt Number: 1

Comment: Having been involved with a number of CERCLA cases, including one involving a waste incinerator, I am very aware of the hazards posed by solid wastes. it is critical to control solid wastes and as good as the regulations may be, their impact will be marginalized without a broad definition of solid waste.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Margaret Jusiel
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1030
Comment Excerpt Number: 1

Comment: I'm sure you've received many long letters stating duplicate concerns over the EPA's proposed Solid Waste Definition Rule. Please consider this short note an additional support against this rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: George Kreider
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0921
Comment Excerpt Number: 1

Comment: I also encourage EPA to discard its definition of "solid waste" for purposes of these rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 3

Comment: EPA's proposed definition of solid waste, however, is irresponsible and seriously endangers public health. By defining many industrial wastes as "fuel," boilers and process heaters at many area source facilities will be permitted to burn such wastes without any control, monitoring, or reporting requirements. Lisa Jackson has repeatedly stated environmental justice issues are a core concern of her mission as administrator. In order to walk the walk, Lisa Jackson and EPA must control toxic emissions from facilities that burn any industrial wastes, regardless of whether the purpose is disposal or energy recovery. It is well within your authority to do so.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 8

Comment: I'm here to speak about the proposed rule concerning the use of non-hazardous, secondary wastes, specifically the definition for on-and-off spec oil. As I mentioned, I'm the Environmental Compliance Officer. I also serve as the chairman of the Government Affairs Committee for the Automotive Oil Change Association. The Automotive Oil Change Association is a nonprofit trade group who represent 3,500 auto maintenance centers throughout the United States, Mexico, Canada and many others throughout the rest of the world. Today I'll speak on behalf of these organizations concerning the Environmental Protection Agency's recently proposed rule change governing solid waste-derived fuels. Some may find it curious that a California used-oil generator would have such an interest in this ruling considering the fact that our waste streams are already considered hazardous wastes. Oil Changer, and its sister company, North American Lubricants, have been working with legislators for the past five years to champion the highest and best use of lubricating oil as defined by the California Integrated Waste Management Board. A 2008 study commissioned by the Board and conducted by Lawrence Livermore National Laboratory concluded the best use of recycling used oil is as a lubricating oil. We're concerned about the misconception that harmful constituents are pervasive in used oil. Over the past five years, Oil Changer has recycled over 2.3 million gallons of used oil in this state. And that's been done over the course of servicing hundreds of thousands of

vehicles. There hasn't been one instance of having halogens greater than 4,000 parts per million, flashpoints of less than 100 degrees Fahrenheit, or any other contamination that would justify classification as off-spec oil. Findings from the National Oil Recyclers Association, also known as NORA, agree with our real world experiences. NORA test data is in disagreement with some of the results cited in the Material Characterization Paper on Used Oil. As part of their formal comments, NORA will submit the data accumulated over the past 25 years from hundreds of thousands of generators. As we move forward in this process, it's important to keep in mind past regulatory milestones. In 1980, 1984, and 1986, Congress asked the EPA to develop regulations that protect human health and the environment while encouraging responsible used oil recycling. Congress was aware that overbearing regulations would adversely affect the market and diminish the likelihood of used oil being handled properly. The result has been a system that has enabled the collection and management of a valuable commodity. The history of used oil regulation illustrates how market forces can work in concert with reasonable regulations. Oil Changer believes the EPA's proposed rule for on-specification used oil is correct. Because it is not abandoned or discarded and has a valid use, it should not be classified as a solid waste. However, the same can be said about off-specification used oil so we must disagree with this point. Off-spec oil is a traditional fuel that is used interchangeably with on-spec oil. Industrial users create a demand for both types of oil since there is no difference in their ability to produce heat. Thanks to a strong market for off-specification oil, it is generally not abandoned, discarded, or otherwise wasted. Approximately 750 industrial furnaces and boilers throughout this country create this demand. If off-spec oil was considered a solid waste requiring incineration, the value of the fuel would plummet. Generators would see their beneficial byproduct transformed into a liability that must be disposed of in a Section 129 solid waste incinerator. These incinerators are fewer and much father between than the furnaces and boilers that currently rely on off-specification oil. Longer distances result in higher costs for generators, pollution resulting from transportation, and the increased possibility of spills and mismanagement. Devaluing a valuable and finite resource has many negative repercussions. Will the proposed rule change result in less pollution released into the atmosphere? Consider these facts before arriving at a conclusion. Does burning off-spec oil in an incinerator with Section 129 permits result in fewer emissions? We would like to see these questions investigated and quantified further. It should also be noted that 750 industrial furnaces and boilers mentioned in the EPA's Materials Characterization Paper are regulated by the Clean Air Act. As a supporter of recycling oil, we must emphasize Exhibit 6 of the American Materials Characterization Paper. Here it is stated that the principal benefits of using used oil as a fuel is the savings in upstream pollution from harmful air pollutants. By collecting and reusing recycled oil as fuel, industry prevents pollution that would otherwise have resulted from producing the same amount of virgin product. Such a change would drastically alter the business model of companies dependent on the current used oil marketplace. The repercussions of such a change must be weighed against proven benefits to the environment.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 9

Comment: The Central Contra Costa Sanitary District, referred to as CCCSD, provides wastewater collection and secondary wastewater treatment for approximately 450,000 people at a facility located in Martinez, California. Sewage sludge generated is conveyed directly to a multiple-hearth furnace, which produces 150 psi steam that drives a turbine/blower supplying air to the secondary process. This helps reduce our need for natural gas. The resulting ash product is combined with other materials to produce a commercially available soil amendment product. Sewage sludge incineration is already regulated under 40 CFR 503, and promulgated under the Clean Water Act back in the early '90's. Human health risk criteria were used to set the maximum sewage sludge concentration for arsenic, cadmium, chromium, lead, and nickel. In addition, 40 CFR 503 includes flue gas concentration limits for carbon monoxide or total hydrocarbons as surrogate indicators of organic compound destruction. There are current emission limits for beryllium and mercury under existing New Emission Standards for Hazardous Air Pollutants and New Source Performance Standards for sewage sludge incinerators. The regulation of sewage sludge as a solid waste under Section 129 is not necessary. CCCSD maintains that our sewage sludge meets the legitimacy requirements as a secondary fuel. First, CCCSD sewage sludge is handled as a highly valuable source of fuel. The sewage sludge is continuously dewatered and directly injected into the multiple-hearth furnace producing ash and steam. Second, CCCSD generates 11 million Btu's per hour of 150 psi steam from combusting 28 million Btu's per hour sewage sludge and 6.7 million Btu's per hour of landfill gas. This saves CCCSD approximately $650,000 per year in energy costs. That's with natural gas at $5.80 per decatherm and clearly shows that sewage sludge has value as a fuel. Third, CCCSD sewage sludge has contaminants levels similar to the coal referred to in Notice of Proposed Rule Making. I want to emphasize "similar to coal." If CCCSD abandons incineration in favor of going to a landfill, the cost for sewage sludge handling will increase from $5 million to $10 million per year. This is mainly due to hauling costs and tipping fees. This does not include any added air pollution from mobile emissions from the haulers. Future costs may be even higher because of new greenhouse gas fees for fleet vehicles and landfill limitations required by California's AB 939 rule, which also places several restrictions on landfill use. In summary, sewage sludge from CCCSD is already appropriately regulated under 40 CFR 503, NESHAP, and NSPS, so regulation as a solid waste under Section 129 is not warranted. Next, CCCSD sewage sludge meets the criteria to be a legitimate secondary fuel and not a solid waste, even if the heat recovery is done with a separate boiler unit; i.e., ducting between the incinerator and our heat recovery boiler. Finally, the high cost alternative going to landfill will add another financial burden to already stressed public agencies with no tangible benefit to human health or the environment. The CCCSD strongly urges USEPA to find that sewage sludge is not a solid waste and should be regulated as a legitimate secondary fuel under Section 112 of the Clean Air Act.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 24

Comment: The solid waste definitions EPA has set has a potential to seriously restrict which types of biomass that may be burned for their carbon-neutral energy and which may be pushed into the waste stream. The non-hazardous secondary materials rule, EPA should define these secondary biomass materials like urban wood and wastewater residuals as fuel and promote their use which displaces fossil fuels and is consistent with the country's call for greater use of renewables.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 29

Comment: And I am especially concerned about the proposed definition regarding non-hazardous secondary materials. It's not what goes into the boiler or incinerator, or what you call it, or where it comes from that's important. What comes out of the boiler or incinerator is what's important. Also, if discarded hazardous secondary materials are processed into a legitimate fuel or ingredient, we need to ensure that such processing itself doesn't lead to air pollution. While it's possible to minimize the amount of waste that must be disposed of in landfills or reduce our reliance on fossil fuels by burning what would otherwise be waste, it must only be done if it doesn't pollute our air.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 32

Comment: SierraPine provided comments on the advancement of this public rulemaking for the solid waste rule and it plans to provide detailed written comments on all of these rules. In addition to providing our own comments, SierraPine supports the comments provided separately by the American Forest and Paper Association and the Composite Panel Association. In regards to the solid waste rule, just to give you a little bit of background, in our finishing end operations we sand the panels and in the process generate wood residue, which is basically wood dust containing small amounts of resin. Utilizing this material on site as a fuel in our boiler, or as the substitute for our own material, reduces the environmental impact of disposing of this material in off-site landfills, reduces the greenhouse gas generation associated with the landfills, and also reduces our fossil fuel demand. SierraPine supports EPA's position in the primary proposal as it relates to resonated wood products -- or I'm sorry -- yeah, resonated wood residuals. When used as fuels within the control of the generator, EPA states in the preamble that they have decided to classify these materials as non-waste. We do not support the statements in the alternative approach that moves wood residuals into a category of solid waste as this is a legitimate use of secondary materials; i.e., wood residues or sander dust used within the continuous industrial process. Sander dust does meet the legitimacy criteria in that it is handled as a valuable commodity, has meaningful heating value, is used in a combustion unit that recovers energy, and it contains contaminants at levels comparable to those of traditional fuels. The material is never discarded, and therefore, should not require consideration under the solid waste regulations. The value of this commodity can be related in terms of the potential cost avoidance. For example, based on historical sander dust usage at one of our facilities, to replace sander dust fuel with natural gas fuel, the additional operating costs are estimated to range from 1- to 2.9 million per year. This does not take into account the costs associated with transportation and disposal of the sander dust off site. Again, this material has not started and we should not be forced by the alternative proposals to dispose of this material in a landfill. And it truly does possess significant value. In any event, we believe it is important for the final rules for the petition process for granting non-waste terminations. So again, as I stated earlier, we do not support the alternative approach.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 38

Comment: Burning waste to energy and calling it recycling is extremely misleading.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking

(NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 46

Comment: And we have our legislators and our City Council trying to go up and change definitions of burning trash. And we know incineration is wrong and simply going about and trying to give it a new fancy name really isn't going to fool anybody. And why are we trying to fool ourselves? Why aren't we trying to do the best that we can? So we've spent a lot of time looking at cumulative impacts and helping the U.S. EPA and Cal/EPA partner together so that we can combine our resources and work directly with impacted communities looking at solutions. People must understand that once you get involved in a situation like this where you have so many impacts in your community, you really have to take the time to look for solutions and not just say no to everything, and that's what we've tried to do in our community. And the trash burning and the battles that we've had going on with this waste energy and just barely scratching on the surface, you see that their basing these claims on unreliable information. These facilities in other countries have been shut down. They're not helping. We don't need to create more dioxin. We don't need to create more chemicals and we certainly don't need any industry.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 54

Comment: The American Lung Association urges the EPA to strengthen the proposed rule for incinerators and for the definition of solid waste. The definition of solid waste proposed here is so narrow that any facility could burn practically any substance as solid waste and not have to follow the requirements, opening a huge loophole that threatens public health. They would also never have to tell the public what they're burning or how much they are burning. That's simply wrong. The American Lung Association here today represents the children with asthma in the communities next door to these facilities. We also speak for the adults on oxygen who cannot be here to say that we must have air that does not make it harder for them to breathe. We speak for all whose lives that are threatened by pollution spewing from these boilers and incinerators. All

of us here today and all of those who cannot join us deserve the right to breathe clean, healthy air. We are counting on the EPA to deliver cleaner, healthier air in every community.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 57

Comment: Like I said earlier, hopefully you guys have heard these talking points today several times. But as I understand it, the definition of, you know, waste of -- that's to be incinerated doesn't really include, at this point, solid waste. That is, it doesn't included shredded material like tires and things like that. I'm not sure if that's completely correct. Correct me if I'm wrong, please, but I'm here to ask that you don't bow to industry groups defining tires, for example, plastics, solvents, anything that's naturally -- you know, like a toxin, a chemical be defined as, you know, anything other than the solid waste that it actually is. They produce, you know, toxins that are -- that can be fatal. Some of these plants are near schools, houses, so I'm just here to hopefully make sure the definition doesn't stray from the facts in that these toxins and chemicals are what they are in whatever form they come in. And if you shred a tire, it's still a tire. It's just in a different form. So, I ask that you don't allow exemptions for on-site burning from like chemical plants. From what I understand, that's an opening in the definition as well. So I ask that that not be an available loophole to chemical production companies and oil plant -- you know, Chevron, ConocoPhillips. Those, I understand, are two of the major plants down here that could be -- you know, cause infractions or what I would consider infractions. And I ask this because, you know, we all breathe the same air. If you guys have children -- I don't know where you live, but I plan on having children and getting married soon. And, you know -- I mean, I can't see this being a viable option for anyone, you know -- and also future generations especially. So please just don't allow exemptions for on-site burning. We definitely need that oversight in the regulation to stand and be firm and be a fair logical definition, not something that's open to abuse by companies that would rather not follow any sort of environmental regulations or rules. And so we just need the definition be revised to include the burning of any toxic material, in any form, be strictly prohibited.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 62

Comment: While the boiler and process heater proposals are a significant step towards clean air, we are gravely concerned over the proposed solid waste standards. In particular, the allowance of any industry to burn its own waste as fuel is dangerous and irresponsible. This policy would promote the burning of hazardous waste such as spent solvents, off-spec plastics and chemicals, and coal mining wastes, among other items of concern, without any appropriate controls or monitoring. This narrow definition of solid waste puts thousands of children, elderly, and sensitive individuals at risk through industrial incinerators and facilities burning solid waste that are sited near homes, schools, daycares and health centers. Any facility that acts as an incinerator should be regulated as such, including appropriate controls and monitoring.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 3

Comment: Use the non-hazardous secondary materials solid waste definition rule that backs up the national goals for energy independence and waste minimization by clearly and easily qualifying residual materials as fuels . For Weyerhaeuser and the forest product industry, it's important that the residuals such as resinate, sander dust, and panel trim biomass, and waste water treatment biomass solids, as well as other alternative fuels that arise in the future are treated as fuels under these rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 5

Comment: I am here to comment on the proposed rule regarding Identification of Non-Hazardous Secondary Materials that are Solid Wastes . The United States Business Council for Sustainable Development, or USBCSD, or Business Council is a network of companies representing 20 major industrial sectors affiliated with the World Business Council for Sustainable Development, another 200 companies from around the world that are all seeking to identify and promote projects and business activities demonstrating the business case for sustainability for the triple bottom line that is economic, environment, and societal values. One of our most successful projects in the United States is called By-Product Synergy. By-Product Synergy is the matching of under-valued by-products, transportation, water, energy and other streams from one facility with potential users at another facility to create new revenues or savings, and create environmental and societal benefits. Stated simply, By-Product Synergy is identifying how a secondary material from one process can be used as a resource in another process . The U.S. Business Council started working on by-products synergy in 1997 with the support US EPA as a co-funder of the first project in Tampico, Mexico. Since that initial collaborative project, we have collected more than a dozen regional synergy products across North America including projects in Kansas City, New Jersey, Puget Sound, Mobile, Alabama, Chicago, Ohio, Dallas, and Houston. We have projects developing currently in the east San Francisco Bay, south Boston and Austin, Texas . Hundreds of companies along with city and state governments and regional non- -- nongovernmental organizations have participated with us in these projects producing hundreds of synergies that have saved tens of millions of dollars while significantly cutting energy, water, air emissions of all kinds, and waste to landfills. These projects have developed over the past 13 years with strong policy support, and often significant funding support, from US EPA regional and headquarters offices. All of this is to say that U.S. industries have identified and implemented many different by-products synergies that provide environmental benefits, promote energy independence, preserve natural resources, and save money . In the Advanced Notice of Proposed Rulemaking, EPA identified a wide variety of successful by-product synergies and the environmental benefits they provide. For example, use of -- of scrap tires or tire-derived fuel has resulted in a significant decrease in the number of tires destined for landfill disposal, a reduction in some types of air emissions, and elimination of the environmental impact associated with obtaining raw virgin fuel sources. Used oil burned for energy recovery results in significantly lower NOx emissions than fuel oil, and also eliminates the greenhouse gas emissions associated with upstream production of fossil fuels. Cutoff of coal fly ash in cement kiln dust and coal refutes were also identified in the advantaged notice . By-Product Synergy projects are becoming a worldwide phenomenon. The European union has made it a central element of the sustainability and issues, and in the United Kingdom, the British government has funded by-products synergy a national waste management energy efficiency and climate control program, though being English they call it industrial semiosis. This is the -- this program has been cited by more than a hundred members of the English parliament as one of the most productive and effective government-supported initiatives underway. Japan, Australia, Portugal, China and other countries are all pursuing the same kind of efficiency program . In the United States, By-Product Synergy is an essential element of EPA's stated goals for the proposed rule as waste management generally include -- including maximizing the usefulness of secondary materials, reducing wastes, conserving energy, reducing air emissions, and reducing greenhouse gas emissions. The business council supports any measure that will remove unnecessary barriers to and provide greater incentives for By-Product Synergy projects . Accordingly, the business

council and its member companies are very interested in the proposed rules -- rule regarding the identification of non-hazardous secondary materials that are solid wastes. We have, however, grave concerns about the proposed rule because it appears to severely limit effective by-product synergies, and did so without any corresponding benefit to human health or the environment . In fact, the effect of the rule will likely be an increase in air emissions, greater use of virgin natural resources, and increase in energy consumption, more waste in landfills, more greenhouse gas emissions, and increase administrative burden on EPA, and increased costs for the regulated community . The business council believes that the proposed rules focus on whether a non-hazardous secondary material fuel remains in possession of the generator to not be a necessary or determining factor in whether a secondary material is a waste. The council believes that the framework set forth in the advanced notice of proposed rulemaking properly places the focus on the beneficial use of the secondary material . For reasons not clearly or adequately set forth in the proposed rule, EPA abandoned the reasonable approach in the advanced notice, an approached that would have promoted by-product synergies while remaining protective of human health and the environment. We're still -- in addition to the making of -- making use of current by-product synergies either impossible or prohibitively burdensome, complicated or expensive, the regulatory hurdles in the proposed rule will likely discourage research and collaboration, as well as innovation into additional by-product synergies and supporting technologies . The business council would submit written comments with additional data that explain our concerns in greater detail and includes specific examples. I appreciate the time to share the business council's thoughts and concerns regarding the proposed rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 8

Comment: Specifically, there should be a better delineation of definitions of boilers and incinerators to ensure that facilities are clear on exactly what is a boiler and what is an incinerator. As well, we believe that the definition of solid waste is too lenient.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 19

Comment: We do however want to voice opposition to your proposed definition of solid waste, and many of our staff members will speak to that, as well. Allowing hazardous and toxic materials to be put into industrial boilers and incinerators under the guide of solid waste or fuel would do the opposite of the other proposed emissions limits. It would put more toxic materials into our air in Texas and throughout the country. I've been working with Texas Campaign for the Environment for about eight years, so this EPA administration, by far and away, has been the strongest, the most protected of public health standards and air standards and water standards. Decision after decision, ruling after ruling, I've seen the EPA take steps in the past year and a half that are just good news after news . This is really the first time that I've come to an EPA to say that that proposal is a bad idea, so I'm -- and in our organization is very actually shocked, frankly, that -- that you propose to define toxics materials as solid waste and fuel in industrial boilers. The EPA can definitely do better than that. The EPA has done better over the year and a half. I know, in seeing the decisions that you've made previously, that the EPA can come up with a better definition of solid waste, that's more protective of public health . That's really what our staff members will testify today. I doubt that all of us will take our whole six minutes and give you a lot of technical details. But for us, this is a very simple matter of air quality in Houston and throughout the country, and we can't just define something if it's toxic material and hazardous material and will poison our air. We can't just define it as okay, and fuel, and allow it to be burned . I know it's a cost issue for industry, and they'll argue costs until they're blue in the face, but it costs us, too, if that stuff ends up in the air.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 20

Comment: I appreciate all that you have done, but of course, when loopholes are allowed to happen where you can't burn an entire tire in a boiler for energy, but you can chip it up and burn it as if that's a lot of change for the use of these tires to burn it for energy. I -- I don't see -- I don't see the logic. I don't see the logic in allowing that chipped up tire to be burned for energy, and so I very much -- if the industry has to spend a little bit more money to burn clean things or to protect the air quality and allow -- you know, the number one reason my kids miss school these days is asthma. You know, it's completely preventable. And so we very much need to do as much as we can do for the people that can't do anything for themselves, especially folks right

around these facilities . And so I just -- I'm putting my -- my faith in you guys that you're gonna do what I can't, and that's to regulate the big industries, so please protect the air.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 21

Comment: Allowing these loopholes to remain in the legislation, you know, to burn toxic waste in industrial boilers, that -- I feel like that really undermines the small sacrifices that we all make every day to improve the planet. So yeah, I definitely want to encourage you to remove those loopholes and, you know, hold industry accountable even if they have to pay a little bit more money.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 36

Comment: I'm the executive director of the Cement Council of Texas. We represent the major cement manufacturers in the State of Texas, and I wanted to make some short comments on the proposed rule for identification of non-hazardous secondary materials that are solid wastes. Our industry is -- is environment -- environmentally responsible industry in Texas and in the United States. We comply with environment laws and regulations . Our concern with the proposed rule is that it may severely limit the use of our industry to use alternative fuels in producing Portland cement, which is a necessary material in the construction of infrastructure of buildings, homes, roads in the United States. I'd like to focus on one particular aspect of alternative fuels, and that is scrap tires. Scrap tires are a major problem in this country, especially in Texas along border areas, and really in the entire world. There are about 300 million scrap tires produced or really discarded in the United States every year. About 60 million of those scrap tires are burned in cement kilns as alternative fuels. That's 20 percent of the supply of scrapped tires that are used

as alternative fuels . Now, what's the benefit of doing that? Well, first of all, a scrap tire has about 33 -- actually about 25 percent more BTU value, ton-per-kiln, than a ton of coal, and about the same BTU value as oil on a pound-for-pound basis. In the U.S., there were about 12.6 billion -- I'm sorry -- 12.6 trillion BTUs of energy generated in the cement industry through the use of scrap tires. Now, this avoids the use of other fuels, virgin fossil fuels such as coal or oil or other materials. In all about 3.6 percent of the energy that is used -- not electrical energy -- but is used to produce Portland cement was done by scrap tires . About 48 of the 113 or so cement plants in the United States are licensed to use scrap tires, and in Texas eight of ten plants can use scrap tires. Scrap tires are -- are a good fuel. They limit the amount of tires that are ultimately disposed of in landfills, and of course scrap tires placed in a landfill, it's -- it's there pretty much forever, and it attracts bugs and insects and disease, rodents. The emissions that result from the use of scrap tires are actually, and in most cases, reduced from a cement plant that burns scrap tires . For instance, the dioxin and furan levels that come out of a cement plant, which are generally very small to begin with, are one-third of those -- in -- in a plant to uses scrap tires, the dioxin/furan levels are about one-third of those as a plant that does not use scrapped tires, and this is to a statistically significantly level. NOx emissions are also significant to reduce. Particulates are about 35 percent reduced, although particulates are very, very small to begin with, and that is not a statistically significant number. Additionally, SO_x and metals emissions are reduced . Carbon monoxide and total hydrocarbons are slightly increased through the use of scrapped tires, but not to a statistically significant level. The -- the rules that EPA is -- are proposing for the identification of non-hazardous secondary materials that are solid waste, we're really concerned that this would compromise the ability for responsible industries such as the Portland cement industry that officially utilize these wastes in uses such as fuel that would -- that would otherwise, if the wastes were not used, compromise environmental quality . And I'd like to end with a note from the TCBQ. This is a quote from one of their publications and -- and it was a publication on the problem with scrapped tires within the State of Texas, and they said that cement kilns, when burning tires at a high heat, which cement kilns always do, and using pollution controls, which again, cement plants always do, do not compromise air quality.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 38

Comment: These benefits, I think, can be negated by standards that will allow for local area plants to burn local waste, whether it be tires or other products on hand. This will be -- to increase local pollution for Houston; especially, this is a big deal. We have -- the number one excuse for students missing school is asthma related. If we increase air emissions from plants that are burning local waste, this will not decrease, but increase.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 46

Comment: The proposition to deregulate what the industry can burn in its incinerators is not only a horrible idea. I believe it's ignoring all Houstonians rights to clean air. The EPA has been doing an amazing job for Houston in the past years, so it did a great job raising the ozone standards, and I greatly appreciate it. I greatly appreciate it. Don't take this massive step backwards . The EPA, as I look at them, they're supposed to look after the people and not the industry. Your job is to look after the Americans, not -- you know, the -- the industry, who technically can vote -- I'm not gonna get started on that. But by adopting this rule, you're allowing the industry to pump millions of pounds of dioxin and other chemicals into the local air. Dioxin is a single -- it's the single worst human carcinogen known to man, and its main cause is incinerators. I can't really spell it out any clearer than that. You're literally pumping the number one worst chemical for human health into our air by allowing this to happen . So I ask you -- no, I implore you not to let this happen. I really -- I just want you to ask yourself, what I would I want in my community. I know you guys know the answer to that question, so don't trash us. Don't trash our lungs. Houston, I love this city, but the pollution has made it to the point to where I -- I feel that I cannot exist in this city.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 55

Comment: In the Non-Hazardous Secondary Materials rule, EPA should define these secondary biomass materials like urban wood and wastewater residuals as fuels and promote their use which displaces fossil fuels and is consistent with the country's call for greater use of renewable fuels.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 59

Comment: What doesn't make sense is your definition, or the proposed definition, of "solid waste." Let me see here. By having these, you know, shredded tires, spent solvents, spent chemicals, and plastics, by having them -- you know, by having the -- gosh, I'm nervous -- having the definition of "solid waste" narrowed would allow for them to burn these materials in order to produce their own fuel with absolutely no regulation, without absolutely no obligation to report or identify the toxins that they're putting in our air that we breathe daily. To me, this doesn't make any sense. I don't understand how that is protecting human health . Maybe -- I mean, I'm not a scientist, but to me, common sense would say that having -- making the guidelines -- or the definition of solid waste more strict to where they can't burn these items which are known to release mercury, lead, formaldehyde -- there's more on here that I can't find -- benzine, dioxins. I mean, you guys -- we all the know how awful that is. It causes mutations, cancer, asthma, and that's among a few of the awful health conditions that it would cause . And in order -- I mean, if this happens where you would narrow the definition of solid waste and allow them to burn these spent chemicals, solvents, plastics, rubber as fuel, goes unregulated and without the community being able to know, I don't understand how that correlates with the Environmental Protection Agency's mission statement . We definitely want -- we want zero tolerance, not zero protection. Industry has been getting away with murder for -- practically murder for a very long time, and I think we should have -- actually, I know we should have a definite separation of the Environmental Protection Agency and loving industry. Jobs are not to love industry; it's to protect human health, water, air, and land quality. It's not to cradle poor industry that makes massive profits every year; it's not -- it's not to baby them and say, oh, okay, well, you don't want to fork over billions of dollars in order have these things regulated. That doesn't make sense. Like how the gentlemen before us, which I'm sure hard working men, they highlighted that their property taxes that they pay goes to benefit schools . What benefit does it do if the toxins that they're pumping out of their factories are harming childrens' health? You guys know that children are the most susceptible to these toxins that are being emitted into the air, so I mean, I would really like to definitely press to please do what the Environmental Protection Agency was formed to do, which is to protect our public health and our water and our air; not to baby corporations and to let them get away with putting awful chemicals into our air . And so yeah, in a nutshell, I want to thank you for making the first steps. Again, thank you. However, please don't take two steps backwards by not strictly defining solid waste. It doesn't make any sense. That's all I have.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 61

Comment: So with all of this progress of eliminating the toxic junk that we breathe, and ozone and the smog, taking -- taking a step backwards is taking a dangerous risk for our economy and our human health, and I think that we can all agree on that . The way that we define solid waste when it is used for industrial facilities that use process heaters and broilers, is -- it's crucial to the lives of thousands, and it's so funny how such a small definition can make or break the lives of thousands of people every year that breathe the air we have here in the City of Houston . But again, it's important that we are not taking the step backwards into that wrong direction, but we are moving forward. So, yeah, Scarlet, again, it doesn't make any sense. Solid waste that -- shredded tires, spent chemicals, spent solvents, coal mining waste, used motor oil, and other kinds of toxic waste. It's -- it's -- that sounds more like industrial toxic carcinogens, things that cause cancer, asthma, autism, mutations, lung disease, all of which of these things have been gradually multiplying within the past few decades . Last week, my grandfather died of lung cancer and never smoked a day in his life, you know, the close -- like the closest person in my life that has passed away. And I'm supposed to be lucky for that, you know, I'm lucky that I even have grandparents. And again, let's not take a step backwards on defining solid waste. It's industrial waste. It causes cancer. People die from it every year, and people in this room, we could all die from these things, as well . So please -- again, thank you so much for letting us come to testify, but again, please do not allow these industrial facilities to burn waste under uncontrolled and unmonitored ways. It exposes us to toxics pollution and deprives us from the right to know what that pollution is, and I think that we have the right to know what that pollution is if we could very well possibly produce children without birth deficiencies or, you know, in the future, die of cancer or lung disease. So again, we've been making all of this progress within the past ten years; it's been a long time coming, so please let's make this step into the forward, right direction, for a clean and healthy future for ourselves and our children and not taking step backwards.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 63

Comment: Raising the air quality standards and then providing a loophole for industry facilities to put whatever they want into the air is just an ironic thing for the Environmental Protection Agency to do. This is a great chance to show off some of the innovative leadership, not bow down to mindless corporate greed. So yeah, saving corporations money is a terrible excuse to put the public's health at risk. Even worse, this is all industries taking no responsibility, be completely unregulated, and do whatever they want to our air. It is y'all's job to keep this exact situation from happening . By making them unaccountable, you're directly making yourselves accountable. Is it somehow okay that at least 1,900 people will die every year because of your proposed loophole? Oh, yeah it is because you're saving industries money. I grew up in Baytown, Texas surrounded by refineries. The landscape was pretty bleak, but at least there was some pollution regulation. What I mean by that is, the sky was pink at night and the air smelled like absolute crap only sometimes. I can't imagine living in a town like that. My home town is the nearby industrial facilities had absolutely no regulation. I'll have lead and mercury, benzine, dioxins, and formaldehyde for breakfast. Why don't you throw in some severe asthma and cancer with that, too. Sorry if it's offensive, but it's the truth whether or not it's hard to swallow . What I'm getting at, is that you're all in the position to do everything you can to stop these terrible things, so you need to do everything you can to stop them. You know, instead, you're proposing to allow facilities to burn waste in uncontrolled and unmonitored facilities. I'm pretty sure if you and your children lived in Baytown, Houston, or any similar area, you wouldn't even consider this ludicrous definition of solid waste to be acceptable.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 65

Comment: Toxic waste is still toxic waste regardless of what you do with it. The molecules that cause cancer and asthma, they don't care why they're being burned. That doesn't make them any less dangerous or any less likely to cause cancer or asthma or birth defects. It doesn't -- you know, it doesn't make it safer or cleaner when you burn these things; it just changes them. It puts them into the air, it doesn't -- yeah, it doesn't make them safer.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking

(NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 74

Comment: Specifically, the American Lung Association urges the Environmental Protection Agency to strengthen the proposed rule for incinerators, and for the -- to narrow the definition of solid waste, which opens the huge loophole that threatens public health . We urge the EPA not to allow industry to burn waste in uncontrolled and unmonitored facilities. On behalf of children of developing lungs, kids suffering from asthma in our communities next door to these facilities, and adults whose health is so compromised they can't be here to speak.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 76

Comment: I'm an attorney with the Oklahoma Department of Environmental Quality, and I'm here to speak on the identification of non-hazardous secondary materials as solid waste. First, the Oklahoma Department of Environmental Quality, ODEQ, appreciates the opportunity to make oral comments during this public hearing process. We will submit additional written comments with supporting data . Before I start, I'd like to provide a very brief background of the state tire program in Oklahoma. The Oklahoma Waste Tire Recycling Act originally came into effect July 1st of 1989. The state legislature declared it a policy of the state to, quote, "Encourage recycling of used tires," end quote. As intended by the act, in the past ten years alone, Oklahoma has remediated approximately 280 illegal tire dumps removing almost 550,000 used tires. Initially, illegal tire dumps were very large. As the tire program has matured in the state, illegal tire dumps have become smaller because Oklahoma has more viable outlets for these used tires . Annually, approximately 3.3 million used tires are processed and/or recycled in Oklahoma. The use of tires as a tire-derived fuel in cement kilns has led to a large percentage of used tires being processed, recycled and/or reused annually. Currently, cement kilns in Oklahoma account for approximately 1.85 million, which is almost 56 percent of Oklahoma's 3.3 million used tires annually . As a result, the ODEQ requests that EPA leaves the use of whole tires and/or shredded tires as an

attractive option for the cement kilns. Without cement kilns, Oklahoma could not recycle and reuse such a large number of used tires on an annual basis. Without cement kilns, the number of illegal tire dumps would grow exponentially. Further, changing the definition of solid waste to include used tires that have been discarded; and used tires that have been discarded to be processed, with steel belting removed, would be disastrous in Oklahoma's tire program . Over the years, various technical reports, some published by EPA, have supported the use of whole or shredded tires as TDF in cement kilns . Throughout the rulemaking process, the EPA is appearing consistent regarding the combustion of used tires and cement kilns. The advance notice of the proposed rulemaking appeared to support the use of TDF in cement kilns. The preamble to the notice of proposed rulemaking appeared the same, though the text has changed and there are some inconsistencies . EPA is not provided -- EPA is not provided an explanation of this change and/or any basis for the change other than relying on the definition of discarded tires only. The ODEQ believes an exemption should be provided for state tire programs already in existence. Such an exemption would be straightforward and clear -- for such an exemption should be straightforward and clear. Such an exemption should be without a lot red tape and/or the petition process that's been identified as an alternative. State tire programs currently in existence should be grandfather into the rulemaking process. These programs have proven effective -- to be effective. Further the use of whole and/or shredded tires as a TDF should be encouraged by EPA, not discouraged or prohibited. The use of one ton of whole or shredded tires in cement kilns is the equivalent of 1.25 tons of coal combustion . Further, when whole tires are combusted in cement kilns, the steel belting becomes a component of clinker replacing some or all of the iron required by the manufacturing process. Dealing with discarded tires and the force processing of whole tires only increases energy use across the board. If EPA disallows the combustion of whole or shredded tires in cement kilns merely because they were discarded, extra energy will not only be required in the processing of the whole tires, but also in the removal of the steel belts from used tires . Even further, if crumb rubber is combusted in cement kilns, the iron component has to be reintroduced back into the kilns separately. Why require the removal of steel belts if they can be advantageous. How is that beneficial? The combustion of whole and/or shredded tires as TDF and cement kilns saves energy. The combustion of whole and/or shredded tires is economically feasible. If the recycling or reuse of tires as a TDF is prohibited as a result of this rulemaking, what is Oklahoma to do with their used tires? There is no benefit to the environment when illegal tire dumps increase exponentially and/or monofill landfills are required because they have to be created, as a result of the lack of use or beneficial use of the used tires . With an increase of illegal tire dumps, there's also an increase of risk of fires, there's also an increase of diseased vectors. There's no benefit to EPA when it pushes the retirement of additional energy and the processing of the used tires when the whole or shredded tire can be used without the processing. A review of the notice of public rulemaking appears to indicate EPA is pushing for increased use of coal and cement kilns . EPA should be pushing for the use of alternative fuels that provide for recycling and reuse of used tires. Why disallow or hinder state tire programs that are currently working? State tire programs provide both environmental and economic benefits. Currently, effective state tire programs should be grandfathered and the state tire programs should be encouraged, not encumbered.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 78

Comment: The EPA needs to be clear that tire-derived fuel is a fuel and not a waste. Defining the classification of TDF based on wire content is arbitrary and does not relate to environmental impact. Our vendors that supply TDF as a boiler fuel are not able to meet the "relatively wire-free requirement." If TDF is considered a waste and not a fuel, we will potentially cease to use and replace about a 100,000 plus tons per year of TDF with coal at a significantly higher cost.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 81

Comment: As a facility manager, it is very difficult for me to determine what my requirements, obligations and potential costs would be for Boiler MACT when EPA has yet to determine what is a "fuel" and what is a "waste." Please finalize the definition of non-hazardous solid waste first, then stabilize the data set and boiler and floor determinations with "boiler" units.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 85

Comment: I am speaking today on behalf of the Plastics Division of the American Chemistry Council, which represents many of the nation’s leading manufacturers of plastic resins. I am here

today to provide testimony on the proposed rule defining what non-hazardous secondary materials are solid wastes for purposes of regulation under Section 129 of the Clean Air Act. The proposed rule is important to ACC's Plastics Division because the plastics industry has a robust and long-standing commitment to supporting efforts to address end-of-life issues for plastics, and notably, we also promote the recycling of plastics as a valuable fuel source. We strongly support the use of non-hazardous secondary materials as fuel as a means to conserve resources and promote greater diversity of fuel sources . For today's hearing, we would like to make three key points. First, plastics have a very high inherent fuel value. The BTU of plastics is higher than coal, which means that plastics that cannot be mechanically recycled should be used as fuel rather than being landfilled . Second, markets are emerging which assess value to plastics as fuel source. Even in this difficult economic climate, we're seeing innovation and growth in conversion technologies that can take hard-to-recycle plastics and/or municipal solid waste and convert these to different forms of energy. Some technologies are converting municipal solid waste to a gas, others are converting plastics to a synthetic crude oil, and some existing companies are blending postconsumer plastics with biomass materials and using this fuel to displace coal and petroleum coke in cement kilns. In a draft report dated October 2008, for the EPA titled "Trends in Beneficial Use of Alternative Fuels and Raw Materials" for the Cement Sector, the use of plastics-based fuels are mentioned as promising alternatives to coal . And third, the regulatory structure should not unduly burden the ability of the industry to look to plastics as an appropriate source of fuel . ACC has been highly successful launching multiple programs to reuse and recycle plastics. We fully support EPA's general solid waste hierarchy or reduce, reuse, recycle, and energy recovery. Landfill disposition should be a last resort. As the U.S. EPA looks to identify which non-hazardous materials should be considered solid waste and which would be considered fuel, we support a regulatory regime that would not harm the fledgling industry of producing fuels containing secondary plastics . We see very strong benefits to expanding the recovery of energy beyond traditional waste-to-energy facilities and cement kilns, and ensuring that regulations are not so overly tightened that refuse derived fuels containing postconsumer plastics cannot remain a viable option for recovery energy at industrial and commercial boilers. As this nation rises to meet President Obama's challenge of becoming more energy independent, combating climate change, and promoting a more sustainable planet, we must not curtail potential markets for fuels that will simultaneously reduce the amount of valuable secondary materials going to this nation's landfills . We have invested heavily in expanding recycling, but we are here today to state that it is critical that we continue to support sound regulatory policy that doesn't stifle innovation and energy independence.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 88

Comment: Although EPA's rule for major source boilers deserves applause, EPA's definition of non-hazardous solid waste is dangerous and irresponsible. By defining industrial wastes as "fuels," the proposal will allow all but a few facilities to burn spent chemicals, spent solvents, scrap plastic, industrial sludge, coal mining waste, used motor oil and other wastes in boilers and process heaters with no obligation to control or monitor their toxic pollution, and no obligation to report the identity and quality of their toxic emissions to EPA, state permitting authorities, or the public . EPA's proposal claims this result is acquired by law. That claim is false. Lisa Jackson, you have the authority to bring the toxic emissions from these industry incinerators under control. Please do not allow industrial facilities to burn their waste in uncontrolled and unmonitored facilities. It exposes us to toxic pollution and deprives us of the right to know what pollution is.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 92

Comment: I'm not a scientist or an engineer, but, you know, I know that a discarded tire on the side of the road is trash and not fuel. There are other ways -- I've seen other ways that tires and other type of materials can be recycled into other more useful materials, not necessarily have to be burned. I -- I do realize something has to be done with them, but they don't necessarily have to be burned.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 97

Comment: We believe that EPA's definition of non-hazardous solid waste is woefully negligent. By defining industrial waste as fuel, the proposal will allow all but a few facilities to burn spent

chemicals, spent solvents, scrap plastics, industrial sludges, coal mining waste, used motor oil, and other wastes and boilers and process heaters with no obligation to control or monitor their toxic pollution, and no obligation to report the identity or quality of their toxic emissions to EPA, state permitting authorities, or the public. Burning solid waste, shredded tires, scrap plastics, and spent solvents can produce high levels of toxic air pollution including lead, mercury, benzine, dioxins and formaldehyde. This leaves many communities at risk from the severe adverse health effects that expose -- that exposure to toxic emissions can cause.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 1

Comment: "Biomass" is in many cases "solid waste" and EPA should require the new generation of so-called "renewable energy" biomass combustion power plants to be subject to the CISWI Rule since these plants claim they are only burning "discarded materials" like waste wood, urban wood residues, forest residues, and other materials that the industry claims has outlived its useful life and is "waste.

The existing and proposed incinerators used to produce thermal output and/or electricity should be subject to the most stringent controls authorized under the Clean Air Act. Many of the proposed so-called "biomass" power plants around the nation, such as that of American Renewables, LLC in Gainesville, Florida, will actually burn what is actually "solid waste." However, industry manipulates the definition of what it is burning, calling things like used pallets anything but "solid waste" and uses terms like "urban wood waste" or "residue." We urge EPA to ensure that biomass burners that are producing electricity from solid waste that is being discarded be covered by the CISWI rule. Such regulation is necessary to protect the public health, reduce current health care and associated economic costs associated with toxic air emissions, and to protect the environment and natural ecosystems.

Additionally, biomass combustion units currently considered boilers should be subject to the proposed CISWI standards in the energy recovery unit subcategory if they continue to combust solid waste. Under the EPA's proposed regulations, units that burn materials that are not a solid waste would be subject to requirements under CAA section 112; units that burn solid waste would be subject to requirements under CAA section 129. [See submittal footnote 1 for reference] The main difference between CAA sections 112 and 129 is that section 129 requires that MACT standards apply to all solid waste incineration units in a given category, regardless of size, while section 112 requires that MACT standards be established for major sources of

hazardous air pollutants (HAP), but provides discretionary authority to establish MACT standards for area sources of HAP emissions. [See submittal footnote 2 for reference]

Biomass combustion power plants that are used to generate commercial electricity frequently burn or propose to burn a mix of materials that includes what is actually solid waste. In most cases, there is simply not enough “clean wood” from forests to supply these plants with fuel for their operating lives. A typical 50 MW plant burns a ton of wood per minute. Hence they are forced to seek sources of fuel other than “clean wood” from our forests, and burn agricultural wastes, and commercial and industrial wood waste. See, e.g. proposed DEP Air Permit No. 0010131-001-AC for the Gainesville FL biomass incinerator that will produce electricity.

Biomass combustion power plants burn trees that have sequestered mercury from coal burning over the last 100 years. When these trees are burned, the mercury is released into the atmosphere. [See submittal footnote 3 for reference] Yet, few, if any air permits currently being issued for biomass combustion power plants even address mercury. See, DEP Air Permit No. 0010131-001-AC for the Gainesville FL biomass incinerator, which does not even mention mercury emissions.

The potential impact on mercury emissions of the large number of existing and planned biomass plants is significant. How these boilers are regulated will significantly affect the health of theAmerican people and the environment. In its Summary of Annual Costs, table 3, the EPA indicates the number of new biomass boilers estimated to come online in the years 2010-13 is 200. [See submittal footnote 4 for reference] The EPA projects the number of existing biomass units affected by the proposed regulation to be 10,958.

Additionally, some of these new biomass boilers will be in urban or other highly populated areas, such as in Madison, Wisconsin. [See submittal footnote 5 for reference] Biomass emissions, such as mercury, pose a high health risk to local populations, particularly the most vulnerable, including the youth, the infirm, and the elderly.

Mercury negatively impacts humans and wildlife. EPA analyses conducted for the Mercury Study Reportto Congress indicate that, for fetuses, infants, and children, the primary health effect of methylmercury is impaired neurological development. [See submittal footnote 6 for reference] Methylmercury poisoning can also affect adults, and symptoms may include impairment of peripheral vision; disturbances in sensations ("pins and needles" feelings, usually in the hands, feet, and around the mouth); lack of coordination of movements; impairment of speech, hearing, walking; and muscle weakness. The study also suggests that effects of methylmercury exposure on wildlife can include mortality (death), reduced fertility, slower growth and development, and abnormal behavior that can affect survival.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: J. Fishman
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1250

Comment Excerpt Number: 1

Comment: Please don't accept the proposed Solid Waste Definition Rule. Please, No Unregulated burning. Industry will adjust.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: J. Wainwright
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1189
Comment Excerpt Number: 2

Comment: Now to hear that the EPA is proposing to loosen laws to allow plastic to be burned, seems completely misguided and really angers me. Please do your job to improve air quality, protect individuals and keep pollution of all kinds from contributing to our nation's rising health care costs.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: John M. Cullen
Commenter Affiliation: Masco Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1464.1
Comment Excerpt Number: 2

Comment: All of our boiler operations are permitted by either the State or local regulators and we believe that none of the wood fuels used by our operations are solid wastes. The wood burned in our boilers is a dry, high Btu fuel. The resonated wood fuels used in our boilers are not "discarded" in normal operations but rather they are wood products generated from the manufacturing of cabinetry which are then used as fuel in our factories or are sold to other manufacturers as fuel. Resinated fuels should be treated like any other traditional fuel and not be subject to further regulatory requirements.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking

(NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eric L. Hiser
Commenter Affiliation: Nucor Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-0903.1
Comment Excerpt Number: 2

Comment: EPA must clarify that the Secondary Materials Proposal does not change the regulatory status of materials recovery facilities, including iron and steel mills.

EPA must clarify in the Secondary Materials Proposal that notwithstanding the proposal's classification of certain secondary materials as "solid waste," that classification does not change the regulatory status of materials recovery facilities, including iron and steel mills, for purposes of NSPS and NESHAP regulation. This clarification is imperative to prevent irresponsible parties from arguing that because iron and steel mills have historically accepted materials that this proposal would now classify as "solid waste," that the iron and steel mills are subject to Emission Guidelines Subpart Cb (Municipal Waste Combustion), and NSPS Subparts Ea or Eb (Municipal Waste Combustion), AAAA or BBBB (Small Municipal Waste Nucor Corporation Comments on Docket No. EPA-HQ-RCRA-2008-0329 Comments on Docket No. EPA-HQ-OAR-2003-01 19 July 19, 2010 Combustion), CCCC or DDDD (CISWI), or EEEE (Other Incineration) and that EPA's Secondary Materials Proposal somehow "overrules" the earlier exemptions for materials recovery facilities included in those rules. See, e.g., 40 C.F.R. §S 60.32b(h) (Cb); 60.50a(j) (Ea); 60.50b(i) (Eb); 60.1020(f) (AAAA); 60.1555(f) (BBBB); 60.2020(h) (CCCC); 60.2555(h) (DDDD); 60.2887(k) (EEEE). It would be most inappropriate for EPA to, in the course of promulgating a rule with a specific congressional exemption for materials recovery facilities from additional regulation as incineration facilities, to subject those very same facilities to regulations as "waste combustion" or "incineration" under other parts of the Emissions Guidelines or NSPS.

3. EPA must clarify that the presence of unavoidable de minimis quantities of solid waste in the feedstock stream of a materials recovery facility does not void the exemption.

Many steel mills, such as those Nucor operates, are involved in the recovery of metal from steel scrap. A significant quantity of steel scrap comes from post-consumer and postindustrial sources. This scrap is often mixed with de minimis quantities of rubber, plastic, paint, oils and rust preventatives, and other compounds from its prior use which cannot be completed separated from the scrap through the use of standard technologies (e.g., gravity and inertial separation, etc.). While regrettable, this is a reality of the scrap market and the size and scale of the operations required to effectively recover scrap for reuse in the electric arc furnace industry. Unfortunately, it is likely that irresponsible parties will seize upon the presence of this unavoidable admixture in the scrap mix to argue that such material is solid waste that is "not combusted for the primary purpose of metals recovery" and that the presence of "one molecule" of non-metal-bearing solid waste converts the steelmaking furnace into a "commercial and industrial solid waste incineration unit," because they are defined to include any unit that

“combusts any solid waste.” EPA must take firm steps in the final rule to avoid abuse of congressional intent in this fashion. EPA should include, preferably in the rule or at least in the preamble, that “the presence in the feedstock to an iron or steel facility of de minimis quantities of solid waste as a result of the processing of scrap or the incidental introduction of de minimis quantities of non-metal bearing materials during normal and customary iron or steelmaking activities, does not vitiate the exemption or render the facility a solid waste incineration unit or waste combustor.” While Nucor regrets that it is necessary to seek this level of detail in a rule, Nucor is aware of several instances where citizen groups or inspectors have argued that the presence of any non-metal material, or even the addition of alloys in bags (they are bagged for this purpose) converted the furnace to a municipal waste combustor or incinerator. EPA should clearly and forcefully state that this is not the case.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 7

Comment: The Agency did not seem to recognize that SARUs would be subject to the proposed Part 241 rule. The Agency did not mention SARUs in the list of NAICS codes of "categories and entities potentially affected" by the proposed rule. In addition, secondary materials combusted as part of the sulfuric acid regeneration process are not included among the "key" secondary materials that the Agency considers to represent the "vast majority of all secondary materials used in combustion processes in the U.S." 75 Fed. Reg. 31,844, 31,850.

The fact that the Agency did not consider these units in the proposed Part 241 rules further indicates that the Agency did not intend for these units to be regulated as CISWI units. This supports an explicit exemption from the CISWI rules for SARUs, as discussed above. In the absence of such a specific exemption in the proposed CISWI rule, however, numerous modifications to the proposed Part 241 rules that define "solid waste" under Subtitle D will be required to eliminate confusion to the regulated industry.

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A. Materials combusted in SARUs or chemical recovery units should not be considered solid waste under Subtitle D.

In the absence of an explicit exemption for SARUs in the CISWI rule, Rhodia encourages the Agency to revise proposed Part 241 to include a specific exemption for materials combusted in SARUs at 40 C.F.R. § 241.3(b)(4) as follows:

(b) The following non-hazardous secondary materials are not solid wastes when combusted:

(4) Fuels or ingredients that are combusted in sulfuric acid regeneration units.

Such an exemption would be consistent with the Agency's intent in crafting proposed Part 241 for several reasons. First, SARUs do not combust any of the types of materials highlighted in the preamble as being the impetus for regulating certain materials more stringently than others. Second, materials that are combusted in non-Part B SARUs should not be regulated more stringently than materials combusted in Part B SARUs. Third, SARUs combust secondary materials that have both sulfur value and heat value, thereby making it unclear whether such materials are "ingredients" or "fuels" under the proposed solid waste rule.

Rhodia's sulfuric acid manufacturing process does not rely solely on virgin sulfur. Instead, sulfur is derived from a variety of sources, including spent sulfuric acid and other sulfur-bearing materials. Other sulfur-bearing materials are processed in the same manner as spent sulfuric acid in the production of virgin sulfuric acid. These sulfur-bearing secondary materials are commonly used as feed stocks in sulfuric acid manufacturing, and the reuse of such sulfur-bearing streams as an ingredient is a legitimate recycling operation.

Whether the Agency even contemplated these non-hazardous sulfur-bearing materials when formulating the approach to solid wastes proposed in Part 241 is unclear. The preamble does not refer to non-hazardous sulfur-bearing materials. The preamble lists eight types of non-hazardous secondary material fuels, and nine non-hazardous secondary ingredients, which the Agency believes accounts for the "vast majority" of all secondary materials used in combustion processes in the U.S. 75 Fed. Reg. 31,844, 31,850. Those categories are as follows:

? Fuels: biomass (pulp and paper residuals, forest derived biomass, agricultural residues, food scraps, animal manure, and gaseous fuels), construction and demolition materials (building related, disaster debris, and land clearing debris), scrap tires, scrap plastics, spent solvents, coal refuse, wastewater treatment sludge, and used oil.

? Ingredients: blast furnace slag, cement kiln dust, coal combustion residues (fly ash, bottom ash, and boiler slag), foundry sand, silica fume, secondary glass material, auto shredder residue, purification process byproducts, and resinated wood products.

Id. None of these types of materials is the type of sulfur-bearing secondary materials combusted in SARUs.

Similarly, the distinction between "ingredients" and "fuels" under proposed Part 241 becomes confusing when SARUs attempt to classify the secondary materials combusted. Some of the non-hazardous secondary materials combusted in Rhodia's SARUs have sulfur value as well as a high heat value. These materials are "ingredients" in the sense that they contribute valuable sulfur to the sulfuric acid regeneration process. These materials are also "fuels" in that they contribute heat value to the process as well, reducing the quantity of other fuels necessary. The Agency has proposed that the decision to treat such materials as "ingredients" or "fuels" be based on the "primary purpose" of using the non-hazardous secondary materials. 75 Fed. Reg. 31,844, 31,868. The sulfur value and fuel value of the materials combusted in Rhodia's SARUs may vary significantly over time, even within the same material stream. This variation would make the "primary purpose" of the materials a constantly moving target. The SARUs will recover the sulfur value of the material even on those occasions when the fuel value may exceed the sulfur value. The proposed rule would act as a disincentive to recovering this sulfur value because the stream would be treated as a fuel using a primary purpose test. Neither the preamble nor the

proposed Part 241 rules provide appropriate guidance for determining which non-hazardous secondary materials burned in SARUs are "ingredients" and which are "fuels." The language proposed above for Section 241.3(b)(4) would eliminate this confusion.

B. Fuels can be burned in SARUs, and not just in units "within the control of the generator."

Restricting the exemption for non-hazardous secondary "fuels" only to those fuels that are burned on-site or at a facility under common control with the generator is not appropriate with respect to SARUs. If the Agency decides that a general exemption for materials combusted in SARUs is not warranted, Rhodia encourages the Agency to eliminate the distinction between on-site and off-site fuels in proposed 40 C.F.R. § 241.3(b)(1).

Fuels burned in Rhodia's SARUs are different from fuels at other facilities burning fuels for two reasons. First, all deliveries are received in bulk (in tank trucks or rail cars), not in drums. Second, all material is directly pumped into the combustion unit from the trucks or rail cars (so that no material is "stored"). The materials are accepted for their energy value when burned in SARUs, and are not "disposed."

The distinction between on-site and off-site combustion of fuels was not raised in the ANPRM. Under the ANPRM, secondary materials would have been considered legitimate, non-waste fuels if they are handled as valuable commodities, have meaningful heating value, and contain contaminants that are not significantly higher in concentration than traditional fuel products.

75 Fed. Reg. 31,844, 31,853. The concept of "legitimacy" does not require secondary materials to be combusted on-site.

The objective of the legitimacy criteria is to prevent "sham" recycling, i.e. conducting waste disposal activities under the guise of recycling. 75 Fed. Reg. 31,844, 31,851. The ANPRM described certain categories of non-traditional alternative fuels that the Agency identified as "questionable" as to whether they are legitimate fuels. The Agency was concerned about these types of materials because they lack adequate heating value or because they may contain contaminants that are significantly higher in concentration than those in traditional fuel products [Footnote: Those categories of materials are polyvinyl chloride, halogenated plastics, chromated copper arsenate lumber, creosote lumber, copper-based treated lumber, lead-based treated lumber, and secondary mill residues. None of the materials combusted in Rhodia's SARUs falls into any of these categories.] 75 Fed. Reg. 31,844, 31,853. The Agency did not indicate that burning these types of materials off-site was a factor in concluding that these materials were "questionable."

Both the ANPRM and the preamble to proposed Part 241 discuss "legitimacy" as the key factor in making the waste vs. non-waste distinction for fuels. The legitimacy criteria generally mirror similar discussions in the October 2008 final rule addressing hazardous secondary materials, regardless of whether those secondary materials are used as ingredients or fuels. See 73 Fed. Reg. 64,668 (October 30, 2008). The legitimacy factors are as follows:

* The hazardous secondary materials being recycled must provide a useful contribution to the recycling process or to the product or intermediate of the recycling process;

* The product or intermediate produced by the recycling process must be valuable;

* The generator and the recycler should manage the hazardous secondary material as a valuable commodity;

* The product of the recycling process does not contain significant concentrations of hazardous constituents that are not in analogous products.

See 75 Fed. Reg. 31,844, 31,852. The need to combust materials at the same location that they were generated is not one of the legitimacy criteria.

Why the Agency concluded that fuels that are burned at the same location where they were generated are more "legitimate" or less likely to be sham recycled than fuels that are transferred off-site for combustion is unclear. The preamble refers to the language "under the control of the generator" contained in the Subtitle C regulations but does not explain why incorporating such a concept into the Subtitle D regulations is necessary to prevent sham recycling. Eliminating the on-site vs. off-site distinction would be consistent with case law discussing the Agency's discretion

under RCRA to determine when materials are or are not solid waste.[Footnote: In Safe Food and Fertilizer v. EPA, 350 F.3d 1263 (D.C. Cir. 2003), the court held that the Agency has discretion to determine that a material is not a solid waste even if it is transferred between industries.] Rhodia therefore advocates an approach that treats non-hazardous secondary materials as fuels as long as they meet the legitimacy criteria in proposed Section 241.3(d)(1) and deletes the phrase "that remains within the control of the generator" from 40 C.F.R. § 241.3(b)(1).

C. Materials that are exempt from the definition of solid waste under Subtitle C should not be solid wastes under Subtitle D.

Rhodia provided comments on the February 2, 2009 ANPRM regarding the types of materials that are considered "solid wastes" under RCRA Subtitle D [See submittal for attachment provided by commenter.][Footnote: Rhodia incorporates its comments on the February 2, 2009 ANPRM (EPA-HQ-RCRA-2008-03290379.1) herein by reference.] Rhodia's comments explained, among other things, that: "Rhodia believes that regulated industries and regulatory authorities would benefit from an explicit incorporation of hazardous solid waste concepts into the definition of "solid waste" under RCRA Subtitle D." The basis for this comment was to avoid a situation where a unit would trigger regulation under the CISWI rules solely due to its combustion of hazardous secondary materials that are excluded from the Subtitle C solid waste definition.

The Agency did not include any such exemption in proposed Part 241. Instead, the

preamble contains some brief references to hazardous secondary materials and states that Part 241

does not address hazardous materials. For example, the Agency states as follows in the preamble:

* "EPA is only addressing non-hazardous secondary materials in this rulemaking and thus, has decided not to address hazardous secondary materials that have been excluded from the definition of solid waste under Subtitle C of RCRA in this rulemaking proceeding. Instead, facilities combusting hazardous secondary materials should refer to EPA's Subtitle C hazardous waste regulations to determine whether the materials they are combusting are solid wastes." 75 Fed. Reg. 31,844, 31,856.

* "The ANPRM also discussed another possible exclusion from being a solid waste — that is, hazardous secondary materials that are excluded from the definition of solid waste under RCRA

subtitle C when combusted. However, EPA has concluded that it does not need to include this exclusion

since these materials have already been excluded from the definition of solid waste as hazardous secondary materials and, therefore, are not subject to this rule, which deals with the definition of solid waste for non-hazardous secondary materials used in combustion units." 75 Fed. Reg. 31,844, 31,873.

8 Rhodia incorporates its comments on the February 2, 2009 ANPRM (EPA-HQ-RCRA-2008-03290379.1) herein by reference.

Taken together, these statements appear to suggest that the Agency is taking the position that hazardous secondary materials are not intended to be regulated under proposed Part 241.

This intent, however, is not reflected in the proposed definition of "non-hazardous secondary materials" in proposed Section 241.2, which reads as follows: "Non-hazardous secondary material means a secondary material that, when discarded, would not be identified as a hazardous waste under part 261 of this chapter." (Emphasis added.) This proposed definition fails to account for materials that may exhibit a hazardous characteristic but that are nonetheless exempt from the definition of "hazardous waste" under Part 261.

Many types of hazardous secondary materials that are (or may be) combusted in Rhodia's non-Part B SARUs are excluded from the definition of "hazardous waste," including the following:

* Spent sulfuric acid, 40 C.F.R. § 261.4(a)(7);

* Materials that are used or reused as ingredients in an industrial process to make a product, 40 C.F.R. § 261.2(2)(1)(i);

* Comparable fuels, 40 C.F.R. § 261.4(a)(16);

* Materials that have been determined not to be hazardous waste, 40 C.F.R. §§ 260.30, 260.31, and 260.34 or an equivalent state provision.

The proposed definition of "non-hazardous secondary materials" is structured in such a way that hazardous secondary materials that are not "hazardous waste" would fit the definition of "nonhazardous secondary materials" under proposed Part 241. Those materials would then be required to undergo the legitimacy analysis under Subtitle D to show that they are not "solid waste."

Rhodia therefore asks the Agency to clarify the definition of "non-hazardous secondary material" under proposed 241.2 as follows: "Non-hazardous secondary material means a secondary material that, when discarded, would not be identified as a hazardous waste under part 261 of this chapter. The term 'non-hazardous secondary material' does not include material that exhibits a hazardous characteristic but that is exempt from the definition of solid or hazardous waste under part 261 of this chapter, or that has been determined not to be a solid or hazardous waste under Part 260 of this Chapter or an equivalent State provision."

D. Non-hazardous materials that are burned should not be presumed to be "solid waste" under Subtitle D.

Rhodia does not support the Agency's proposed "alternative approach" that would presume that all non-hazardous secondary materials are "solid wastes" when combusted. 75 Fed. Reg. 31,844, 31,885. Rhodia believes that this alternative approach would be unduly burdensome on industry

and is inconsistent with the Agency's position that reusing secondary materials is environmentally beneficial.

As the Agency recognizes, secondary materials are widely used as raw materials, as products, and as fuels and/or ingredients in industrial processes. The continuous development and refinement of combustion technologies improves the efficiency of combustion processes to allow combustion units to derive more value from different types of secondary materials. 75 Fed. Reg. 31,844, 31,849. The combustion of secondary materials not only recovers valuable resources, it is also known to reduce greenhouse gas and particulate matter emissions. Id. The use of secondary materials as ingredients or fuels also reduces the need for virgin raw materials and fuels. Id. Creating a rule that presumes that such materials are "solid waste" when combusted creates a disincentive to reuse secondary materials by subjecting units that combust these materials to heightened regulation.

Treating all non-hazardous secondary materials as "solid wastes" when combusted is also inconsistent with the purpose and structure of RCRA. 40 C.F.R. § 261.2 does not presume that all hazardous secondary materials that are burned are solid wastes. Rather, hazardous secondary materials are solid wastes only if they are "abandoned" by being burned or incinerated. 40 C.F.R. § 261.2(b). Thus, the hazardous waste regulations implicitly recognize that there are instances in which hazardous secondary materials may be burned or combusted without being "abandoned." Section 261.2 further recognizes that materials that are recycled by being used or reused as ingredients in an industrial process, or as an effective substitute for a commercial process, are not solid waste. The Subtitle C regulations, therefore, do not presume that all hazardous secondary materials are solid wastes when burned. Because RCRA was structured so that hazardous wastes are regulated more stringently, it is inconsistent with the purpose and structure of RCRA to craft a definition of non-hazardous solid waste that results in more stringent regulation for non-hazardous solid waste than for hazardous solid waste.

The Agency's "alternative approach" appears to be based on comments to the ANPRM suggesting that any secondary material that is burned for energy recovery is a solid waste. Although the case is not referenced by name, this viewpoint is based on an erroneous reading of the

D.C. Circuit's decision in Natural Resources Defense Council v. Emil. Prot. Agency, 489 F.3d 1250 (D.C. Cir. 2007) ("NRDC"). As explained in Section I, supra, the NRDC decision does not compel the Agency to presume that all non-hazardous secondary materials are solid wastes when combusted. No reason exists, therefore, to adopt this vastly overbroad alternative approach.

E. No Btu Threshold Should Be Set.

The Agency has also requested comment on whether it should establish a floor Btu value below which secondary materials burned as fuels would not be considered to have "meaningful heating value." The Agency has considered 5,000 Btu/lb as a possible floor value. Rhodia does not support the establishment of a floor Btu value for fuels. Rhodia agrees with the Agency's assessment in the ANPRM that even materials not meeting the comparable fuels minimum heating value of 5000 Btu/lb can have value as legitimate fuels. 74 Fed. Reg. at 54. Changing technology constantly improves the efficiency of the combustion process, making it possible to derive "meaningful" heating value from materials with lower Btu ratings. If the Agency were to quantify

"meaningful" heating value by creating a floor below which secondary materials could not be considered legitimate fuels, that floor would soon become out-of-date in light of advancing combustion technology.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Catharine Fitzsimons
Commenter Affiliation: Iowa Department of Natural Resources (IDNR)
Document Control Number: EPA-HQ-OAR-2003-0119-1837.1
Comment Excerpt Number: 1

Comment: Comments regarding CISWI that are related to EPA proposal to amend the definition of nonhazardous solid waste fDocket No. EPA—HQ—RCRA-2008-0329]

The National Association of Clean Air Agencies (NACAA) provided comments on the solid waste proposal that specifically related to issues affecting air quality and to the ability of state air agencies to implement Clean Air Act programs.

In summary, NACAA expressed concern that EPA's proposal does not establish a clear, objective definition and uses criteria that are open to widely different interpretations. This could lead to confusion about which sources are subject to Clean Air Act (CAA) Section 129 and

which are subject to Section 112. NACAA also recommended that EPA clearly articulate the role of state and local permitting agencies in the determination of what is a solid waste.

The IDNR concurs with the following, specific comments submitted by NACAA:

"Under section 129, EPA must establish the 'meaning' of the term 'solid waste.' In its proposal to do so EPA has specifically rejected suggestions that it provide clear lists of those secondary materials that it believes are wastes and those it believes are not. Moreover, EPA also rejects any role for state and local permitting authorities in this process, asserting that, under section 129, it and it alone is responsible for establishing the meaning of solid waste. Instead, EPA proposes two sets of 'criteria' for determining whether a secondary material is a solid waste and — importantly asserts that these criteria are to be self-implementing. These criteria include a number of terms that are susceptible to widely different interpretations: (1) whether a low BTU material provides a "meaningful" contribution to the energy needs of a source; (2) whether the level of contaminants in a secondary material is "comparable;" and (3) whether secondary materials have been stockpiled for more than a "reasonable" time. By "self implementing," EPA means that the source itself would look at the criteria and decide whether its secondary materials are solid wastes. Based on this determination by a source, either section 112 or section 129 limits would apply. However, contrary to this notion, under the CAA (and especially under Title V), while a source may propose that an emission limitation (e.g. Best Available Control Technology) does or does

not apply, it is the permitting authority that determines whether a particular requirement applies. Nothing in the narrow language of section 129 suggests that it was intended to alter the role of state and local authorities either in the management of solid wastes or the

implementation of CAA permit programs. Indeed, pursuant to section 129, EPA merely promulgates "emission guidelines," the actual emission limitations are to be implemented in the first instance by state laws submitted to EPA for review and approval in a manner similar to State Implementation Plans developed under section 110 of the CAA. The act further provides a substantive state role in this process, in that states may take into account the remaining useful life of a facility (and other factors) in developing a standard for that facility. Thus, it would appear that the CAA anticipates a process where the states, in developing plans under section 111(d) of the CAA, incorporate facility-specific limitations that may deviate from EPA's guidelines where appropriate...

Based on a reading of its preamble, 30 years of prior experience has given EPA some clear notions of what it considers to be a waste. For, example, EPA clearly believes that the emissions resulting from combustion of bagasse by sugar producers should fall under section 112 rather than section 129...For this reason NACAA suggests that EPA adopt the suggestion of various commenters that it promulgate as part of its rule lists of materials that are secondary materials as well as those that are not. We recognize that this is a complex area and that there will be a number of instances where the determination is a close call that depends on specific facts. We believe that EPA is currently in a position to make determinations for over 80 percent of the processes/industries subject to standards under the proposed rules. For that category of materials where a clear determination cannot be made, criteria similar to those set out in EPA's proposal could be employed in the case-by-case procedure that EPA suggests. For the most part, these criteria have been used by EPA over the years to evaluate whether an entity is engaged in "sham recycling." We see no reason why such "criteria" could not be set out in rules governing RCRA state program and/or section 111 plan approval and applied by state and local regulatory authorities (rather than simply by sources as set out in the proposal)." [NOTE: The footnotes that NACAA included with their comments are omitted here]

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 1

Comment: The potential effect of the CISWI standards is intrinsically connected to EPA's concurrent proposal regarding the Identification of Non-Hazardous Secondary Materials That Are Solid Waste (75 Fed. Reg. 31843). The Maine DEP submitted comments regarding that

proposal as well, and hopes that EPA will seriously reconsider the scope of materials that would be defined as solid wastes. To reiterate Maine's position on the solid waste definition:

Maine wants to continue to regulate the use of non-hazardous secondary materials as a fuel or ingredient and wants to maintain regulatory authority over these materials and their disposition.

Maine wants to continue to maximize the diversion of non-hazardous solid wastes from disposal by continuing the uses that have already been carefully reviewed through the state's beneficial reuse program [Footnote: Commment submitted by Yvonne Bolton, Board of Directors, NEWMOA. Document ID:EPA-HQ-RCRA-2008-0329-0788.]

Ideally, all non-hazardous solid wastes would be considered solid wastes unless the disposition of the waste has been vetted through a state's benefical use determination (BUD) program. Facilities combusting wastes that have received a BUD require both air and solid waste permits to burn the waste.

If the scope of the solid waste definition remains unchanged in the final rule, there are hundreds of boilers and process heaters in Maine licensed to burn secondary materials, such as waste oil, that would

be regulated as CISWI units. Maine's licensing program covers combustion units of at least 1 million British thermal units per hour (MMBtu/hr); Maine DEP expects there are many additional unlicensed units at small commercial and industrial facilities that could also be subject to the CISWI standards.

Hundreds of boilers in Maine combust a combination of traditional fuels and a variety of secondary materials, many of which have been granted beneficial use determinations by the Maine DEP's Solid Waste Program. The majority of those units are oil-fired units that also combust waste oil generated on-site. Other commonly combusted secondary materials include tire derived fuel (subject to a range of processing), sanitary waste water sludge, waste paper, on- and off-specification used oil, oily solids, coffee grounds, and construction and demolition debris. Much of these materials is generated on-site at pulp and paper mills and biomass energy production facilities, and are diverted from the landfill waste stream by their combustion for heat and energy recovery. However, the heat input contribution of many of these materials is minimal and will no longer be cost effective for facilities as an alternative to disposal if combustion in their boilers subjects the units to the CISWI standards. The Maine DEP is extremely concerned that the proposed standards will negatively impact beneficial use of secondary materials, increase the volume of Maine's waste stream, and impose significant costs on Maine's industrial and commercial facilities without effectively reducing the primary pollutants of concern.

The EPA and all states, including Maine, have goals to conserve resources and to maximize the diversion of materials from disposal. The Maine DEP is concerned that the effect of the proposed solid waste definition and CISWI standards will be diversion of pulp and papermill sludges from their current combustion in boilers to disposal in landfills. Emission tests have shown no significant differences in emissions with or without the combustion of these residuals in boilers. These dewatered sludges have net energy value as a usable form of fuel, and do provide a source of energy to the mills. These wastes have been licensed by the Maine DEP as a boiler fuel for many years and received beneficial use determinations. The Maine DEP estimates that regulation of boilers combusting papermill sludges under the CISWI standards will at least double the mills' landfill capacity needs.

Increased landfilling of sludges will increase production of methane, a powerful greenhouse gas. Maine has aggressive statutory greenhouse gas emission reduction goals to eventually achieve 75 to 85 % reductions from 2003 levels. Increasing the landfill disposal rate of pulp and papermill sludge, thereby increasing the production of methane gas, is counter-productive to this effort.

In addition, some mills in Maine receive treated municipal wastewater and landfill leachate in their wastewater treatment facilities. Maine recommends that EPA establish a de minimus level of 5% of annual wastewater flows that would allow for the processing of these wastes and the beneficial reuse (combustion) of the resulting sludge in properly licensed boilers (air quality and solid waste permits).

There are more than one hundred boilers in Maine licensed to combust waste oil as a fuel. Many of these facilities blend off-specification oil into on-specification waste oil, or they blend off-specification oil with normal fuel oil to meet on-specification waste oil standards. The proposed CISWI standards contain no de minimis for applicability, which could cause automotive garages nationwide that burn waste oil in burners for space heat to send their waste oil off-site. The proposed CISWI standards would require every one of those facilities to obtain a Title V permit, and would virtually eliminate beneficial use of off-specification waste oil as a heating fuel. It would greatly increase the volume of

waste oil that must be shipped to processing facilities, which consumes resources and results in air emissions, and would likely increase the rates of improper disposal, spills, and resultant groundwater contamination. Units that burn residual oil are subject to less onerous standards under the proposed Area and Boiler Source MACTs while that fuel type produces equivalent or higher HAP emissions. The Maine DEP recommends that EPA establish a separate subcategory for waste oil combustion with only work practice standards.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

The commenter also mentions that, due to the NHSM, there may be space heaters burning used oil that could possibly be subject to CISWI. These particular units are discussed in the CISWI preamble.

Commenter Name: Catharine Fitzsimons
Commenter Affiliation: Iowa Department of Natural Resources (IDNR)
Document Control Number: EPA-HQ-OAR-2003-0119-1837.1
Comment Excerpt Number: 2

Comment: The IDNR also submitted comments to the docket for EPA's proposed amendments to the definition of non-hazardous solid waste. The following comments are verbatim to those provided previously for the solid waste proposal, and are also pertinent EPA's proposed CIS-WI amendments:

As proposed, it will be the facility's (i.e., the facility that burns the material) responsibility to determine if the non-hazardous secondary material satisfies the proposed criteria that identifies

which material is a solid waste when burned in a combustion unit. We are concerned by the self-implementing nature of the proposed criteria, in that no oversight is required of the Agency or state solid waste programs. In order to evaluate whether the facility burning the material has accurately evaluated the material to ensure it meets the legitimacy criteria, third party review of the operator's justification is crucial. IDNR recommends that the Agency require initially, if not on a periodic basis, notification and recordkeeping by those persons who both generate and combust the nonhazardous secondary material, including documentation that explains or provides the basis for the non-hazardous secondary material designation. Given most states already have permitting requirements expressed in their administrative rules for facilities that incinerate solid waste, notification and recordkeeping requirements may be better served by delegating this authority to the states.

The proposed definition of processing is insufficient and will be subject to such a wide interpretation that its implementation across states will not be consistent. The self-implementing nature of the proposed rule will only add to implementation inconsistencies. Given the level of processing necessary to render a discarded non-hazardous secondary material into a non-waste product is dependent upon on the material, the criteria with which an evaluation are made must be clear and concise. The proposed criteria include conditions like "significantly improve the fuel characteristics," "chemically improve the as-fired energy content," "improve ingredient characteristics," "secondary materials have been stockpiled for more than a "reasonable" time," "whether a low BTU material provides a "meaningful" contribution to the energy needs of a source," and "whether the level of contaminants in a secondary material is "comparable." The vagueness of these terms will be a point of contention and ongoing debate regarding whether adequate processing has taken place. A list of activities that the Agency has deemed adequate processing and/or a comprehensive list of non-hazardous secondary materials that the Agency has deemed not solid waste would provide much needed clarity to generators and state agencies.

Further clarification is needed regarding what constitutes "clean" cellulosic biomass. The proposed rule tries to clarify this by stating that it "must not be altered (either chemically or through some types of production process), such that it contains contaminants not normally associated with virgin biomass materials, to ensure that the material being burned does not introduce contaminants not normally associated with virgin biomass materials." In the instance of agricultural seeds, they are often subject to various treatments (e.g. fungicides and pesticides) designed to protect seed growth and impart improved handling characteristics. It is unclear from the proposed rule at what point the Agency considers cellulosic biomass to be "virgin" in nature and void of contaminants so as to accurately characterize whether the material is a traditional fuel when combusted.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)

Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 10

Comment: Solid Waste Determinations And Permit Delays

There are concerns that the process for determining applicability with the Boiler MACT Rule versus CISWI will cause significant delays in issuing construction permits. Based on the EPA's proposed applicability determination process, a facility applies directly to the EPA regional administrator for a determination, which includes a 30-day public notice period. South Carolina issues permits to both minor and major sources. A facility must apply for and be issued a construction permit prior to using any additional fuel. We would not be able to issue a construction permit without first determining if the source was subject to CISWI or the Boiler MACT Rule. Additionally, our State regulations specify the amount of time we are given to issue these permits, from 90 days (minor) to 270 days (P SD) depending on the regulations triggered. The process proposed by the EPA would first, remove the state permitting agency from the determination process and second, potentially delay permit issuance until a determination was drafted, noticed and issued by the EPA. The EPA has not committed to a timeframe to review and notice these determinations. Additionally, South Carolina issues operating permits for minor and major sources. These permits must address all applicable requirements, including a determination of CISWI or Boiler MACT Rule applicability.

South Carolina's solid waste management program currently makes solid waste determinations and determinations on the beneficial reuse of certain materials. The EPA should rely on a determination through the state's beneficial use program rather than through the petition process to the EPA regional administrator. The EPA should use the flexibility provided by CAA Section 129 to rely on a state's determination that certain secondary materials are or are not solid waste when handled in a manner approved by the State. The State is more than qualified to act on behalf of the EPA to make such caseby-case determinations.

While EPA acknowledges that the actual planning and direct implementation of solid waste programs under Subtitle D is largely a state and local function, it nonetheless proposes a definition of "solid waste" that would potentially create a regulatory conflict for state solid waste management programs. Even though the proposed definition is intended to narrowly define which non-hazardous secondary materials are or are not solid waste when used as fuel for energy recovery or as ingredients in combustion units, those determinations may conflict with a state's determination regarding a material's beneficial use, for example, waste tires or used oil. Therefore, the proposed rule should clarify the following:

a. that the RCRA Subtitle D definition of solid waste applies only to the use of such materials as fuel or ingredients in combustion units as regulated by Sections 112 and 129 of the CAA and associated federal air regulations;

b. that the proposed rule does not preempt any state statutory or regulatory definition of solid waste; and

c. that the material may be simultaneously regulated as a fuel, product, or recycled materials pursuant to a state's air pollution control program, and as a solid waste by a state's solid waste program.

South Carolina has in place a well established solid waste management program that, by law, includes programs for the collection, recycling, and reuse of solid waste, such as waste tires and used oil. The State is concerned about the potential for an increase in the mismanagement and illegal disposal of such materials that would no longer be used as a fuel source by a facility that did not want to upgrade to the Section 129 air pollution control requirements. There is also a concern about the impact on the increase in landfilling of materials that will no longer be burned particularly when landfilling is the least desirable solid waste management option for the State.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 1

Comment: The Used Oil Management Association (UOMA) requests that this letter and the attached comments [see DCN: EPA-HQ-OAR-2003-0119-1948.2 through 1948.7 for attachments submitted by the commenter] be included in the docket for the Environmental Protection Agency's (EPA's) Proposed Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incinerators (CISWI) (75 Fed. Reg. 31938, June 4, 2010).

UOMA is a trade association representing the manufacturers of used oil-fired heaters and small boilers that operate in accordance with the standards set forth at 40 C.F.R. 279.23. These products are designed to safely combust used oil in accordance with EPA's Used Oil Management Standards at 40 C.F.R. Part 279.

The attached comments set forth the legal and policy arguments that support UOMA's contention that used oil is not a solid waste and therefore units that burn used oil are not subject to the proposed CISWI rule. Specifically, whether on- or off-specification, used oil is a traditional fuel with a long history of being managed as a valuable fuel product. In addition, Congress, in the Used Oil Recycling Act of 1980, established a separate regulatory program for recycled oil. This program covers used oil that is burned for energy recovery, as distinguished from used oil that is discarded (and therefore a waste). See 42 U.S.C. 6903(37) and 40 C.F.R. 279.10(a).

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eileen Sottile
Commenter Affiliation: LKQ Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1832.1
Comment Excerpt Number: 1

Comment: LKQ processes over 465,000 vehicles annually. This figure equates to roughly 2.3 million scrap tires that, they cannot be recycled for consumer's use, are processed as TDF. 2,430 tires, when converted to TDF, can supply enough energy to power one home for a year. As explained in its comments on the RCRA proposal, we view TDF as a valuable fuel resource and do not believe it should be classified as "solid waste" when combusted for energy recovery. Such designation would discourage this important recycling market by classifying units combusting such materials as CISWIs, thereby subjecting these units to the proposed emission standards of this rulemaking.

The same reasoning applies to the recycling of used oil fuel for energy recovery. As part of our operations, LKQ goes to great lengths to ensure that every fluid is removed from the automobiles we recycle to prevent their introduction into the local environment. Under both state and federal guidelines, used motor oil must be drained to prevent entering the land or storm water systems. Among other things, LKQ burns used oil fuel on-site for heat recovery in lieu of virgin fuel, and introduces used oil fuel into the used oil fuel recycling market.

As is the case with TDF, if EPA designated off-specification used oil fuel as a solid waste under the RCRA rulemaking, facilities combusting these materials for energy recovery would be subject to the CISWI emission standards. LKQ believes it would be poor environmental policy to categorize facilities recycling used oil fuel for energy recovery as CISWIs, as this would not properly characterize the true purposes of these combustion activities – which is recycling as opposed to destruction. This also could result in a downturn in TDF and used oil fuel recycling markets, which would be environmentally counter-productive.

If such units are identified as CISWIs, including LKQ's facilities when they burn such materials for heating value, the applicable CISWI emission standards must be technical and legally sound. Unfortunately, as outlined below, we do not believe this would be the case in the proposed rule. If these flaws are not corrected, LKQ could be subject to significantly increased and inappropriate controls for the combustion of used oil fuel.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Stephen E Woock
Commenter Affiliation: Weyerhaeuser Company
Document Control Number: EPA-HQ-OAR-2003-0119-2094.1
Comment Excerpt Number: 1

Comment: Weyerhaeuser has over 40 boilers and process heaters at its wood product mills and pulp mills located across the U.S. We presume these boilers and process heaters will either be subject to the Boiler MACT (proposed 40CFR63 subpart DDDDD) or the Area Source Boiler Rule (proposed 40CFR63 subpart JJJJJJ) that EPA concurrently issued with the RCRA and incinerators rules. Weyerhaeuser also operates additional boilers and process heaters at several wood products mills that, as direct-firing combustion units (i.e., the heated combustion gases contact the process materials), have been subject to the PCWP MACT (40CFR63 subpart DDDD) promulgated in 2004; it appears that these units also could be impacted by the proposed solid waste definition rule because some of

their fuels are potentially subject to this new dichotomous "fuel or waste" evaluation under the RCAR rule proposal.

All of these combustion units are designed to combust fuels to produce steam or heat, and at our pulp mills some cogenerate electrical power. EPA should note these units are not designed or operated as incinerators, and Weyerhaeuser does not intend to operate or permit them to operate under the CISWI regulations [Footnote: This is Weyerhaeuser's intention; however, the final tally is a presumption because it will depend on achievability and economic feasibility evaluations with respect to how EPA chooses to finalize the Boiler MACT (75 FR 32006) and Area Source Boiler NESHAP (75 FR 31896), as well as the concurrently-proposed Non-hazardous Secondary Materials Solid Waste Definition rule (75 FR 31844) and these proposed CISWI rules.]. We believe boilers and process heaters are designed and operated differently from incinerators and an inaccurate regulatory declaration will not alter their basic design and functionality. We refer EPA to the comments we filed on the non-hazardous solid waste definition proposed rule for extensive discussion of the reasons we believe EPA is able to continue to protect health and the environment while also protecting the current and future value of the secondary materials that are part of the fuels firing our boilers and process heaters.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: David Mickey
Commenter Affiliation: Blue Ridge Environmental Defense League
Document Control Number: EPA-HQ-OAR-2003-0119-1966.1
Comment Excerpt Number: 2

Comment: To maximize the benefits from reduced emissions it is critical that EPA not exclude facilities based simply on energy recovery. The proposed rule includes this definition: "Commercial and industrial solid waste incineration (CISWI) unit means any distinct operating unit of any commercial or industrial facility that combusts any solid waste pursuant to Subtitle D of RCRA."

An "energy recovery unit" is defined as, "Energy recovery unit means a combustion unit combusting solid waste (as that term is defined by the Administrator pursuant to Subtitle D of

RCRA) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste."

Regardless of size and regardless of the energy recovered, either in the form of electricity or in the form of heat or steam, the combustion of solid waste deserves EPA's strongest protections. Many renewable energy from biomass projects fall into a category of small power producers that might be regulated as area sources. Given the wide variety of solid

waste materials proposed as "fuels", the subject of the proposed RCRA solid waste definition rules, it is alarming to see potential "biomass loopholes" in the rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 2

Comment: The proposed rule lacks provisions which allow for limited scale development of new processes for the use of alternative fuels. The rule looks to the past regarding the purpose for combustion (is it recycling or disposal?) and instead defers the CISWI applicability determination, based on past practice, to the proposed Resource Conservation and Recovery Act (RCRA) definition of non-hazardous solid waste.

The proposed rule appears to make it more difficult for small businesses to conduct research into new uses for recyclable materials by treating all new sources as waste incinerators emitting the same air contaminants. Currently, the state air pollution control agency can issue a permit to conduct a trial burn to evaluate the emissions generated by an innovative combustion process or an innovative use of a material as a fuel. Part of the case-by-case permit review process is to complete a mass balance analysis of the expected emissions from a specifically proposed alternative fuel used under specific conditions. That becomes the basis for appropriate air pollution controls and stack testing requirements tailored to the specifically proposed combustion unit. The CISWI rule as proposed will impose identical and expensive performance testing requirements on all combustion sources defined to be waste incinerators based on the material burned as defined in RCRA. The case-by-case review is pre-empted.

A specific example of an innovative process — Michigan's Air Quality Division (AQD) permit staff has fielded questions on whole tire gasification. In 1993 the economics of the process were not favorable, but some small businesses are re-evaluating the possibilities. The EPA's Small Business Innovation Research Web page refers to pyrolysis as a tire disposal process. But the EPA's description states: "Pyrolysis of scrap tires helps to recover and reuse most of the valuable chemical available in tires. Pyrolysis of scrap tires under inert atmospheres produces reusable gas, oil, and char."

As written, the proposed RCRA non-hazardous solid waste definition considers the tires to be a solid waste. The RCRA rule has a petition process to define newly considered materials as either a waste or a fuel. That is different from classifying an industrial process based on emissions. The proposed CISWI definition of "solid waste incineration unit" excludes "materials recovery facilities." Is tire gasification "combustion" or "materials recovery"? Are performance tests for cadmium, carbon monoxide, dioxins/furans, hydrogen chloride, lead, mercury, opacity, oxides of nitrogen, particulate matter (filterable), sulfur dioxide, and fugitive ash all truly required for this process? Is the same testing list necessary for the next new and innovative use of a "waste" material that might also be considered a "fuel"?

Another use of tires is as both an ingredient and fuel in cement kilns. Whole tires in cement kilns should not be regulated as incineration of a solid waste under the CISWI rule. An exemption is appropriate. Tires are used both as a fuel and an ingredient in the cement

production process. The cement kiln is a tire processing unit, not an incinerator used for disposal of tires. One facility in Michigan operated two rotary kilns permitted to process whole tires which were added as a material mid-kiln. Organic hazardous air pollutants (HAP) emissions were controlled through destruction in the kiln at a combustion temperature of approximately 2,300 °F and a retention time measured in minutes and with a regenerative thermal oxidizer add-on control system. Metal HAPs, including those from the whole tires used, exited the kiln in the form of clinker, an ingredient in the Portland cement product. Test data showed compliance with all applicable regulations, including Michigan's air toxics control rule.

It appears that fuel characteristics, which under RCRA define a material as a waste, are being substituted for air emissions control technology efficiency.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Laura Colban
Commenter Affiliation: Skanden Energy
Document Control Number: EPA-HQ-OAR-2003-0119-2109.1
Comment Excerpt Number: 2

Comment: The distinction between incineration and boiler heating is ambiguous and unfounded. As the rule currently stands, there is no logical ground substantiating the difference between an incinerator and a boiler. For example, if a peanut butter factory uses peanut shells to heat its building, the equipment is deemed a "boiler" and EPA boiler rules apply. If it sells these peanut shells to its neighbor for the same use, the equipment is deemed an "incinerator" and EPA incineration rules apply. There is no difference in combustion or emissions, yet because the fuel was transported across the street, different rules apply. A better approach is to make fuels that are comprised of 100% plant material permissible in boilers, and require that fuels be tested annually.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Randy Thurman
Commenter Affiliation: Arkansas Environmental Federation (AEF)
Document Control Number: EPA-HQ-OAR-2003-0119-2018.1
Comment Excerpt Number: 2

Comment: By redefining solid waste to include a wider scope of materials—such as biomass and certain pulp and paper residues that include primary and secondary wastewater treatment sludge's, as well as painted wood and treated wood—and forcing such incinerator units to be Title V permitted with emissions limits based upon MACT floors for each subcategory will effectively eliminate a large portion of Arkansas's waste to energy efforts.

Arkansas's main hope for a future based upon "alternative energy sources" is underpinned not by wind, solar or future river damming projects, but upon the large quantity of naturally occurring biomass lying upon the floor of our vast forests, and the wood residue from our forest and paper products manufacturing facilities. Under the proposed rules, most of this biomass material will be considered solid wastes, and if incinerated, must comply with the most stringent air emission's limitations. This seems counterintuitive to our efforts to utilize our own resources for energy production. The net effect will be contrary to the energy policies of the State of Arkansas and the nation.

Additionally, Arkansas's manufacturing sector has relied upon the use of whole tires as an energy source for production of cement. The Ash Grove Cement facility is a ready and eager market for the thousands of used tires produced each month in Arkansas and surrounding states. Without that facility, the State and taxpayers would be saddled with the additional burden of disposal, with landfill opportunities limited and politically difficult to propose. Requiring the shredding, chopping and belt removal of those tires before they can be used as fuel is a waste of energy, time and resources. It counterproductive to our nation's energy security and makes little environmental sense.

Likewise, the removal of the exemption for agricultural wastes in the solid waste definition will largely impact Arkansas's facilities. Labeling such waste fueled boilers as "waste incinerators" will unduly alarm the public and make permitting of future facilities extremely difficult, resulting in wasted biomass to energy opportunities and, to what environmental benefit?

The AEF and AFPC strongly encourage the Agency to consider the impact to our state and nation's energy independence initiatives as they move forward with this regulation. The regulations will result in less biomass, waste tire and agricultural wastes being utilized as an energy source. This will mean less "home grown" energy in Arkansas, and we suspect in many parts of the nation. It will result in less investment in those types of facilities and fewer job opportunities.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 2

Comment: CAA Section 129 does not have authority over ingredients.

Jurisdiction under CAA §129 is limited to units that `combust' solid waste. A commonly accepted definition of 'combust' is the burning of a gas, liquid or solid in which the fuel is oxidized evolving heat and often light. Thus, EPA has no authority to regulate the use of ingredients. It has been our understanding that all previous rulemakings prompting this Proposed Rule have centered on incinerators burning wastes for destruction purposes and boilers burning wastes, CEMEX urges EPA to reconsider the inclusion of ingredients in this rulemaking. We also question and would respectfully appreciate an explanation of EPA's jurisdiction over the use of ingredients under CAA §129.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jeffrey O'Hearn
Commenter Affiliation: Panolam Industries International Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1961.1
Comment Excerpt Number: 3

Comment: The focus of the regulation appears to be based on the combustion of solid waste streams rather than liquid streams as indicated by Section V. of the Preamble to the proposed rule. Non-hazardous liquid waste streams should be exempted from this rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 5

Comment: Cement kilns should not be regulated under § 129 of the Clean Air Act.

Essroc has submitted comments on a companion proposal to the CISWI proposal during EPA's "Notice of Proposed Rulemaking – Identification of Non-Hazardous Secondary Materials That Are Solid Waste When Combusted." (75 Fed. Reg. 31844 et seq., June 4, 2010). EPA proposed that rule under authority of the Resource Conservation and Recovery Act (RCRA). The purpose of the proposed RCRA rule is to establish the conditions under which non-hazardous secondary materials would be deemed "solid waste" when combusted.

A unit combusting such a material would be subject to Clean Air Act (CAA) § 129 requirements for Commercial and Industrial Solid Waste Incineration Units ("CISWIs"). Therefore, a Portland cement kiln utilizing non-hazardous secondary materials as fuels or ingredients would be subject to the standards and requirements contained in the instant CISWI proposal.

The industry filed extensive comments strongly opposing many fundamental elements of that RCRA proposal on August 3, 2010. Those comments (with numerous attachments) appear in the docket for that rulemaking at EPA-HQ-RCRA-2008-0329-1138 and incorporate them by reference.

As explained in those RCRA comments, Essroc believes the proposed RCRA rule – in combination with the proposed CISWI rule – would have a seriously negative impact on beneficial reuse and recycling of non-hazardous secondary materials in the United States. We explained how our cement kilns use thousands of tons of alternative fuels and ingredients annually in a manner that conserves virgin natural resources such as fossil fuels and mined materials. Yet we showed that Portland cement kilns would have great incentives to avoid CAA § 129 jurisdiction and would accordingly cease engaging in these beneficial reuse practices. Massive amounts of non-hazardous materials now being beneficially reused and recycled would – as EPA recognizes in its proposed rules – end up being landfilled.

We further explained that it is critical to recognize that Portland cement kilns are fully regulated under stringent Maximum Achievable Control Technology (MACT) standards for hazardous air pollutants under CAA § 112 and New Source Performance Standards (NSPS) under CAA § 111. If such kilns are allowed to continue to use non-hazardous secondary materials without triggering CAA § 129 jurisdiction, there would accordingly be no concern over the impacts of air pollutant emissions from the kilns.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Gary A. Molchan

Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 6

Comment: CAA §129 Confers No Jurisdiction Over Use of Ingredients.

The proposed RCRA rule would regulate the use of both fuels and ingredients. Yet jurisdiction under CAA § 129 is limited to units that "combust" solid waste. Under the plain meaning of the word "combust," in an industrial furnace such as a portland cement kiln a fuel is combusted but an ingredient is not. Thus EPA has no authority to regulate use of ingredients.

We also showed in this section of the comments that nothing in the legislative history of CAA § 129 indicated any focus whatever on the use of ingredients. Moreover, throughout the years of rulemaking and litigation prompting the proposed rule, the parties and the court never dealt with the issue of the use of ingredients by industrial furnaces. Rather, all of the focus was on boilers burning waste fuel and incinerators burning waste for destruction. Moreover, EPA has never explained a basis for claiming jurisdiction over use of ingredients under CAA § 129.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 7

Comment: The RCRA Proposal Places Major Impediments on Reuse/Recycle with No Attempt to Justify Such Impediments as Necessary to Protect Health/Environment.

RCRA's primary goals are to (1) protect human health and the environment and (2) encourage reuse and recycling. The second goal is particularly critical in the Subtitle D context, as the materials of concern are by definition non-hazardous. In fact, the first words of Subtitle D are:

The objectives of this subchapter are to assist in developing and encouraging methods for the disposal of solid waste which are environmentally sound and which maximize the utilization of valuable resources including energy and materials which are recoverable from solid waste and to encourage resource conservation. [RCRA § 4001(a), emphasis added.]

EPA has not attempted to justify its anti-reuse/recycling RCRA proposal on grounds that it is in any manner necessary to protect human health and the environment. We indicated how EPA has great latitude under RCRA and the relevant case law to structure its Subtitle D proposal in a manner that would promote reuse and recycling without impairing health and environmental protection. We demonstrated that neither the statute nor the case law require that Subtitle C precedents be applied in the Subtitle D context. Throughout the proposal, however, EPA

improperly relied upon regulatory and case law precedents established for the cradle-to-grave Subtitle C hazardous waste regime as a framework for its approach to Subtitle D non-hazardous materials.

Combustible solid waste processed as a manufactured alternative fuel has long been utilized by portland cement kilns. Using that type of fuel as an example, we showed how EPA's interpretations of such terms as "discard" and "processing," as well as its approach of imposing so-called "legitimacy criteria" in the non-hazardous material context, are legally unnecessary and will have adverse effects on reuse and recycle practices for no health or environmental gain. We also showed that key aspects of the current RCRA proposal treat non-hazardous materials in an even more burdensome and stringent manner than EPA's Subtitle C regulations for hazardous waste.

The Function of the Proposed Rule within the Overall Implementation of RCRA is Exceedingly Narrow.

Some EPA personnel have expressed a concern that if the proposed rule were to provide that a certain type of material were not a solid waste, this could have adverse effects on states' ability to regulate that type of material as solid waste. This is absolutely not correct.

The purpose of this proposed RCRA rule, as clearly stated in the proposal's regulatory language as well as in the preamble, is merely to specify under what conditions certain types of materials would be deemed a solid waste "when combusted" for purposes of determining CAA § 129 jurisdiction. This would not affect the ability of states to classify and regulate materials as solid wastes under their own solid waste laws or under RCRA Subtitle D for purposes of generation, transportation, taxation, management standards, or any other purpose.

EPA stresses this point in its RCRA preamble, 74 Fed. Reg. 31888. Thus, just as the proposed RCRA rule's anti-reuse/recycle approach cannot be justified on health and environmental grounds, it cannot be justified on concerns over impacts on states' ability to regulate materials as solid wastes for all purposes.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 9

Comment: Non-hazardous secondary materials used as ingredients and fuels in cement kilns should not trigger jurisdiction under § 129 of the Clean Air Act

A companion proposal to the Proposed CISWI Rule is EPA's Proposed RCRA Rule. EPA proposed that rule under authority of the Resource Conservation and Recovery Act (RCRA). The

purpose of the proposed RCRA rule is to establish the conditions under which non-hazardous secondary materials would be deemed "solid waste" when combusted.

A unit combusting such a material would be subject to CAA § 129 requirements for CISWI units. Therefore, a portland cement kiln utilizing non-hazardous secondary materials as fuels or ingredients would be subject to the standards and requirements contained in the Proposed CISWI Rule.

PCA filed extensive comments strongly opposing many fundamental elements of that Proposed RCRA Rule on August 3, 2010. Those comments (with numerous attachments) appear in the docket for that rulemaking at EPA-HQ-RCRA-2008-0329-1138. We attach those comments to these comments on the Proposed CISWI Rule [see submittal for Attachment 3 provided by commenter] and hereby incorporate them by reference.

As explained in the comments filed above, the Proposed RCRA Rule – in combination with the Proposed CISWI Rule – would have a seriously negative impact on beneficial reuse and recycling of non-hazardous secondary materials in the United States. We explained how portland cement kilns beneficially use millions of tons of alternative fuels, including spent agricultural seed, and ingredients annually in a manner that conserves virgin natural resources such as fossil fuels and mined materials. Yet we showed that portland cement kilns would have great incentives to avoid CAA § 129 jurisdiction and would accordingly cease engaging in these beneficial reuse practices. Massive amounts of non-hazardous materials now being beneficially reused and recycled would – as EPA recognizes in its proposed rules – end up being landfilled.

We further explained that it is critical to recognize that portland cement kilns are fully regulated under stringent Maximum Achievable Control Technology (MACT) standards for hazardous air pollutants under CAA § 112 and New Source Performance Standards (NSPS) under CAA § 111. If such kilns are allowed to continue to use non-hazardous secondary materials without triggering CAA § 129 jurisdiction, there would accordingly be no concern over the impacts of air pollutant emissions from the kilns.

We explained in detail several fundamental legal flaws with the Proposed RCRA Rule, as follows:

A. CAA §129 Confers No Jurisdiction Over Use of Ingredients

The Proposed RCRA Rule would regulate the use of both fuels and ingredients. Yet jurisdiction under CAA § 129 is limited to units that "combust" solid waste. Under the plain meaning of the word "combust" in an industrial furnace such as a portland cement kiln a fuel is combusted but an ingredient is not. Thus EPA has no authority to regulate use of ingredients.

We also showed in this section of the comments that nothing in the legislative history of CAA § 129 indicated any focus whatsoever on the use of ingredients. Moreover, throughout the years of rulemaking and litigation prompting the proposed rule the parties and the court never dealt with the issue of the use of ingredients by industrial furnaces. Rather, all of the focus was on boilers burning waste fuel and incinerators burning waste for destruction. Moreover, EPA has never explained a basis for claiming jurisdiction over use of ingredients under CAA § 129. (See pages 12-17 of attached PCA comments.)

B. The RCRA Proposal Places Major Impediments on Reuse/Recycle with No Attempt to Justify Such Impediments as Necessary to Protect Health/Environment

RCRA's primary goals are to (1) protect human health and the environment and (2) encourage reuse and recycling. The second goal is particularly critical in the Subtitle D context, as the materials of concern are by definition non-hazardous. In fact, the first words of Subtitle D are:

The objectives of this subchapter are to assist in developing and encouraging methods for the disposal of solid waste which are environmentally sound and which maximize the utilization of valuable resources including energy and materials which are recoverable from solid waste and to encourage resource conservation.

RCRA § 4001(a) (emphasis added.)

EPA has not attempted to justify its anti-reuse/recycling RCRA proposal on grounds that it is in any manner necessary to protect human health and the environment. We showed through numerous examples, and citations to U.S. Supreme Court and D.C. Circuit case law how such an approach would be vacated as arbitrary and capricious, and a failure of reasoned decision making.

In that section we also showed how EPA has great latitude under RCRA, and the relevant case law to structure its Subtitle D proposal in a manner that would promote reuse and recycling without impairing health and environmental protection. We demonstrated that neither the statute nor the case law require that Subtitle C precedents be applied in the Subtitle D context. Throughout the proposal, however, EPA improperly relied upon regulatory and case law precedents established for the cradle-to-grave Subtitle C hazardous waste regime as a framework for its approach to Subtitle D non-hazardous materials.

Whole scrap tires are a particularly important non-hazardous alternative fuel that has long been utilized by portland cement kilns. Using that type of fuel as an example, we showed how EPA's interpretations of such terms as "discard" and "processing," as well as its approach of imposing so-called "legitimacy criteria" in the non-hazardous material context, are legally unnecessary and will have adverse effects on reuse and recycle practices with no health or environmental gain. We also demonstrated that key aspects of the Proposed RCRA Rule treat non-hazardous materials in an even more burdensome and stringent manner than EPA's Subtitle C regulations for hazardous waste. (See pages 18-35 of attached PCA comments.)

C. The Function of the Proposed Rule within the Overall Implementation of RCRA is Exceedingly Narrow

Some EPA personnel have expressed a concern that if the Proposed RCRA Rule were to provide that a certain type of material were not a solid waste (such as whole tires), this could have adverse effects on states' ability to regulate that type of material as solid waste. This is absolutely not correct.

The purpose of the Proposed RCRA Rule, as clearly stated in the proposal's regulatory language as well as in the preamble is merely to specify under what conditions certain types of

materials would be deemed a solid waste "when combusted" for purposes of determining CAA § 129 jurisdiction. This would not affect the ability of states to classify and regulate scrap tires and other materials as solid wastes under their own solid waste laws or under RCRA Subtitle D for purposes of generation, transportation, taxation, management standards, or any other purpose.

EPA stresses this point in the preamble to the Proposed RCRA Rule, 75 Fed. Reg. 31856. Thus, just as the proposed RCRA rule's anti-reuse/recycle approach cannot be justified on health and

environmental grounds it also cannot be justified on concerns over impacts on states' ability to regulate materials as solid wastes for all purposes.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 10

Comment: Given the complexity and history of the Comparable Fuels Exclusion under RCRA, these Proposed Rules should provide some explicit relief from the regulatory burden of these new rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 10

Comment: EPA should not promulgate the Proposed Rule, but instead should adopt a rule using the general framework set forth in the Advanced Notice of Proposed Rulemaking for Identification of Non-Hazardous Secondary Materials as a Solid Waste.

EPA should adopt a rule that focuses on the beneficial use of a secondary material and whether the material meets the legitimacy criteria.

EPA should not focus on whether materials are transferred to a third-party, but should look to the totality of the circumstances of how a non-hazardous secondary material is handled, managed, and used, and whether the material meets the legitimacy criteria in determining whether the material has been discarded. As EPA stated in the ANPRM, "materials treated as a commodity, rather than as a waste, are not discarded and are not solid wastes so long as they are legitimately recycled." EPA has adequate latitude under both RCRA and the court order to define solid waste to include only those materials that are not beneficially reused or recycled, i.e., those that have been truly been abandoned, or that do not meet the legitimacy criteria. As EPA stated in Beyond RCRA, "[o]ne approach to making such a system work would be to identify materials as 'wastes' only when they are clearly destined for disposal; until then, all potentially hazardous materials

would be subject to similar management controls/incentives based on their risk potential rather than on designation as a waste—that is 'materials management' rather than 'waste management.'" [footnote: in: Beyond RCRA, Waste and Materials Management in the Year 2020, EPA50-R-02-009 at 12-13 (April 2003).] The challenge should not be to regulate as much material as possible; rather the challenge should be to find a beneficial and environmentally sound use for all secondary materials.

A more general approach would promote beneficial use of non-hazardous secondary materials. Many secondary materials that are no longer of use to the generator, for example plastics, have high inherent fuel value. Conversion and use technologies are emerging for these materials and the approach in the ANPRM will help promote continued development and implementation of these technologies. Additionally, the general approach of the ANPRM would remain protective of human health and the environment. The ANPRM retains the requirement that a secondary material meet the legitimacy criteria. Further, under the ANPRM, a source that is currently subject to regulation under the CAA would remain subject to the CAA even if it combusts non-hazardous secondary materials as an ingredient or fuel.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 12

Comment: EPA should expand the definition of biomass fuels to include clean sources of wood residue and wood products, including resinated wood products and paper to ensure they are not categorized as "waste".

The company believes that resinated wood products and paper should be included in the definition of biomass fuels, and not be considered solid wastes under CISWI. In regard to the resins and adhesives used in engineered wood products, the Company notes that numerous EPA and other regulatory and voluntary standards have had and will continue to have a profound impact on reducing, and in many cases completely avoiding, the use and distribution of materials containing toxic compounds. Wood glues and resins found in today's engineered products contain far fewer hazardous air pollutants (HAPs) and have resulted in reduced HAP usage and product content.

As a result, the reduced HAP content is also reflected in the characteristics of the cut-offs and trimmings, making today's engineered wood cut-offs and trimmings far less of an environmental concern than anytime in history. EPA's focus on lower HAP and HAP alternatives used in adhesive and resin formulations is an appropriate focus at maintaining the environmental improvements desired.

Similarly, other clean sources of wood-derived and/or cellulosic materials, such as paper, corrugated and clean wood scrap such as damaged palettes should be added to the list of biomass fuels so that these materials can be beneficially re-used as a fuel source under this regulation.

Therefore, if captured at the site where manufactured or initially machined for use in products, or if handled through an effective renewable fuels management program for quality assurance purposes, these wood by-product residuals and other wood, paper and corrugated materials provide a clean, renewable fuel that is a desirable alternative to fossil fuel. We believe such materials are more consistent and therefore more manageable than fuels currently defined as biomass in the proposed National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and should not be considered waste for purposes of determining applicability of the CISWI rule. Furthermore, restricting and regulating energy recovery units such as ours, and thereby restricting the use of such beneficial biomass secondary materials, would be counterproductive from an environmental standpoint. It would have devastating consequences on cut-offs and trimmings wood recycling and recycling alternatives, and could force manufacturers to avoid reuse and instead simply send these materials to a landfill.

An increase in the disposal of these materials to landfills will also have adverse greenhouse gas implications. Wood products that might otherwise be recycled or reused will be destined to a landfill for disposal. Breakdown in the landfill releases far more potent greenhouse gases when compared to beneficial combustion, and landfill emission control systems may be ineffective at capturing and treating landfill gases.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 22

Comment: Our Fuels are Not Solid Waste

As previously stated, the Forest Products Industry burns many fuel types, including purchased and on-site generated biomass, wastewater treatment system and paper production residuals, tire derived fuel, and even creosote treated wood. Use of these fuels is critical to our operations and to managing fuel costs. The Forest Products Industry is closely following the development of the definition of non-hazardous solid waste in hopes that many of the materials that are currently burned as fuels are not classified as wastes, which would force facilities to either landfill these materials currently being burned as fuels and further increase energy costs, or force facilities to unnecessarily install additional air emissions controls and implement additional administrative requirements under the CISWI rule. We are submitting separate comments on the proposed definition of non-hazardous secondary materials that are solid waste.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 16

Comment: Legitimacy. For many years, EPA has struggled to distinguish between secondary materials and solid wastes. In its 2008 final rule (73 Fed. Reg. 64668), EPA published legitimacy criteria within the definition of solid waste ("DSW") where owners and operators may determine if a secondary material meets a "secondary material" exclusion in 40 CFR 260.43. The secondary material exclusion removes the material from regulation as a hazardous waste. The proposed revised solid waste legitimacy criteria adopts the same substantive test for non-hazardous solid waste as exists today for hazardous wastes.

The first three criteria, useful contribution, value, and proper material handling, are appropriate to this inquiry. EPA appropriately proposed that any stream being combusted that contributes meaningful heating value to a combustion system meets the first prong. The presumptive 5,000 British Thermal Unit ("BTU") per pound ("lb") presumptive criteria appropriately identifies materials that should be considered a fuel instead of a waste. EPA also appropriately allows a case-by-case determination for secondary materials contributing less than 5,000 BTU/lb heat contribution to a combustion system.

EPA's proposed value and material handling criteria are also appropriate criteria to evaluate secondary materials. Materials that are not valuable to the generator are legitimately solid wastes. If a generator cannot take reasonable steps to value the material as a product or raw material throughout the material life cycle, then the generator cannot legitimately claim that the material is valuable. Generators producing legitimate secondary materials should properly store, identify, inventory, and manage useful secondary materials.

However, the 2008 final regulation contains problematic language regarding hazardous constituent concentrations in proposed secondary materials. At 75 Fed. Reg. 31852, EPA proposes that "the product of the recycling process does not contain significant concentrations of hazardous constituents that are not in analogous products." EPA inappropriately proposes to extend this concept, which was intended to address "toxics along for the ride," to non-hazardous solid wastes. As these secondary materials are not hazardous waste, EPA should not be concerned about indirect hazardous waste generation absent a finding that combustion of these materials may generate hazardous waste, a finding missing in the DSW preamble. Before continuing any attempts to regulate non-hazardous secondary materials in a manner appropriate for the regulation of hazardous wastes, EPA should make a separate finding that residues of non-hazardous secondary materials could generate hazardous waste. Any further regulation should be based on specific risks from handling any such hazardous wastes.

EPA's proposal to compare secondary material compositions to comparable fuel compositions is flawed. EPA proposes to utilize the hazardous air pollutants ("HAP") at 42 USC 7412(b) or Appendix VII of 40 CFR 261 as a basis to compare secondary materials to comparable fuel materials. Many secondary materials contain concentrations of potentially hazardous organic constituents considerably different than what equivalent fuels may contain. For example, several Arkema streams potentially usable as secondary materials contain a variety of organic HAP not necessarily found in conventional #2 fuel oil. However the combustion device where these secondary materials may be used will consume the organic materials, HAPs and other non-HAP volatile organic compounds ("VOC"). After combustion, where well over 99% of the organics are destroyed in the combustion chamber, the amount of residual organic materials remaining in the vent stream is insignificant.

Likewise, the comparison between secondary materials and inorganic HAP is troublesome. The HAP profile of a typical #2 fuel oil may vary widely, based on where the oil was refined, what feedstock it was refined from, and what, if any, blending may have occurred during distribution. Given that the petroleum industry does not publish standard fuel oil metal and halogen HAP concentrations, generators of secondary materials are left to guess what concentrations of metal and halogen HAPs satisfy this condition.

EPA confuses the issue further by requiring secondary material generators to compare any secondary material to other materials combusted in a specific unit, rather than any comparable material. Newer secondary material combustors are specifically designed to combust the secondary material in the presence of a limited number of supplemental fuel choices. Arkema combusts liquid secondary materials in otherwise natural gas fired units in several locations. These combustors were not designed to combust any liquid fuels, or any materials other than the designated secondary materials and natural gas. EPA proposes that operators of such units must

inappropriately demonstrate that the secondary material is functionally equivalent to natural gas, an impossible proposition. Any secondary materials criteria that forces a generator or an owner/operator to demonstrate that liquid streams meet any standard based on any gaseous stream is inappropriate and should be removed from any final regulation.

EPA should instead utilize the other regulations proposed as part of this regulatory package to address the secondary materials question. EPA seems to be concerned that secondary materials combustion, no longer regulated under the CISWI standards at 40 CFR 60 Subparts CCCC and DDDD, could be combusted in unregulated sources. Some may believe that regulation under CISWI is critical to protect human health and the environment, and no other regulations would apply to combustion units firing secondary materials. Such units would not escape regulation under EPA Federal Register notices coincidentally published with this proposal.

Major sources of HAP combusting secondary materials will be subject to the Boiler and Process Heater Maximum Achievable Control Technology ("MACT") standard, proposed 40 CFR 63 Subpart BBBBB. Area sources of HAP combusting secondary materials will be subject to the Boiler Generally Achievable Control Technology ("GACT") standards, proposed 40 CFR 63 Subpart JJJJJJ. These standards regulate emissions from a variety of regulated air pollutants emitted from combustion activities. Because the Boiler MACT regulates additional pollutants not covered in the Boiler GACT, EPA should consider requiring all owners and operators combusting secondary materials exempted from the definition of a solid waste in proposed 40 CFR 241.3(d) be regulated under the MACT, including area sources. By implementing this

minor change to the Boiler GACT rule, EPA reduces HAP emission risks from less regulated Boiler GACT combustion units. Because the emissions control technologies minimizing HAP emissions risk will coincidentally control most criteria pollutant emissions, the Boiler MACT, substantially as proposed, is reasonably protective of human health and welfare for pollutants that would otherwise be controlled under CISWI. We comment further on Boiler MACT, Boiler GACT, and CISWI, the rules that regulate combustion of non-hazardous secondary materials, separately.

EPA addressed this issue in the RCRA § 261.4 solid waste definition exclusions, specifically for scrap metal (§ 261(a)(13)), shredded circuit board (§ 261(a)(13)), and spent materials from metals processing (§ 261(a)(13)) materials streams. In these cases, owners and operators attempting to assert these solid waste exemptions must meet variations of the first three legitimacy criteria. However, EPA made no attempt to force any constituent-by-constituent equivalency, as proposed in the fourth prong of the non-hazardous version of the legitimacy criteria, in any of these exemptions. Exempting metals recovery and burnoff oven operations from the definition of solid waste, so long as they meet the three-prong non-hazardous legitimacy criteria, meets EPA's solid waste regulatory goal of appropriate cradle to grave management.

EPA should resist regulating the content of non-hazardous secondary materials. By proposing the fourth prong pollutant equivalency test, EPA severely restricts the number, type, and amount of secondary streams that may be combusted in boilers. This rule will cause a large number of facilities to cease combusting legitimate secondary materials, increasing fuel combustion from traditional sources, and significantly increasing the amount of industrial solid waste disposal in

the United States. Congress did not intend this result. Senator Dole testified in the Senate negotiations leading up to the Clean Air Act Amendments ("CAAA") of 1990 that the Senate wished to provide "flexibility so that [solid waste] incineration can be used in an appropriate manner." (136 Cong. Rec. S3757, April 3, 1990) Congress intended solid waste incineration rules to decrease the total solid waste requiring land disposal, not increase the solid waste disposal problem. EPA contradicts its solid waste reduction mandate with the material equivalency proposal. EPA should keep the first three prongs of its proposed solid legitimacy test, and abandon the comparable fuel concentration prong.

Clean Air Act Conformance. Separately, EPA should further clarify that materials meeting the CAAA § 129(g) statutory exemptions from commercial solid waste combustion are secondary materials in proposed § 241.3(b). Congress specifically excluded metals recovery related combustion, certain small power generation and co-generation units, and air curtain incinerators from regulation under CISWI standards. Congress specifically required EPA to not evaluate materials co-located with recoverable and/or recovered metal substrates as solid wastes. The chemical industry, of which Arkema is a member, typically operates two types of metal recovery units where the input stream should not be considered a solid waste.

The first metallic stream subject to recycling after thermal treatment is metallic catalysts and filter media. In many applications, a company will use a metallic material, often alumina, nickel, or precious metal based, to assist with a manufacturing or emission control process. Many of these substrates may be thermally regenerated and recycled. This regeneration process often requires residual (typically organic) materials to be thermally melted, desorbed, or pyrolized (thermal desorption in an oxygen depleted atmosphere) from the metallic matrix. Owners and

operators design these systems to avoid actual combustion on the metallic matrix to extend the metallic matrix service life. Many of these systems require surface activity, and combustion on the face of the metal could reduce surface activity, reducing the value of the underlying metallic material. EPA should find that residues on metallic derived matricies, including a variety of metal bearing catalysts and/or filter media, are not solid wastes when being thermally recovered for recycling.

The second metallic stream subject to recycling after thermal treatment is metallic parts undergoing maintenance. In many applications, a company will use a thermal technology to clean a metallic part when other cleaning technologies may not be appropriate or may damage the part. The underlying part is never considered solid waste, because it is in the process of being returned to service in a manufacturing application. Instead of handling as bulk metals, these parts are handled individually by the owner/operator. Otherwise, the process of removing metal for cleaning, thermally removing (typically organic) materials from the metal, and returning the metallic material to service is the same for loose metal, metallic catalyst mounted to a substrate, and whole metal parts. Just as EPA should not consider residue on a catalyst bed a solid waste, it should not consider residue on a solid metal part a solid waste. Please see our upcoming comment in docket EPA-HQ-OAR-2003-0019 for additional details concerning this process.

Point of Generation. This approach described above, where a metal bearing material that is being cleaned for reuse, is consistent with existing EPA point of generation regulations and policy. At 40 CFR 261.2(a), EPA regulations describe several situations where materials exiting processes are not solid wastes. § 261.2(e) describes how recycled materials are not solid wastes when managed in a certain manner. Recycled materials that are not "used in a manner constituting disposal," burned for energy recovery, speculatively accumulated, or specific inherently waste-like materials, are not considered hazardous wastes by EPA. Here, the metal stream, either in bulk or as equipment parts, is a valuable commodity, needed for reuse in the process. As the metal stream is not intended for disposal, EPA cannot regulate regeneration of these materials as waste combustion per Clean Air Act § 129.

At 40 CFR 261.4(c), EPA designates that materials are not subject to hazardous waste regulation "until it exits the unit in which it was generated," typically known as the point of generation. As the only waste generated from the metal recovery or burnoff oven process is any residue generated during reclamation, the point of generation is ash recovery, not metal recovery or parts cleaning. This situation is analogous to the 40 CFR 261.4(a)(17) spent materials exemption from solid waste regulation typically used by minerals processors. In the exemption, a spent material is not a solid waste if it is legitimately recycled to recover valuable materials, the spent material is not speculatively accumulated, and the spent material is managed as a valuable product. This exemption captures the essence of the legitimacy criteria above. EPA should adopt the same approach when addressing metals recovery operations and burnoff ovens for this regulation. These furnaces recover metals for reuse, the materials are valuable to the operator, and the materials are managed as valuable. EPA appropriately restricts listed hazardous waste generation from this exemption, and requires operators to describe to the Administrator how the handling systems fit the exemption. EPA should adopt his approach in lieu of the proposal, amending the § 261.4(a) language to promulgate a clarification exempting metals recovery and burnoff ovens from the definition of solid waste. Such an exclusion would fully harmonize RCRA solid waste regulations with Clean Air Act statutory requirements.

Arkema understands that, were the process to generate a characteristic or listed ash waste, that the owner or operator would be required to comply with RCRA Subtitle C hazardous waste provisions. However, EPA already possesses appropriate authority to regulate hazardous wastes, and this proposal does not and cannot change those requirements. Here, even if the process residue were hazardous, the cleaning process itself would not be regulated under RCRA, just the residue management practices that follow the cleaning process.

EPA should use its existing point of generation concept to delineate that metal recovery and burnoff oven processes do not manage waste, but manage valuable materials intended for recovery and reuse.

Consequences. Misapplication of the DSW regulation could have substantial unintended consequences, potentially damaging a wide variety of industrial operators. Were EPA to not clarify that compound-by-compound comparable fuel evaluations are not necessary, facilities would be unable to combust alternate fuel streams. This outcome would bring the same fate as EPA's first attempt to promulgate hazardous DSW regulations in the last decade, where the rules were so onerous as to be unusable.

Misapplication of the § 129 metal recovery and burnoff oven exemption from solid waste management would cause most of the United States plastics industry to throw away valuable polymer management equipment, such as extrusion dies, molten plastics conditioning parts, pumps, valves, and pipes. EPA proposes that burnoff oven operators could blast (water or grit) parts as an alternate cleaning practice. However, the plastics industry must maintain dimensional stability of the parts now subjected to burnoff oven cleaning.

Any attempt to hand clean, blast, or otherwise apply physical force to finely machined extruder parts renders the parts useless and scrap. Some of these parts cost tens of thousands of dollars to fabricate to very fine tolerances, and are not replaced easily. Many are custom built for the individual extruder, and may not be able to be replaced but for custom manufacturing at great expense.

We also considered resuming methylene chloride parts washers as a replacement technology, but reject that option for several reasons. First, EPA heavily regulates halogenated parts cleaning systems, with good cause. Halogenated solvents used for parts cleaning are very toxic, many suspected or known carcinogens. Industry does not take a decision to unnecessarily expose its employees to unnecessary toxic environments lightly. First, halogenated parts cleaners are expensive to operate, require significantly additional care to maintain, and create emissions not easily managed. Second, condensers do not adequately recover halogenated organic vapors in these processes, mostly because the required freeboard around the units force operators to collect a significant amount of dilution air in recovery systems. Combusting residual post-condenser emissions is problematic because the halogens in the process stream create hydrochloric acid as a combustion product. This acid gas forces operators to purchase upgraded thermal oxidizers and post-combustion scrubber systems to recover the acid before the final process vent. Third, halogenated solvent cleaning systems are not known to clean some polymers, specifically variations of nylon, from metal parts. Many polymer manufacturers, including Arkema, produce nylon varieties, and thus cannot use halogenated solvent cleaning technologies. For these reasons, because we do not believe that EPA intends polymer manufactures to scrap valuable equipment parts and that no other technology exists to replace burnoff ovens, EPA should

consistently define solid waste management at the point where an operator manages residue from metals cleaning processes.

Conclusion. This proposal, substantially designed to guide owners and operators concerning CISWI applicability, should conform to both RCRA § 3005 conditions and CAAA § 129 conditions. EPA should add provisions to § 241.3(b) to identify the statutory solid waste exemptions using the first three legitimacy criteria identified in the proposal, and incorporating the Clean Air Act § 129(g) exemptions, including metal recovery processes.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Sarah E. Amick
Commenter Affiliation: Rubber Manufacturers Association
Document Control Number: EPA-HQ-OAR-2003-0119-2029.1
Comment Excerpt Number: 2

Comment: RMA strongly recommends that EPA classify TDF as a fuel rather than a waste so units that combust TDF are classified as boilers and not incinerators.

Tire-derived fuel (TDF) is the oldest and most mature market for scrap tires in this country. Industrial facilities across the country, including cement kilns, pulp and paper mills and electric utilities, use TDF as a supplemental fuel to increase boiler efficiency, decrease air emissions and lower costs. RMA has worked to develop the market infrastructure to successfully manage and reuse scrap tires, and is extremely proud of the progress in the area of scrap tire management.

The Definition of Non-Hazardous Solid Waste NPRM specifies that all scrap tires are considered discarded and thus solid waste. Adequate processing of the scrap tire or a successful petition would be required in order for TDF to be considered a fuel. The practical impact of this approach would be that whole tire TDF consumed in cement kilns would be deemed solid waste. As a result, because cement kilns wouldl be burning a solid waste, they will be classified as incineration units and regulated under the proposed CISWI rule. However, TDF destined for pulp and paper mills or electric utilities will be considered a fuel. Thus, pulp and paper mills or electric utilities burning processed TDF would not be burning solid waste and will be regulated as boilers.

RMA urges EPA to consider the detrimental impact classifying TDF as a solid waste will have on the scrap tire marketplace. Although RMA is still in the process of collecting 2009 stockpile data, RMA estimates that fewer than 100 million tires remain in stockpiles, compared to estimates of one billion in 1990. However, depending on the outcome of the Definition of Non-Hazardous Solid Waste rulemaking, the United States could again see the number of scrap tires in stockpiles rise. There would also be significant environmental effects from increase scrap tire

dumping and stockpile formation. Two longstanding environmental concerns with outdoor scrap tire stockpile formation is the risk of fire and mosquito infestation.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Sarah E. Amick
Commenter Affiliation: Rubber Manufacturers Association
Document Control Number: EPA-HQ-OAR-2003-0119-2029.1
Comment Excerpt Number: 3

Comment: RMA filed extensive comments outlining why tires should be classified as fuel rather than waste on the Solid Waste NPRM. [Please see submittal for a copy of these comments included as "Attachment 1" provided by commenter] and incorporates them here in their entirety by reference.

RMA again thanks the EPA for this opportunity to comment on the proposed rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 6

Comment: The proposals will hinder the use of biofuels, biogas and biomass (woody and agricultural) by triggering more stringent air requirements when burning those materials in traditional and renewable energy heat and power generation projects.

Landfill gas and biogas are sustainable fuel sources that should be harnessed for use as a viable fuel. Gaseous fuels are being produced from the collection of landfill gas and from proposed projects using anaerobic digestion of organic containing solid wastes to generate methane, creating a renewable energy source. The State agrees that these gaseous fuels are comparable to traditional fuel products. If landfill gas and biogas are not considered traditional fuels, the combustion unit using landfill gas or biogas may be designated a solid waste incinerator and subjected to more burdensome CISWI standards, even though the composition of these gases are similar to natural gas. Under that scenario, there is little incentive to harness and utilize the fuel source. The associated biogas would then continue as a source of fugitive emissions, containing 50-80% methane [Footnote: U.S. Dept. of Energy website: httn://www.energysavers.gov/vour

workplace/farms ranches/index.cfm/mvtopic=30003 , accessed: 8/19/10.] Also, under the proposed rule, it is unclear who determines if the gaseous fuels are managed as a valuable commodity and have meaningful energy value. The State recommends that the rule contain specific provisions to recognize these as traditional fuels, not solid wastes.

Just as EPA should not overlook the alternative fate of landfill gas and biogas should combustion of these fuels be discouraged by the proposed rules, EPA should also not overlook possible deleterious environmental effects of new regulations that overly constrain existing and emerging technologies that use woody biomass for the production of renewable energy and other purposes. As Governor Ritter and the Western Governors' Association have repeatedly communicated, Colorado and the Inter-mountain West face forest health problems of monumental proportion. Landscape-scale insect infestations, disease, decades of fire suppression, and persistent drought have left Colorado forests in a state of elevated risk for catastrophic wildfire. Not only do such intense fires compromise ecological health and watershed functionality, they pose risk for people, their communities and public infrastructure located within or adjacent to forested land. Importantly, they also are sources of PM, CO_2, CO, NOx, S02, and other pollutants in amounts and concentrations that dwarf emissions typically associated with biomass boilers and other

means of controlled combustion of woody biomass. Since public financial resources are insufficient to underwrite large scale hazardous fuels reduction and forest thinning projects that are critical to reducing these risks and to restoring forested landscapes to healthier conditions within generally accepted ranges of natural variability, private investment tied to the potentially profitable use of woody biomass is a vital public policy objective. Unfortunately, more stringent air quality standards, if not clearly warranted from a public health standpoint, could dramatically impact the ability of private operators and local communities to use locally harvested materials for heating or small scale power generation since the cost of the advanced control technologies are, in many instances, more expensive than the entire project. EPA should thus take a very rigorous look at whether, and if so in what instances, woody biomass should be included in, or excluded from, these proposed rules.

To further underscore the importance of the role of woody biomass use in managing Colorado's forest health issues, [see submittal for attached August 10, 2010 letter from Governor Ritter to the U.S. Secretary of Agriculture, Thomas Vilsack.]

The proposals will hinder the re-use of other byproducts that currently have a viable use as a fuel or ingredient (i.e. waste oil - when used at the facility that generated that oil, waste tire bead/cord, etc.), as well as hinder the re-use of materials that may have a future use as a fuel or ingredient. For example, requiring that the metal wire bead/cord in the tires be removed and the tires be shredded prior to the burning of waste tires in cement kilns is both unnecessary and

wasteful. Cement kilns can easily burn whole tires as fuel — the BTU content of whole tires and shredded tires is the same. Perhaps more significant, ASTM 5.2 suggests that cement kilns burn waste auto tires at sufficient temperatures to oxidize the wire from tire beadkord. Not only does the cement kiln benefit from the energy released from this oxidation, but it benefits from the iron oxide created because iron oxide is a critical component in cement chemistry. Removing the metal from the tires not only increases processing time and resources, it reduces the incentive for beneficial energy recovery, Since whole tires can be burned in cement kilns, the shredding of, and metal removal from waste tires provides no benefit and should not be required.

The proposals also limit the ability to use non-traditional fuels generated by homeowners or small businesses. Many non-hazardous secondary materials that may be used as a fuel are generated by homeowners and small businesses. The requirement that the combustion unit stay within the control of the generator (in these cases the homeowner or small business) is not feasible. This will remove any incentive to develop uses for wastes from these groups as a fuel, even if the waste is superior from an air emissions perspective when compared to the traditional fuel. [See submittal for attachment of potential biomass opportunities in Colorado provided by commenter.]

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 6

Comment: By designating urban wood as a NHSM, EPA sets in motion a series of decisions that will impact our hog fuel boiler, our procurement agreements and our suppliers in ways we can only begin to imagine. Attached is a copy of the NHSM comments that outline our concerns.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 7

Comment: The proposals' inter-relationship with the Definitions Rule should be clarified. Specifically, it is unclear who is to decide whether a material is a non-hazardous secondary material that is a solid waste.

Under the solid waste program the responsibility of making a determination of whether or not a material is a non-hazardous secondary material that is a solid waste lies with the owner or operator. However, this approach conflicts with the historic implementation of the MACT rules under the Clean Air Act, in which the state permitting agency or the EPA has made the ultimate decision as to the applicability of a MACT to industry.

To avoid confusion and unpredictability, and inconsistent compliance determinations and enforcement, the determination of whether a material is a non-hazardous secondary material that is a solid waste must be consistent between the solid waste and air quality programs.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 7

Comment: CalRecycle supports the efforts of U.S. EPA to promote the safe and effective use of non-hazardous secondary materials as fuels or ingredients in the industrial processes involving combustion. CalRecycle supports the prevention of sham recycling and speculative accumulation as these improper activities have resulted in significant hazards to public health and the environment. However, while we understand that U.S. EPA needs to be consistent with past legal determinations regarding discard and the definition of solid waste, we urge U.S. EPA to use its discretion to amend the proposed rule to recognize the benefits of using certain secondary materials as fuel or ingredient. We believe such action is justified from both an air quality perspective, and a resource perspective to preserve our nation's lands and meet our energy needs.

Review of the proposed rule has revealed that there may be unintended consequences that have potentially adverse affects on California's efforts to increase diversion of solid waste from landfills and to promote the recovery of low carbon fuels and energy from solid wastes. The rule as drafted adversely impacts our efforts to promote the use of conversion technologies to produce fuel or electricity from solid wastes and our waste tire diversion program. U.S. EPA can mitigate these adverse impacts by amending the proposed rule as suggested below.

1. The Scope of the Rule Impacts Small Business' Ability to Reuse Wastes

The proposed regulatory approach requires that the secondary material is under the control of the generator and complies with the legitimacy criteria to ensure that the material is not handled as a waste and is a truly beneficial fuel or ingredient product. CalRecycle staff agrees that this approach may work well for waste generated by large companies, but

using only this approach eliminates similar legitimate uses for wastes generated by residences and small businesses since they are unable to maintain control of their wastes. We would support development of a regulatory approach that addresses wastes generated by residences and small businesses and that promotes legitimate and environmental protective reuse of wastes.

2. Landfill Gas/Biooas/Biofuels

On Page 31856, U.S. EPA is asking for comments on whether landfill gas and biogas should be considered a 'traditional fuel'. CalRecycle agrees with U.S. EPA's finding that the composition of these gases is similar to natural gas. On Page 31855, U.S. EPA states that biofuels are viewed as legitimate fuel products. We believe the basis for the determination that biofuels are

considered a traditional fuel is also applicable for landfill gas and biogas. The consequence of not considering these as a traditional fuel would be adverse affects on the marketability for these gases as fuel. This would reduce the demand for these fuels, which will result in increased flaring of landfill gases and thus waste a valuable resource. The proposed rule places the responsibility on the end user of the gas to establish that landfill gas or biogas meets the definition of a traditional fuel based on its chemical composition. Lastly, the consideration of landfill gas or biogas as a solid waste appears to be inconsistent with the hazardous waste regulations where uncontained gases are not regulated.

CalRecycle supports the identification of landfill gas and biogas as a traditional fuel in the final rule or as a finding in the final preamble.

3. Waste Tires

Approximately 40 million tires are generated annually in California. Approximately 75 percent of these waste tires are diverted from land disposal and are re-used in construction projects (e.g., rubberized asphalt concrete paving and tire derived aggregate (TDA) light weight backfill), landfill application (e.g., TDA in aggregate landfill gas collection systems and, as alternative daily cover), and as fuel. About nine million tires annually are used as fuel (primarily in cement kilns).

Although the use of waste tires as a fuel is not CalRecycle's preferred alternative for the reuse of waste tires, the use of waste tires as fuel and "ingredient" in cement kilns constitutes a beneficial use of these waste tires and accounts for a significant portion of the diversion rate. However, the proposed rule poses significant problems by requiring the processing of waste tires so that the steel belts are removed, in order for waste tires to be considered a legitimate fuel. The three cement plants now burning tires as a fuel in California would be treated as solid waste incinerators under the proposed rule, and because processing costs would increase, may elect to not burn waste tires. If the three plants were to stop taking the tires, the diversion rate in California for tires may be reduced significantly from about 75 percent to about 55 percent, resulting in more landfill disposal, and the potential for stockpiling or illegal disposal of tires. U.S. EPA is proposing this rule change even though the preamble for the rule recognized that cement kiln emissions are lower when burning tires as fuel instead of coal, that the metal in the steel belt is needed to make quality cement, and life cycle analysis indicates that lower greenhouse gas

emissions result from burning tires when compared to coal. It appears that the proposed regulatory approach does not consider the situation when a secondary material has a dual benefit as an ingredient and a fuel.

In response to the question on Page 31878, CalRecycle recommends that the final rule contain a provision for waste tires used as fuel in a cement kiln to not be considered a solid waste and supports any effort by U.S. EPA to adopt an additional definition for processing that would not require the metal belts to be removed from tires or the tire be shredded when the waste tire is used in a cement kiln.

4. Ability to Petition for a Non-Waste Determination

The proposed rule allows a petition to the U.S. EPA Regional Administrator for a non waste determination. CalRecycle supports the ability to seek a case-by-case

non-waste determination due to the unknown number of situations that may be affected by the adoption of the proposed rule. On Page 31880, U.S. EPA asks for comments on allowing states to handle the petition determination process. States are more knowledgeable about solid waste activities within their respective state, have programs in place to promote safe and effective management of solid wastes in lieu of land disposal, and have the resources for regulating solid waste facilities and landfills. CalRecycle supports allowing states to handle the petition determination process for non-waste determinations.

5. How Long Should Fuels be Held Before Use

CalRecycle does not believe there is a single answer to the question on Page 31881, of how long fuels are generally held before they are used. Fuel storage varies by industry and in some cases State requirements. For example, in the case of waste tires at cement plants, California statutes provide for a maximum of a one-month supply of waste tires at a cement plant (based on the monthly consumption during the previous year). If the facility stores more tires than this limit it must obtain a waste tire storage permit and be subject to regular inspections.

5. The Proposed Rule is Unclear on How On-Going Activities Will be Addressed

The proposed rule does not address if an on-going activity that would be subject to the new rule would need to be stopped while a petition is filed and processed. Activities should not have to cease if they are meeting all existing State and Federal requirements while U.S. EPA acts on a petition that is filed within a reasonable time. The rule should include a provision for U.S. EPA (or states if delegated the authority) to accept and act on petitions within a reasonable time frame. In addition, CalRecycle staff recommends that the rule be amended to provide for a type of 'interim status' until the U.S. EPA Regional Administrator or State acts on a petition.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 9

Comment: The Brick Industry Association (BIA) on behalf of its member companies submits these comments on the proposed Identification of Non-Hazardous Secondary Materials That Are Solid Waste, published in the Federal Register on June 4, 2010 (75 FR 31843). The BIA is the national trade association that represents brick manufacturers, distributors, and associated services. The BIA has been working diligently with the U.S. Environmental Protection Agency (EPA) on the development of standards for major sources of brick and structural clay products. BIA is providing comments on this proposal because the definition of solid waste could needlessly subject some brick and structural clay products manufacturing operations to a waste incinerator rule, as opposed to our industry specific regulation. The demonstration that

operations are not using solid waste and, thus not subject to these regulations, would be expensive and unnecessary.

In this comment letter, we intend to address two main topics:

* The EPA should recognize the basic fact that a byproduct that has value and is purchased and used by a third party cannot be considered discarded. If a byproduct is not discarded, it cannot be a waste.

* EPA should clarify the rule to exclude situations where the byproduct is being beneficially used in the body of a product and not in the combustion process itself.

Each of these is discussed in more detail below.

A. Definition of Discarded.

While our industry has not been on the forefront of the complex discussions being conducted in to the definition of "waste" versus useful byproducts, we contend that there seems to be some obvious and basic facts that are being discounted in this discussion. We fully support the comments submitted by the American Forest and Paper Association (AF&PA) on this topic and contend that the answer to this issue could be very simple.

1. If a material has never been discarded, it cannot be a solid waste.

2. If a byproduct of a manufacturing process has a recognized and exercised value in another operation (either onsite or at another site), it should not even be considered as potentially "discarded."

EPA appears to recognize onsite reuse as material that is not discarded- and we applaud that determination. However, it seems obvious that the most defensible demonstration that a byproduct has value and has not been "discarded" would be the situation where a third party pays the generating party for this byproduct and then uses it in their process. Clearly, no industry would survive if it paid for something that did not benefit the bottom line of that company. Therefore, the purchase and use demonstrates that this material was not discarded. We cannot understand how, if it was never discarded, there is any reason to then evaluate the "legitimacy criteria" contained in the proposed rule. If it was never discarded, it cannot be considered a solid waste.

We recognize that, in the past, companies have referred to many byproducts as "waste material" and have looked to "waste exchanges" or "waste disposal" options for these products. However, in recent years, everyone has been looking for opportunities to rethink past behavior and to look to more sustainable manufacturing. Rethinking the casual use of the term "waste" has been part of that process—and EPA has been one of the leaders in encouraging reuse or repurposing of these materials. This proposal appears to be a giant and unnecessary step back in this process.

By purchasing the byproduct, the third party company has clearly demonstrated that the product is not a "waste" material, regardless of careless terms that may have been used to describe the materials in the past. For example, in the past, sawdust could have been seen as a "waste," but is now clearly recognized as a fuel, even by the EPA. The same should be clear of materials used as ingredients in other products. We would think that the priority for EPA would

to be to encourage the responsible re-use/re-purposing of byproducts, whether re-use/repurposing is done within the industry where the byproduct is created or sold to a third-party. To do

otherwise would be to discourage the re-use/repurposing and only lead to more materials requiring landfilling, which we believed was contrary to EPA's goals of reducing the waste generated by industry.

In addition, there are several programs currently in operation to seek to increase the use of recycled materials. These include Leadership in Energy and Environmental Design (LEED), an internationally recognized certification program that provides third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO_2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. The LEED program directly awards "points" to a company's actions based on, among other environmentally conscious actions, the percent of recycled content in their products. Programs such as these could be decimated by EPA's overreaching attempts to define useful recycled byproducts as a waste.

As with the LEED program, EPA and others encourage the use of recovered or recycled materials that are expressly not generated on-site. For example, EPA, in its Wastes - Resource Conservation - Comprehensive Procurement Guidelines, uses the following definition:

Recovered Materials: Waste materials and byproducts that have been recovered or diverted from solid waste, but does not include materials and byproducts generated from, and commonly reused within, an original manufacturing process.

This is similar to terminology adopted by the International Standards Organization. ISO 14021 Environmental labels and declarations -- Self-declared environmental claims (Type II environmental labeling) incorporate the following definition:

Recovered material: material that would have otherwise been disposed of as waste or used for energy recovery (e.g. incinerated for power generation), but has instead been collected and recovered as a material input, in lieu of new primary material, for a recycling or a manufacturing process.

Recycled material: material that has been reprocessed from recovered (reclaimed) material by means of a manufacturing process and made into a final product or into a component for incorporation into a product.

Many of these recovered and recycled products could be used in operations that also include combustion. In those cases, the positive benefits that result from these (and other programs) could be lost if EPA determines that any material shipped off-site is "discarded" and a solid waste and that any process that uses these materials must be considered a solid waste incinerator.

B. Regulatory Certainty Needed.

Designation of a byproduct material as a solid waste will bring unnecessary and unwarranted impacts. Specifically, the use of a resource that is termed a "solid waste" as either a fuel or as an ingredient in a process that includes combustion would automatically designate the entire process as a "waste incinerator," regardless of the true primary purpose of the process. It is conceivable that a brick kiln could be reclassified in this way. This makes no sense.

The brick industry, like most other industries, is struggling to recover from a severe economic downturn. At the same time, we are also struggling with the potential for a myriad of new regulations. We believe that it is incumbent on the EPA, as well as on all governing bodies, to

ensure that unnecessary requirements are not being heaped on industry. By overreaching in the determination of what is considered to be a "solid waste," EPA could have a strong negative impact and restrict industry's ability to maintain jobs and/or potentially experience job growth to recover—and for no additional benefit. For materials that are used as part of the body of our brick, we would be forced to evaluate "legitimacy criteria" for each potential byproduct. This material has never been discarded, as discussed above, and should not have to go through any additional analysis. It is not a waste. EPA could eliminate this unnecessary step by clarifying that material added prior to the combustion process (e.g., as part of the body of a brick) is not a waste and is not subject to a "waste" classification.

We understand that EPA has proposed a comprehensive and complicated case-by-case approval process for the use of "waste" as a fuel. The EPA has failed to address that the mere process to determine whether a material is considered to be a solid waste could be an insurmountable cost for struggling industries such as ours, which is comprised largely of small businesses. We fully support the recommendations of AF&PA and others that EPA should, at a minimum, conduct many of these reviews themselves and publish a list of approved applications. The EPA should also solicit for nominations for products that would be reviewed and ensure that the small business impact is part of the selection criteria.

It is our understanding that the combustion of a product that EPA considers to be a solid waste could mean that our brick kilns could be considered a commercial/industrial solid waste incinerator (CISWI) under the Clean Air Act. It is also understood that, if a facility is determined to be a CISWI, we would no longer be subject to the upcoming maximum achievable control technology (MACT) for brick and structural clay products and would instead be subject to the recently proposed CISWI rule. This does not make sense. Our industry's operations are currently being evaluated for a MACT rule that is expected to be proposed in 2011 and promulgated in 2012. Our process is not the least bit similar to an incinerator designed to destroy material through combustion. Our process makes bricks. It is possible to include some recycled byproduct in a brick, which includes byproducts generated both at a brick plant and from other industries (such as bottom ash from coal combustion). This process uses byproducts as an integral part of the brick and creates a useful product, while reducing the amount of material that could be considered "discarded" and ultimately sent to a landfill. The potential for a brick plant to become subject to a rule that never considered brick operations is untenable. One potential fix would be to clarify that materials added to the brick body (i.e., before the combustion process) are not subject to this determination.

As EPA has yet to determine whether materials used by the brick industry are considered solid waste or not, we are unsure whether we should be reviewing and providing comments on the recently proposed CISWI rule. We believe that EPA must first make a final determination on the definition of solid waste and then re-open the public comment period on the CISWI rule should the rule's applicability potentially extend to operations such as brick kilns.

C. Concluding Comments

We are working closely with EPA as they develop the MACT regulations that will impact all of our operations. If this rule, or associated rules such as the CISWI rule, will have an impact on our industry, we would like the opportunity to work with EPA on these rules, as well. However, EPA can ensure that our industry, and other industries, that have been working with EPA in good faith on individual regulations for their specific industry have the certainty they need by not

needlessly expanding the definition of solid waste. The easiest solution to these unintended consequences would be to recognize that material purchased for use as a raw material in the manufacturing of our brick has never been discarded and is, therefore, not a solid waste.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 10

Comment: The waiver process regarding solid waste determinations should be clarified and streamlined, and should give state agencies the authority to make waiver decisions. As it currently is proposed, this process will be severely complicated by the complexity of determining whether a material is solid waste for both air and for solid waste purposes, the fact that these determinations may differ between air and solid waste programs, the anticipated volume of determinations on this matter, and the liability of incorrectly deciding Boiler/Process Heater MACT or CISWI applicability.

EPA recognizes that many states have programs in place to make non-waste determinations

under state solid waste statutes. EPA should allow the states to make case-specific non-waste determinations under the Definitions Rule without the need to obtain EPA approval.

Colorado supports the inclusion of a specific provision authorizing the burning of waste tires in cement kilns under the Boiler/Process Heater MACT provisions and not CISWI. The Definitions Rule allows for a case-by-case petition to the Regional Administrator that is desirable for specific situations. It would be more appropriate to have a specific provision allowing the use of waste tires as a fuel or ingredient in a cement kiln. Absent such a provision, given the uncertainty and time to process the petition, it is likely that more tires will be sent to the landfill annually, illegally disposed or stock piled. Greenhouse gas emissions would increase while the associated viable use of a readily available energy source would be lost.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1

Comment Excerpt Number: 11

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

Definition of contracted processed Urban Wood as a traditional fuel plus the other recommendations PTPC set forth in our comments on the NHSM rule [see submittal for attached comment letter on NHSM rule]

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 13

Comment: Re: Docket ID No. EPA-HQ-RCRA-2008-0329 Comments on the Proposed Rulemaking — Identification of Non-Hazardous Secondary Materials that are Solid Waste

Port Townsend Paper Corporation (PTPC) appreciates the opportunity to comment on the proposed NHSM rule. We would also like to thank you for extending the comment period on the proposed rules for Boiler MACT, CISWI MACT and the area source Boiler GACT. These 3 major sets of rules along with the NHSM rules are each very complex sets of regulations that have the potential of a grave economic impact on industry and our country. We will be submitting comments on Boiler and CISWI MACT by the new deadline. We respectfully submit these comments on the NHSM for your consideration.

Company Background

PTPC operates an unbleached Kraft pulp and paper mill in Washington State and have corrugating converting plants in Canada. PTPC is the largest private employer in Jefferson County, WA providing 290 employees with family-wage jobs and benefits. The mill exports most of its 310,000 tons of product to Canada or overseas.

The mill is a foundation of the area's economy infusing greater than $150 million annually with a 3-to-5 times multiplier effect. Loggers, truck drivers, local suppliers of goods and services depend on our operation for their jobs and businesses.

The mill is the largest recycler on the Olympic Peninsula using the equivalent of over 30% of the State's recovered Old Corrugated Containers (OCC) and is the larges user in the State of Reprocessed Fuel Oil (RFO). The mill has upgraded its operations and is in compliance with MACT I and MACT II along with other federal and state compliance requirements.

The mill has two boilers that are subject to Boiler and/or CISWI MACT — a 1976 stoker-fired biomass boiler and a 1996 oil-fired boiler.

PTPC is considered small pulp-and-paper company as defined by the Small Business Administration (SBA). As such, we participated on the Boiler MACT SBAR panel in the early stages of rule making. The company is also an active participant of the American Forest and Paper Association (AF&PA) and has been working with EPA and AF&PA on Boiler MACT since before the remand. We strongly encourage you to carefully consider the AF&PA comments that will be submitted separately.

Here are our concerns:

* Attached is the March 23, 2009 letter to Administrator Jackson on the Report of the Small Business Advocacy Review Panel for Boiler MACT and CISWI MACT. We would encourage you to review the recommendations from that report as it impacts facilities and small businesses. It encourages health-based compliance alternatives, increased sub-categorizations, reduced monitoring requirements and less frequent reporting.

* By designating urban wood as a NHSM, EPA sets in motion a series of decisions that will impact our boiler, our procurement agreements and our suppliers in ways we can only

begin to imagine:

* Do we use our urban wood but become a CISWI unit? How do we get a circa-

1976 stoker-fire boiler into compliance with limits set by units designed upfront as incinerators? is this even technically-feasible? Our consulting engineers doubt it.

o Do we continue to contract with urban wood suppliers to provide us 10-200/0 of our biomass supply? Or do we drop them and begin to source from the woods?

o Do we drop using this processed urban fuel and lose the stability of the bum by giving up a consistently dry fuel? By doing this, we increase the variability of the moisture of the biomass.

o Do we just start burning more oil again? We do not have natural gas available in our area.

o Do the urban wood suppliers give up on the extensive sorting & processing to prepared our fuel & let this product go off to the landfill?

o Do the suppliers we have been working with over the years just go out of business?

o What is the timing needed to make these decisions?

* PTPC believes that the Urban Wood supplied to our mill has mistakenly been lumped into the construction & demolition waste category. RCRA defines solid waste as material that has been discarded. The source of our urban wood is collected, sorted, processed and delivered under contracts with quality specifications. The material is a fuel that has both economic value (as evidenced by the invoices) and environmental value. The fuel is sorted & processed to eliminate any asbestos or lead contamination. Any loads that are suspect are rejected and loads are periodically tested to prevent contamination. Some suppliers have been dropped when they could not meet the quality standards in place. The drier urban wood when run at 10-20% of the biomass load allows us to reduce our use of oil and increase our use of biomass. Contracted Urban Wood is a traditional fuel and should be listed as such.

* The legitimacy criteria for the NHSM appear to be more stringent than that for hazardous waste. This appears to be an overly zealous approach to handling a variety of materials as fuels.

Since the vast majority of environmental impact comes from the combustion of fuel, it is more appropriate to focus on combustion emissions than on incidental contaminants in the fuel.

* These proposed rules provide that some fuels are considered NHSM if they come from off-site from a third party as opposed to coming from the same source but under the owner's control. This mill has used third party suppliers for a number of the materials we need to produce our products. We have worked for years to develop sound business

practices to insure that we receive what we ordered. This includes fuels. This well-established supplier model should not trigger NHSM designation.

* The Alternative Approach to designate solid waste seems to be overly broad and discourages the concept of reuse, recycle or recover energy. RCRA should be concerned with the regulation of hazardous waste and allow innovation and economics dictate how materials are used or re-used.

Recommendations

These rules should be working in concert with energy independence, cross-media environmental impacts and economic sustainability. We would recommend that EPA reconsider the NHSM definitions to include:

1) The recommendations from the SBAR report to reduce monitoring and reporting frequencies.

2) Define contracted Urban Wood as a traditional fuel.

3) Legitimacy Criteria Reviews consistent with comments above.

4) Individual companies conducting their own legitimacy criteria reviews to determine what is a fuel or a solid waste. The company can retain their records for inspection or audits.

5) Dropping the proposed Alternative Approach.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Terry Walmsley
Commenter Affiliation: Fibrowatt LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2118.1
Comment Excerpt Number: 1

Comment: As stated in the CISWI Rule, at 31945, the applicability of such proposed rule is linked in parallel with a proposed rule at 75 Fed Reg. 31845 (2010) related to the "Identification of Non-Hazardous Secondary Materials that are Solid Wastes." On August 3, 2010 Fibrowatt submitted comments to this proposed Solid Waste Identification Rule [see DCN: EPA-HQ-OAR-2003-0119-2118.2 for comments on the proposed Solid Waste Identification Rule] supporting a position that poultry litter is a 'traditional fuel" [Fibrowatt's detailed rationale for identification of poultry litter as a traditional fuel or, as an alternative, the demonstration that

poultry litter is a non-hazardous secondary material that qualifies as a legitimate fuel is provided by commenter, see DCN: EPA-HQ-OAR-2003-0119-2118.2.] In these comments, Fibrowatt (a) provided supporting information on the fuel characteristics of poultry litter, (b) demonstrated that poultry litter is procured, transported, managed, and processed as a fuel, and (c) demonstrated that poultry litter has been used successfully as the principal fuel in multiple large-scale, modern biomass power plants since the early 1990's .

Under characterization of poultry litter as a traditional fuel or alternatively, as a non-hazardous secondary material that qualifies as a legitimate fuel, such a unit would not be under the jurisdiction of the CISWI Rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 1

Comment: EPA HAS NO AUTHORITY TO REGULATE THE USE OF SECONDARY MATERIALS AS INGREDIENTS UNDER CAA 129

Plain words of statute – "combust"

The purpose of the SWI (RCRA part 241) proposal is to identify materials that would be deemed "solid wastes" for purposes of triggering CAA §129 jurisdiction. See proposed §241.1 75 FR 31892, June 4, 2010.

EPA's CAA §129 authority is limited to "solid waste incineration units," which are defined as units that "combust" solid waste. CAA §129(g)(1). This definition does not say EPA can regulate units that "treat" solid waste (as provided in RCRA Subtitle C). Nor does it say that EPA can regulate units that "use" solid waste.

The act of "combustion" is thus necessary to trigger CAA §129 jurisdiction and materials that are used as ingredients in an industrial process are not "combusted." Even though temperatures in a cement kiln are extremely high, the feedstocks (i.e., ingredients) to produce clinker that are placed into the kiln are not "combusted" – rather, they are chemically incorporated into the clinker

product. Similarly, secondary materials that are used as substitutes for mined or virgin feedstocks become incorporated into the clinker product and also are not "combusted."

Neither the CAA nor RCRA define the words "combust" or "combustion." One must accordingly turn to the plain meaning, common sense, dictionary, standard usage among engineers, etc. definitions. The McGraw-Hill Science and Engineering Dictionary, Third Edition 1984, defines "combustion" as follows (emphasis added): The burning of gas, liquid, or solid, in

which the fuel is oxidized evolving heat and often light." Similarly, a well-respected engineering text defines "combustion" in this manner (emphasis added): "the conversion of a substance called a fuel into chemical compounds known as products of combustion by combination with an oxidizer. The combustion process is an exothermic chemical reaction, i.e., a reaction that releases energy as it occurs." [see submittal for Weston, Energy Conversion, chapter 3, p. 85, included as Attachment 1, and available at http://www.personal.utulsa.edu/~kenneth-weston/chapter3.pdf.]

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michael J. Burns
Commenter Affiliation: Ever-Green Energy, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2112
Comment Excerpt Number: 1

Comment: District Energy St. Paul supports EPA's proposed rules for determining whether a solid material used as fuel is classified as a "solid waste". Specifically, the primary proposed definition that wood residuals in the form of forest residuals and other tree wastes collected for use as fuel are not classified as "solid waste". The definition in the proposed rule conforms to District Energy St. Paul and affiliates process for collection and utilization of wood residuals as fuel.

District Energy St. Paul and its affiliates understand the rationale for imposing stricter definition on what constitutes "solid waste" in order to limit the potential release of pollutants that may be inherent in some of those fuels. It is for that very reason, over a decade ago, that we established our own strict limits on our wood residuals feedstocks to ensure that only clean wood residuals are utilized as fuel in our facility.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 1

Comment: At the same time as it published the Proposed Rule, EPA also published for public comment a proposed rulemaking concerning the Identification of Non-Hazardous Secondary

Materials That Are Solid Waste (the "Proposed Solid Waste Identification Rule"). EPA states within both the Proposed Rule and the Proposed Solid Waste Identification Rule that it expects that "secondary" materials classified as solid waste under the final Solid Waste Identification Rule would be subject to the emission and operating standards under the final CISWI regulation. ARIPPA has provided extensive commentary in the context of the Proposed Solid Waste Identification Rule in support of the proper classification of coal refuse – whether currently- or historically-generated -- as a fossil fuel and not a solid waste, consistent with longstanding EPA regulatory practice under the Clean Air Act ("CAA"), Resource Conservation and Recovery Act and Surface Mining Control and Reclamation Act. Since coal refuse should not be classified as a solid waste, combustion of coal refuse should not be subject to the CISWI standards, consistent with the decision of the D.C. Circuit Court of Appeals, directing EPA to ensure that the combustion of materials that are properly characterized as solid wastes are subject to regulation under Section 129.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Late William Turley
Commenter Affiliation: Construction Materials Recycling Association (CMRA)
Document Control Number: EPA-HQ-OAR-2003-0119-2259
Comment Excerpt Number: 1

Comment: Comments

EPA-HQ-RCRA-2008-0329

The Construction Materials Recycling Association (CMRA) is a national 501c3 organization that promotes the recycling of construction and demolition (C&D) materials. We have worked with the U.S. EPA on a variety of projects for this mutual goal. We are commenting on the proposed rule for identification of non?hazardous secondary materials that are solid waste, especially as it pertains to C&D wood made into a biomass product.

We are heartily disappointed that the EPA is not recognizing the common sense and scientifically valid viewpoint that it doesn't matter what fuel goes into the boiler, it matters what emissions come out the stack, and has instead chosen to evaluate fuels based on their content. While some such evaluation is valid, to make it the only criteria, instead of emission results, is focusing on the wrong outcome. For human health and safety, all that should matter are emissions. If the energy generating facility was designed to accept material such as C&D biomass, or any other alternative materials for that matter, and could not accept "traditional" fuels, the legitimacy criteria should not be applicable.

Underlying all the technical points we are making in these comments is the fact that biomass made from C&D wood is a major financial underpinning of the entire

building?related C&D recycling industry. This proposed rule has the potential to undermine the entire building?related C&D recycling industry to the point of near extinction. The reason for that is there are limited potential market options for much of the wood from the C&D stream except as a fuel product. Wood makes up as much as 40% of the incoming stream to these facilities. Most of it is not of the quality to make added?value products such as panelboard. The best any one can do is recover the Btu value. Virtually banning its use will not spur development of new markets, that is not physically possible, but send the material to a landfill. And expecting other processes, such as reuse and deconstruction to fill the void, is naïve at best. Most of the wood is not suitable for reuse, and the stock that is is dwindling every year. The cost of deconstruction is far more than demolition and recycling, when all costs are taken into consideration. Indeed, has EPA performed an economic impact statement for what it is going to cost to send all this wood to a landfill, including the negative effect it will have on the C&D recycling industry? Has the agency completed a life cycle analysis for putting all of this carbon into landfill methane into the environment? Saying that we can just recover the methane for power generation is a grossly inefficient method compared to the use of C&D wood as a biomass. The best option for both the environment and the economy is C&D recycling, which relies on a boiler market for its C&D wood biomass product.

A study performed by the University of New Hampshire in 2007 ("Life?Cycle Assessment of C&D Derived Biomass/Wood Waste Management") showed that the use of C&D wood as a fuel product reduces greenhouse gas emissions. That is because the use of the wood replaces some traditional fuels, especially coal and natural gas. If the latter two had been left in the ground, they would have never released their GHGs; no matter what, if the wood had stayed in the forest and died or ended up as a fuel product, it will have released them. Using C&D wood fuel saves on GHG emissions.

The proposed rule lists traditional fuels as being exempt from consideration. One of those fuels is natural wood. As C&D wood as biomass has been in use for boilers for more than 15 years, it should be considered a traditional fuel.

The C&D wood biomass product is, of course, made of that natural wood, is a cellulosic biomass, and should be similarly exempt. In fact, as a fuel it is easily as good if not better than natural wood because it has been dried and does not have the 30% or so moisture content of virgin wood. If EPA does decide to follow its "bright line" minimum requirement of 5000 btu/lb, C&D biomass is rated between 7000 to 8200 on that scale, much better than natural wood.

That an alternative fuel must have meaningful heating value is only one of the three criteria the agency cited in making its decision on what is a fuel and what is solid waste. The other two are handled as valuable commodity and contaminants not significantly higher than the traditional fuel it is most similar to. In addition, the agency wants to see the material is processed in steps that make it into a fuel product. This last one first.

C&D wood is received at a mixed C&D processing facility as part of loads from construction and demolition sites. On the tipping floor the material is examined in a variety of methods, including XRF analyzers and simple eyeballing material to remove any obvious contaminants. The removal of potential contaminants as much as possible before it enters the plant is part of every facility's basic operating rules, let alone its permitting requirements.

Then the wood, along with other materials of value, are separated out from the rest of the incoming stream one of two ways; either through mechanical means or through humans sorting

along a specially built picking line. The other materials include concrete, metals, plastics, asphalt shingles, etc., all found in the building? related waste stream. After separation, the wood is ground to a specific size and density per the specification of the plant using the biomass product. Indeed, the creation of natural wood products follows a similar processing path, except that C&D wood is more carefully prepared than virgin wood fuel because of the chemical analysis the C&D product undergoes. We invite any interested party to tour a C&D recycling plant to see how the process is performed.

Another criteria EPA has is does the fuel have value? C&D wood does. Its end market value is usually between $25 to $30 a ton, but that changes throughout the country. Finally, the question of contaminants. In a study from 2006, "Emissions from Burning Wood Fuels Derived from Construction and Demolition Debris", by NESCAUM, the Northeast States for Coordinated Air Use Management, which is made up of top officials in governmental air quality agencies eight northeastern states), "a review of the data shows that the use of appropriately processed C&D

wood is similar in its emission profile to that of virgin wood and other power generation fuels such as coal and oil." Strict fuel standards are a must, the report adds, and that "fuel standards minimizing contamination from other C&D materials and removing C&D fine material (known as "fines") from the fuel chips increases fuel quality substantially, resulting in lower metal and other air toxic emissions. Finally, requirements for comprehensive testing and sampling of the fuel at both the processing facility and the location of the end user will assure that the fuel quality is maintained."

This relates to the last criteria, contaminants. C&D wood coming into a recycling facility can contain lead from lead?based paint, and certain treated woods have arsenic and other contaminants cited in the proposal. That is why most facilities have some kind of quality control for incoming material. Most painted wood and all treated woods are removed. That is both regulatory and market driven as the boilers already have limits on how much contaminants they can release. Those end markets for C&D recyclers can only accept minor amounts of such contaminants. Any recycler whose material exceeds those limits is soon cut off from that market. The boiler cannot take the chance of a contaminant or an excess of unallowed emissions to ruin his business. Fortunately, as stated above, current C&D recycling processing techniques remove most of the dangerous substances, such as removing the fines after grinding, which is where the paint ends up. Because C&D wood so closely resembles natural wood in virtually characteristics, including in contaminant levels, it should be considered the same as the traditional fuel and be exempt from this proposal. Further support for this comes directly from the proposal: "Recycled fuel products no different from recycled paper and aluminum cans...if non? hazardous secondary materials are disposed, but are later collected, segregated and processed into a homogeneous fuel product that is marketed and are no different than traditional fuels used today, then they should no longer be considered solid waste, just as recycled paper is not a solid waste." As there is little chemical difference between C&D wood biomass and natural, they should be considered the same.

A contaminant point we do question is the proposed arsenic limit, which is about one-quarter of that found in natural cedar bark. But under this proposal the natural wood will be exempt while C&D wood would not be. Also, to meet the proposed standard, C&D recyclers would have to somehow commute the laws of nature and physics in order to make the product cleaner than nature created it. We contend that is impossible.

The CMRA also questions the proposed petitioning process on several fronts. First, this will be a costly step for wither the C&D recycler or the boiler to undertake, a large and unnecessary expense making it economically unfeasible for C&D wood to compete in the marketplace. Second, C&D wood has proven itself in the marketplace and in the opinion of many state environmental agencies. Why should it have to go through this process again at a newly created bureaucracy at the federal level? Related to that, this bureaucracy could undermine the current standards that have been set by each state, which have already set up their own type of petitioning process through their permit apparatus.

Related to that is the question of fuel pellets made from wood waste, including C&D wood. The two main markets for that wood, which is ordinarily the cleanest of the clean wood, are commercial furnaces and residential stoves. We are asking for clarification if these are covered by this proposal, and if so, how.

Two other alternative proposals are listed by EPA in the document. Both would eliminate boiler fuel as a market for C&D wood, virtually closing down the C&D recycling industry in the United States. Hence, both proposals should be discarded with prejudice.

Summary

C&D biomass is a carefully processed fuel product that provides superior heating value to its closest traditional fuel, and is strikingly similar in chemical composition to natural. Its contaminant level is already controlled by the marketplace and the fact that before processing C&D recyclers take careful steps to remove as much incoming contaminants. The material is sold to energy generating facilities, recyclers do not pay to bring the material there. C&D wood is virtually the same material as natural wood, and should be treated the same including making it exempt from the solid waste designation.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: James C. Jackson
Commenter Affiliation: Boise Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2150.1
Comment Excerpt Number: 1

Comment: Boise strongly believes that its biomass boilers should be subject to the Boiler MACT rule and not the CISWI rule. A proper determination by EPA concerning the definition of solid waste will result in Boise's biomass boilers not being energy recovery units regulated under the CISWI rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 2

Comment: But even if §129(g)(1)(A) could be read to require a material-based analysis, EPA should categorically exclude from the definition of solid waste all of the inputs to iron and steelmaking processes. As described herein, the steelmaking process uses many materials other than iron and steel (e.g., carbon, fluxes, slag, mill scale, dusts, etc.) to achieve the final product. Because the steelmaking process is carefully controlled, and must be metallurgically precise to produce a steel product that meets customer specifications, these inputs are necessarily added for the "primary purpose" of aiding in the recovery of metals to make iron or steel. As such, we encourage EPA to clarify that the use of secondary materials as inputs into the iron and steelmaking process falls within the §129(g)(1)(A) exemption.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 2

Comment: Even if one were to depart from a strict statutory plain meaning test, the legislative history shows that the drafters indicated no intent to include use of materials as ingredients when they specified the word “combust.” The legislative history of CAA §129 shows there is no mention of use of secondary materials for ingredients. Rather, the entire focus of the legislative history reflects a concern in the late 1980s that municipal and hospital incinerators were coming on line (or planned) in large numbers and the then-existing CAA controls at the federal level for such units were perceived to be inadequate.

The only analysis and explanations of the CAA §129 language in the legislative history appear in the two Senate Environment and Public Works Committee Reports leading up to the final enactment of the 1990 Clean Air Act Amendments. One Report accompanied the 1989 version of the Senate Bill, Senate Report 101-228, accompanying S. 1630 [see submittal for Attachment 2 -the “1989 Senate Report,” provided by commenter]. [See submittal for Attachment 3 - The other accompanied the 1987 version of the Senate Bill, Senate Report 100- 231, accompanying S. 1894 (the “1987 Senate Report,”)].

One will search in vain for any concern about or reference to – even obliquely – the use of secondary materials as ingredients. As explained on page 8593 of the 1989 Senate Report, the driving force for §129 was a study EPA had prepared (as directed by 1984 RCRA amendments from Congress) on the health risks of "municipal solid waste incinerators." 1630 [see submittal for Attachment 2 -the "1989 Senate Report," provided by commenter] The 1987 Senate Report further explains that the concern driving Congress was related to the fact that "111 municipal incineration facilities are currently in operation in the United States, and at least 210 more are in the planning or permitting phase." [See submittal for Attachment 3 - The other accompanied the 1987 version of the Senate Bill, Senate Report 100- 231, accompanying S. 1894 (the "1987 Senate Report,"at 9450.)]

The Report explains that citizen concerns over potential health risks have made "permitting for municipal incineration units difficult or impossible in some communities," and that the purpose of

the legislation was to insure that such units would be subject to protective emission standards to alleviate such concerns. Id.

The Report goes on to explain that there are three types of incinerator technology: "mass burn" facilities that take "garbage" untreated and burn it in a simple process to produce heat, steam, or electricity; "refuse derived fuel (RDF), which is fed to "specialized boilers;" and "modular" units, which are "small pre-fabricated" units that burn waste in a "two-chamber process." [See submittal for Attachment 3 - The other accompanied the 1987 version of the Senate Bill, Senate Report 100- 231, accompanying S. 1894 (the "1987 Senate Report,"at 9451-52.)]

Thus, the types of units the drafters thought they were covering with §129 most certainly did not include industrial furnaces in manufacturing processes that might be using secondary materials as ingredients. This is strongly reinforced by the fact that there are unequivocal (and lengthy) statements in the legislative history to the effect that the byproduct of the "incinerators" covered by the legislation is "fly ash" and "bottom ash [see submittal for Attachment 2 -the "1989 Senate Report," provided by commenter at 8494: "Pollutants which are trapped by control devices before entering the air become incinerator fly ash. Managing incinerator ash, therefore, is inextricably linked to controlling air emissions from municipal waste incinerators."]

Cement kilns produce cement kiln dust (CKD) as a byproduct. This is a material that is wholly distinguishable from fly ash, not only physically and chemically, but legally. (Compare RCRA §3001(b)(3)(A)(i) (fly ash) with RCRA §3001(b)(3)(A)(iii) (ckd)).

And the 1987 Report states with respect to the units that would be regulated under CAA §129: "It is necessary to regulate air emissions and ash simultaneously because the control technologies required to limit emissions trap pollutants, which then become part of the fly ash." ." [See submittal for Attachment 3 - The other accompanied the 1987 version of the Senate Bill, Senate Report 100- 231, accompanying S. 1894 (the "1987 Senate Report," at 9451.)]

Under the assumption that the units regulated by §112 would be producing this "incinerator ash" or "fly ash," Congress included a special provision included within the 1990 CAA Amendments (along with CAA §129) specifying that "ash from solid waste incineration units" could not be regulated as a hazardous waste under RCRA for two years. 42 U.S.C. §6921, note.

Thus all the legislative history shows no indication of any Congressional intent to cover materials used as ingredients in industrial furnaces, and, in fact, consistently points the other

way. It strongly reinforces the point that the statutory word "combust" can and should be given its plain English, unambiguous meaning.

EPA's Own Word Usages

EPA's own phraseology in its proposed part 241 preamble underscores this point. This is from the preamble summary (75 FR 31844, emphasis added):

EPA is proposing a definition of non-hazardous solid waste that would be used to identify whether non-hazardous secondary materials burned as fuels or used as ingredients in combustion units are solid wastes.

Moreover, see the definition of "contaminant" in the proposed regulatory provisions:

". . . when secondary materials are burned as fuel or used as ingredients . . . " (75 FR 31892, emphasis added) There are several places in the preamble where EPA draws this distinction: fuels are "burned" whereas ingredients are "used." Of course, "combustion" equates with "burn" but not with "used."

We found no place in the preamble where EPA stated that ingredients are "burned." In fact, quite remarkably, there is no place we could find in the January 2, 2009 ANPR or the new part 241 proposal where EPA even attempted to explain how it thinks its jurisdiction to regulate "combustion" can extend to regulation of materials used as ingredients.

The closest EPA comes (very indirectly) is to say several times that it is being guided by Subtitle C principles and precedents in crafting the proposed part 241 provisions. But of course, as noted above, the relevant word in Subtitle C is "treatment," which is much broader in concept than "combustion."

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Curtis Lesslie
Commenter Affiliation: Ash Grove Cement Company
Document Control Number: EPA-HQ-OAR-2003-0119-2145.1
Comment Excerpt Number: 2

Comment: If finalized as proposed, the CISWI and SWI proposals would punish those who have already made significant strides towards their sustainability goals and stifle voluntary efforts moving forward. EPA has not identified any environmental benefit of arbitrarily deeming "solid waste" the bona fide raw materials and fuels that have been utilized safely in the cement industry for decades. Cement kilns are already fully regulated under both NSPS and NESHAP and have been for years. The recently finalized NSPS F and PC NESHAP have further restricted emissions and regulated Area Source kilns for all pollutants except HCl. While Area Source boilers and other source categories that utilize secondary fuels may be unregulated with the CISWI proposal, that is simply not the case for cement kilns. EPA should revisit the proposal

and remove secondary materials and fuels that are used in cement kilns from the definition of solid waste and remove cement kilns from the CISWI source categories covered.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 3

Comment: NOTHING IN THE D.C. CIRCUIT'S 2007 NRDC OPINION OR IN ANY OF THE RULEMAKING OR ADVOCACY LEADING UP TO IT CONTAINS THE SLIGHTEST HINT THAT EPA COULD OR SHOULD REGULATE INGREDIENTS

A. Energy Recovery the Only Focus

The part 241 proposal is EPA's response to the Court's remand in NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007). Starting with EPA's first CISWI rule of December 1, 2000 (65 FR 75338), there were several rounds of rulemakings, administrative petitions, and judicial challenges culminating in the 2007 NRDC decision.

Throughout these administrative and judicial proceedings, there was a raging dispute regarding whether EPA should regulate burning for energy recovery under CAA §129. The focus was not only 100% on energy recovery, but also overwhelmingly on boilers (not industrial furnaces). And nothing in the petitions, comments, or judicial briefs filed by NRDC and other groups ever even mentioned the issue of using secondary materials for ingredients.

B. Rulemaking Preceding the 2007 NRDC Opinion

EPA's first CISWI rule (December 1, 2000) contained exemptions from CAA §129 coverage for units burning fuels for energy recovery. EPA did this by defining "commercial and industrial waste" to mean "solid waste combusted in an enclosed device using controlled flame combustion without energy recovery . . ." (65 FR 75359)

Even though EPA used the terms "solid waste combusted," there is not a word in EPA's 2000 rule or preamble about use of materials as ingredients in an industrial process. Moreover, it could not be clearer from the rule and the preamble, and the types of units that EPA's rule was intended to cover, that the rule did not cover use of ingredients.

[See submittal for Attachment 4 - Earthjustice (on behalf of the Louisiana Environmental Action Network (LEAN) and the National Wildlife Federation (NWF)) filed an administrative reconsideration petition with EPA on January 30, 2001.] Earthjustice's objection focused solely on the fact that EPA had excluded units burning fuels for energy recovery, maintaining that such exclusion violated the clear terms of CAA §129. Earthjustice's petition made no mention whatever of use of materials as ingredients.

EPA granted Earthjustice's petition on the procedural ground that the issue of excluding energy recovery burning had not been raised with sufficient specificity in the proposed rule preceding the 2000 final rule, and EPA undertook a new round of public comment. On February 17, 2004, EPA proposed amendments to the CISWI rule, once again taking the position that burning secondary materials as fuels for energy recovery would not be regulated under CAA §129. (69 FR 7390)

Earthjustice once again strenuously objected to EPA's proposed definitions in its comments on EPA's February 2004 proposal [See submittal for Attachment 5 - "Earthjustice 2004 Comments"] Once again, the comments made no mention of materials used as ingredients and included no objection to the fact that the rule did not cover ingredients. The entire objection was directed to the energy recovery issue.

Moreover, it is quite clear from Earthjustice's comments that the overwhelming focus of its concerns related to the issue of area source boilers. (See Id. at 1-2. Earthjustice's primary fear was that EPA would "exploit" the provisions in CAA §112 allowing "area sources" to be regulated under less stringent "Generally Available Control Technology" (GACT) requirements.) (Id.) Boilers, of course, do not utilize secondary materials as ingredients.

EPA issued its final CISWI rule on September 22, 2005. (70 FR 55568) The rule once again exempted energy recovery burning, and did not purport in any manner to regulate use of ingredients or even mention ingredients. EPA made clear in the preamble of that rule that Portland cement kilns would not be regulated under CAA §129 if they burned fuels for energy recovery. (E.g., 70 FR 55571)

C. The NRDC Briefing and Opinion

NRDC, the Sierra Club, and the Environmental Integrity Project sought judicial review of EPA's September 2005 final rule. This resulted in the Court's 2007 opinion remanding EPA's CISWI rule, to which the Agency is now responding with its June 4, 2010 proposed rules.

Similar to their comments on the 2004 CISWI proposed rule, the overwhelming focus of the NRDC parties' concern was on boilers, and the issue of whether and to what extent EPA's rules could allow smaller "area source" boilers burning waste fuels for energy recovery to be covered by more lenient "GACT" standards under CAA §112. The entire thrust of the NRDC parties brief was that EPA could not exempt energy recovery burning from CISWI coverage. [See submittal for Attachment 6 - NRDC Brief.] If the NRDC parties prevailed on that issue, then such energy recovery burning by boilers would be subject to CAA §129, which does not provide for less stringent standards for area sources.

NRDC's brief said nothing about whether industrial furnaces using secondary materials as ingredients should be regulated. And from the very first sentence of the NRDC Brief "Statement of Facts," it is clear that the issue of ingredients was never considered part of the mix:

This matter concerns the highly toxic air emissions from more than 50,000 incinerators and boilers nationwide. Widely used to dispose of on-site waste and to generate heat or electricity, incinerators and boilers operate at virtually every imaginable industrial site, including chemical plants, refineries, pulp and paper mills, lumber mills, agribusinesses, and smelters.

(Id. at 6)

This point becomes further evident from the following key point in the NRDC Brief:

That is, although section 129 directs EPA to regulate sources that combust "any solid waste material from commercial or industrial establishments," 42 U.S.C. § 7429(g)(l) (emphasis added), the agency instead regulates only sources that combust solid waste from "commercial or industrial establishments ... without energy recovery." This leaves the excluded, so-called "energy recovery units" to be regulated under EPA's boilers rules.

(Id. at 19)

Note especially the last phrase, "under EPA's boilers rules." This strongly reinforces the point that no thought was being given in this litigation to issues involving industrial furnaces using secondary materials as ingredients. The only issue in the case was EPA's attempt to exclude energy recovery burning.

For further reinforcement of this point, one can review the numerous "standing" declarations attached to the NRDC Brief, where various members of NRDC and its co-petitioning organizations explained how they could be adversely affected if EPA excluded energy recovery burning from CAA § 129. (See Id. at 69-98.) In every one of these declarations, the declarant states that he or she lives in close to proximity to an industrial boiler or an on-site incinerator.

Not a single declarant states that he/she would be affected by emissions from an industrial furnace such as a Portland cement kiln.

Thus, not surprisingly, the D.C. Circuit opinion in the 2007 NRDC case makes absolutely no mention of any issue involving the use of secondary materials as ingredients. The Court held only that EPA's regulation that exempted waste combusted for energy recovery was "inconsistent with the plain language of section 129," because §129(g)(1) defined the affected facilities as "any facility which combusts any solid waste material." (489 F.3d at 1254, 1255)

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 4

Comment: EPA makes clear at the beginning of its January 2, 2009 ANPR that it is initiating the new part 241 rulemaking for the purpose of complying with the remand in the 2007 NRDC case. (74 FR 43) But as shown above, the NRDC case had nothing whatsoever to do with ingredients. EPA

never explains – either in the ANPR or in the June 4, 2010 part 241 proposal – why it chose to include ingredients within the scope of this rulemaking.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking

(NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: James C. Jackson
Commenter Affiliation: Boise Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2150.1
Comment Excerpt Number: 4

Comment: Boise's four integrated pulp and paper mills in Alabama, Louisiana Minnesota and Washington state have a total of five solid fuel fired boilers These boilers principally burn clean biomass (bark and wood residues) but also burn other

Non-Hazardous Secondary Materials (NHSM) such as urban wood, wastewater treatment residuals, tire derived fuel, and cross tie derived fuel. Our biomass boilers also burn other incidental NHSM such as waste oil and waste paper. Thus, there is the potential that our biomass boilers could become CISWI 'energy recovery units" depending on how EPA decides the "fuel vs. solid waste" issue. For the reasons cited in its comment letter. dated August 2, 2010, submitted to rcra-docket(&.epagov concerning the proposed Identification of Non Hazardous Secondary Materials that are Solid Wastes, 75 Fed. Reg. 31844 (June 4 2010) (hereafter referred to as the NHSM rule). Boise strongly believes that the NHSM burned in our biomass boilers are indeed fuels and should be treated as such in EPA's final NHSM rule.

Boise strongly believes that its biomass boilers do not burn solid waste and should not be subject to the CISWI rule.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 5

Comment: Supreme Court "State Farm" and D.C. Circuit Precedent

Judicial review often focuses on two fundamental issues: (1) whether EPA's interpretation of a statutory provision is sustainable; and (2) whether EPA engaged in "reasoned decisionmaking" in reaching that interpretation. The court may vacate an EPA regulation on either ground. In its bedrock decision Motor Vehicle Mfrs. Ass'n v. State Farm, 463 U.S. 29 (1983) ("State Farm"),

the Supreme Court elaborated upon the APA "arbitrary or capricious" standard with the phrase "reasoned decisionmaking," and this terminology is used frequently by the D.C. Circuit.

In CMA v. EPA, 217 F.3d 861 (D.C. Cir. 2000), the Court reviewed an EPA rule under the Clean Air Act in which EPA had imposed a so-called "early cessation" requirement. Many facilities had been burning a certain type of waste under emission limitations established under RCRA. EPA had imposed more stringent requirements under the CAA that were to take effect in three years, and EPA specified in those new rules that facilities failing to affirmatively commit to coming into compliance with those new more stringent standards by the three-year deadline would have to cease burning that type of waste much earlier than the three-year compliance deadline.

Petitioners before the Court pointed out that if any facility was forced to stop burning that type of waste before the new deadline, the same waste would simply be burned by other facilties under the same older RCRA standards, and EPA did not dispute this. Also, EPA generally maintained that such a rule would have health and environmental benefits, but neglected to explain how.

The Court said the CAA's purpose was to protect and enhance air quality so as to promote the public health and welfare. (Id. at 866) But since EPA could not explain any environmental benefits to its early cessation requirements, the Court held that it was unreasonable for EPA to impose "costly obligations on regulated entities without regard to the [CAA's] purpose." (Id. at 867) In fact, the Court pointed out the possibility that environmental harm might be increased by EPA's rule because more movement of wastes could increase the chances of leakage or spillage. (Id. at 865) The Court concluded that the agency's actions represented a "classic case of arbitrary and capricious rulemaking." (Id. at 865)

Similarly, the D.C. Circuit in API v. EPA, 216 F.3d 50 (D.C. Cir. 2000) rejected an EPA interpretation that a certain material had been "discarded," and was therefore a solid waste in the Subtitle C context. Citing State Farm, the Court ruled that EPA had failed to provide a "rational explanation" for its decision. (Id. at 56-58) (We note that EPA cites this case as "API II" in its preamble.) (75 FR 31851) Other recent D.C. Circuit cases in which the D.C. Circuit has relied upon State Farm "reasoned decisionmaking" principles to reverse EPA rules include Am. Farm Bureau Fedn v. EPA, 559 F.3d 512, 523-24 (D.C.Cir. 2009) and New York v. EPA, 413 F.3d 3, 10-11 (D.C. Cir. 2005).

B. EPA Has Latitude to Define "Solid Waste" to Effectuate RCRA's Goals

For over thirty years EPA has been attempting to define – in its Subtitle C hazardous waste regulations codified at 40 C.F.R. §261.2 – which secondary material management and handling practices trigger the definition of solid waste (DSW). EPA has always claimed and exercised discretion to "draw lines" in this regard under the statutory definition of solid waste (RCRA §1004(27)). As EPA stressed in its first final Subtitle C DSW rule: "the extent of the Agency's authority is not explicit on the face of the statute" when addressing the issue of whether materials destined for recycling may be deemed solid wastes. (50 FR 614, 615, January 4, 1985)

A primary goal of RCRA is protection of human health and the environment. (E.g., RCRA §§3001, 3002, 3003, 3004, 3005) Another primary goal of RCRA is to promote resource conservation and recovery, including energy recovery. (E.g., RCRA §1002, 1003) Throughout its various rounds of Subtitle C DSW rulemakings, EPA has used its discretion to "draw lines" in an attempt to effectuate and accommodate these primary statutory goals.

1. Rationale for Subtitle C DSW Approach

EPA's DSW for Subtitle C purposes involves a complex "line drawing" matrix in which hazardous secondary materials destined for recycling may or may not be deemed a solid waste. EPA's most recent revisions to the Subtitle C DSW appear in a final rulemaking published at 73 FR 64668 on October 30, 2008. In the preamble to these revisions, EPA summarized and reviewed some of the most fundamental reasons why it has used its discretion to regulate some materials destined for recycling as solid waste in the Subtitle C context.

One major factor is that the secondary materials in question in the Subtitle C context are by definition "hazardous," and present the same risks to health and the environment as hazardous wastes. (73 FR 64671) EPA cites the fact that hazardous materials destined for recycling were involved in (a) one-third of the first 60 RCRA waste site "imminent and substantial endangerment" actions EPA initiated before CERCLA became law in 1980, and (b) 20 of the initial 100 sites on the CERCLA National Priorities List (NPL). EPA stresses that many additional "damage cases" have been documented more recently. (Id.)

Another major factor is the "cradle to grave" regulatory regime mandated by RCRA Subtitle C. EPA has reasoned that allowing classification of hazardous materials as solid wastes depending only on what persons handling the materials "intended to do with them" would be inconsistent with the cradle to grave scheme of Subtitle C. (Id.)

2. The Subtitle C DSW Approach Was Never Intended to Apply to Non-Hazardous Materials

Despite the complexity of EPA's ever-evolving DSW in the Subtitle C context, one thing has always been crystal clear: the definition applies only in the Subtitle C context. EPA has always

taken great care to distinguish between the definition of solid waste for Subtitle C purposes (40 C.F.R. §261.2) and the definition of solid waste for Subtitle D purposes.

EPA's Subtitle C regulations, in fact, could not be more explicit on this point: "The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing subtitle C of RCRA. For example, it does not apply to materials (such as non-hazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled." (40 C.F.R. §261.1(b)(1)) In issuing this provision, EPA cited to RCRA legislative history calling for this result, so that the Subtitle C definition could not be used in "unintended contexts" for non-hazardous Subtitle D materials. (50 FR 614 & 627, January 4, 1985, citing H.R. Rep. 98-198 at 47)

C. EPA Relies Upon Subtitle C DSW Principles for Its Proposed Subtitle D Solid Waste Definition Without Justification

In its Part 241 proposed preamble, EPA says that to define solid waste under Subtitle D, it is "appropriate to use the same general framework" it has used under Subtitle C, "noting that the same statutory definition of solid waste applies to both RCRA Subtitles D and C." (75 FR 31858, col. 2) The fact that the "same statutory definition" applies to both Subtitles C and D is not a valid justification because, as explained above, EPA has long made clear that the extent of its authority relating to secondary materials destined for recycling "is not explicit on the face of the statute." Moreover, EPA's regulations have long specified that the Subtitle C DSW does not apply in the Subtitle D context and EPA has explained in preamble materials, citing legislative history that it should not.

Yet EPA has not only borrowed heavily from its Subtitle C DSW approach in crafting its Subtitle D part 241 proposal, but in some regards the part 241 proposal is significantly more stringent than the Subtitle C DSW. The most striking example is the contrasting approach to ingredients.

Under §261.2 (Subtitle C DSW), hazardous secondary materials that are recycled by being "used or reused as ingredients in an industrial process to make a product" are exempt from the DSW so long as the materials are not being reclaimed. §261.2(e)(1)(i). Under proposed §241.3(b)(2), however, non-hazardous secondary materials being recycled for use as an ingredient will be exempt only if they meet several "legitimacy criteria" as specified in proposed §241.3(d)(2).

Among the most notable of these criteria is the fourth:

The non-hazardous secondary material used as an ingredient must result in products that contain contaminants at levels that are comparable or lower in concentration to those found in traditional products that are manufactured without the non-hazardous secondary material.

(Proposed §241.3(d)(2)(iv), 75 FR 31893)

Thus, secondary ingredient materials that are by definition hazardous may, under the Subtitle C hazardous waste regime, be exempt from the definition of solid waste regardless of how much those materials may influence contaminant levels in the resulting product. As EPA has proposed its part 241 regulations under Subtitle D, however, secondary ingredient materials that are by definition non-hazardous are treated much more stringently.

Applying logic and common sense, one would assume that (1) if EPA has leeway under the statute to define solid waste (which it does); (2) if EPA has authority to define solid waste for purposes of Subtitle C differently than for purposes of Subtitle D (which it does); and (3) if secondary materials under Subtitle C are hazardous and secondary materials under Subtitle D are non-hazardous (which is the case), then EPA should not – unless it can demonstrate a rationale for doing so – be regulating secondary materials under Subtitle D as stringently as (or more stringently than) under Subtitle C.

We note that the two fundamental grounds EPA has cited to support the lines it has drawn in the Subtitle C context are, as discussed above, the innate hazardousness of the material (with "damage case" examples going back decades) and the "cradle to grave" mandate of RCRA Subtitle C. EPA cites no damage cases to support its part 241 proposal, however (and it is hard to see how it could when dealing with material that is by definition non-hazardous). And, of course, there is no "cradle to grave" system under RCRA Subtitle D. Thus, the grounds EPA relies upon in using its discretion to draw lines in its Subtitle C DSW simply do not apply in the Subtitle D context.

And EPA's approach in this proposal appears even more illogical and "unreasoned" when one considers (as explained in part II above), that the only function of the proposed part 241 definition is to determine what materials will trigger CAA §129 applicability when combusted. Materials that may be excluded from the part 241 definition will not be excluded from the definition of solid waste for all other purposes.

This is in stark contrast to the function of EPA's Subtitle C definition of solid waste in 40 C.F.R. §261.2. If a material is excluded from the definition under that section, it may also be excluded from RCRA control when stored, transported, or otherwise managed or discarded. Considering that the materials at issue under the Subtitle C definition are hazardous, the consequences of

excluding a material are obviously much more serious from a health and environmental perspective.

D. EPA's Proposal Would Impose Unjustified Barriers to Recycling and Reuse

It is bad enough that EPA for unexplained reasons would regulate non-hazardous materials recycling in the same fashion as hazardous materials (and in some cases more stringently). The problems with this approach are greatly magnified when EPA's rule would operate to frustrate one of the most important goals of RCRA – the promotion of resource conservation and recovery through recycling and reuse.

EPA's line-drawing efforts in the Subtitle C recycling context over the years have endeavored to balance two fundamental RCRA goals: protection of human health and the environment, and the promotion of recycling/reuse of secondary materials. In the context of dealing with hazardous secondary materials in the Subtitle C definition, EPA has accordingly often drawn lines that might discourage some forms of recycle/reuse on grounds that such a choice was necessary to protect health and the environment. There is at least a rational basis for this, as materials that would

qualify as hazardous wastes may warrant special precautions. Moreover, Congress repeated the mandate to protect human health and the environment incessantly in various key Subtitle C provisions. (E.g., RCRA §§3001, 3002, 3003, 3004, 3005)

As we will demonstrate with numerous examples throughout these comments, in the RCRA Subtitle D non-hazardous material context, EPA's part 241 proposal (along with the CISWI proposal) draws many lines that would impose major impediments to recycling and reuse. Yet EPA never attempts to justify these choices dealing with non-hazardous materials on grounds of protecting human health and the environment. One key example that will be developed below: How could keeping whole tires in landfills and waste piles be better for public health and the environment than having these tires used as a replacement for coal in Portland cement kilns regulated under CAA §112 and other CAA standards?

We note that the RCRA policy favoring recycling/reuse is expressed in the strongest terms in the Subtitle D context. Here are the very first words of Subtitle D (in RCRA §4001) (emphasis added):

The objectives of this subchapter are to assist in developing and encouraging methods for the disposal of solid waste which are environmentally sound and which maximize the utilization of valuable resources including energy and materials which are recoverable from solid waste and to encourage resource conservation.

There is no doubt that EPA expects that its part 241 proposal would result in far less solid waste being recycled/reused and that waste materials would be landfilled instead. The CISWI proposal is quite clear on this in many places, as is the RIA for the part 241 proposal. (E.g., 75 FR 31965-66)

So the question becomes, why does EPA's part 241 proposal, at practically every turn, draw lines that will discourage recycling/reuse of non-hazardous material when an over-arching Subtitle D goal is to maximize recycling/reuse of non-hazardous materials? If EPA believes this approach is necessary to protect health and the environment, EPA never asserts this, nor explains how or why. We believe the D.C. Circuit would find this, just as it found EPA's rules in the CMA case cited above, a "classic case of arbitrary and capricious rulemaking." (217 F. 3d at 865) And it is

clear that EPA cannot remedy this defect by post hoc fabrication and articulation of a rationale in its final rule. "A 'notice of proposed rulemaking must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully.'" Cement Kiln Recycling Coalition v. EPA, 493 F.3d 207, 225 (D.C. Cir. 2007) (quoting Honeywell Int'l, Inc. v. EPA, 372 F.3d 441, 445 (D.C. Cir. 2004), emphasis added)

E. EPA's Reliance Upon RCRA Subtitle C Caselaw Is Unnecessary and Inappropriate

EPA attempts to justify some of its positions on the basis of several D.C. Circuit cases that have judicially reviewed various versions of EPA's Subtitle C DSW. (75 FR 31850-51) But again,

those decisions have been limited to rulings on a Subtitle C definition that EPA has consistently maintained has no applicability in the Subtitle D context.

For example, EPA has cited American Petroleum Institute v. EPA, 906 F.2d 729 (D.C. Cir. 1990 ("API I") for the proposition that the Court has disapproved the concept that a material that may have once been thrown away could nevertheless "cease to be a solid waste" if it were being beneficially reused, as it would no longer at that point be considered a "discarded material." (75 FR 31850, col. 3; 74 FR 51, col. 1)

But EPA has overlooked a critical element of the Court's ruling. In remanding the rule to EPA for a further explanation of its position, the Court stressed it believed it would be "unlikely" EPA could successfully maintain the position that a discarded material could cease to be a solid waste when recycled because, in the Court's words:

To reach such a conclusion, EPA would have to reconcile this position with RCRA's acknowledged objective to establish a cradle-to-grave regulatory structure for the safe handling of hazardous wastes.

(906 F.2d at 741, emphasis added, and internal citations and quotation marks omitted)

Thus, this Subtitle C case in no way impairs EPA's ability to craft a Subtitle D rule that could allow for materials once deemed to have been discarded to cease to be a solid waste when recycled. And no other case cited by EPA (or any that we have found) disapproves of EPA's ability to do this in the Subtitle D context.

In fact, other D.C. Circuit cases reviewing EPA's "solid waste" definition have made clear that the Court understood the Subtitle C hazardous waste context to be quite distinct from RCRA Subtitle D. In its preamble at p. 31850, EPA cites American Mining Congress v. EPA, 824 F.2d 1177 (D.C. Cir. 1987) ("AMC I".) The Court in that case stated: "RCRA includes two major parts: one deals with non-hazardous solid waste management and the other with hazardous waste management. Under the latter, EPA is directed to promulgate regulations establishing a comprehensive management system." (Id. At 1179, emphasis added) Nothing in the Court's opinion speaks to the issue of defining solid waste for Subtitle D purposes. The Court correctly recognized, however, that it is Subtitle C – and not D – that establishes a "comprehensive management system."

Similarly, American Mining Congress v. EPA, 907 F.2d 1179 (D.C. Cir. 1990) ("AMC II"), which EPA cites on page 31850 of its preamble, was limited to an examination of issues under RCRA Subtitle C, which the Court noted "requires EPA to create a comprehensive regulatory scheme for the treatment, storage, and disposal of hazardous wastes." (Id. at 1182)

EPA also cites American Petroleum Institute v. EPA, 216 F.3d 50 (D.C. Cir. 2000) ("API II") on page 31851 of its preamble. But again, the Court's opinion could not be clearer that it was limiting its ruling to Subtitle C issues, and not considering how solid waste might be defined in the "less stringent" Subtitle D regime:

RCRA is a comprehensive environmental statute granting EPA authority to regulate solid and hazardous wastes. "Solid wastes" are governed by Subtitle D of

RCRA, and are generally subject to less stringent management standards than "hazardous wastes" which are regulated under Subtitle C.

...

In pursuit of its congressionally conferred duty and authority to regulate solid waste under RCRA, the EPA has adopted regulations defining solid waste for purposes of its hazardous waste regulations.

(Id. at 54, emphasis added)

In some of these cases, EPA's positions have been upheld and in some of them EPA's positions have been rejected. Taken together, the cases may fairly be characterized as somewhat inconsistent and difficult to follow. But one thing about these cases is totally consistent and clear: they do not purport to circumscribe, or in any manner limit, EPA's authority to define solid waste either for purposes of RCRA Subtitle D in general or for purposes of triggering CAA §129 in particular. EPA remains free and is obligated to craft its definition of solid waste in the instant rulemaking to effectuate the clearly stated purposes of RCRA Subtitle D.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 6

Comment: Very early in the preamble to the SWI rule, EPA says it is "pursuing an approach to materials management that employs the concepts of life-cycle assessment and full cost accounting" and that the proposal "aims to facilitate materials management...through the establishment of a

regulatory framework that guides the beneficial use of various secondary materials." Later, EPA touts numerous benefits of using secondary materials as "alternative fuels and/or ingredients in manufacturing processes using combustion" and also claims the use of secondary materials as fuels and/or ingredients will "continue and expand in future years." (75 FR 31849) But, in the same Federal Register, in the CISWI preamble, EPA says the opposite - noting the CISWI rule will drastically shrink the number of facilities that use secondary materials [Footnote: EPA

estimates that the universe of facilities that beneficially reuse secondary materials will shrink by 50% due to the CISWI rule, and EPA's estimate is improperly limited only to "incinerators, burn-off ovens, and small remote incinerators." (75 FR 31967) CKRC estimates that the combined effects of the SWI and CISWI rules will cause nearly 100% of the cement kilns that use over 800,000 tons per year of scrap tires as alternative fuel to cease that activity and burn coal instead. (The cement industry further estimates that the CISWI rule will jeopardize the use of approximately 110 million tons per year of alternative raw materials.)] and will cause an additional 214,000 tons/year of currently reused materials to be diverted to "local landfills."

The Agency offers no explanation for the blatant conflict between its unsubstantiated rosy claims in the SWI rule and the quantified (albeit significantly underestimated) negative effects of the CISWI rule. Nowhere else in either rule does EPA as much as mention "life cycle assessment and full cost accounting," much less conduct analyses that employ these concepts. In fact, and as we will explain further, the regulatory framework that EPA has proposed for defining nonhazardous solid waste will produce materials management outcomes that clearly will not "facilitate" the beneficial use of secondary materials and definitely will not allow the use of secondary materials to "continue and expand." On the contrary, if finalized, the SWI rule will destroy important existing beneficial reuse applications while creating enormous obstacles to the development of new ones. And, if these outcomes were fairly examined in the "life-cycle assessment and full cost accounting" context that EPA ostensibly is "pursuing," it would be clear that the stiff barriers to beneficial reuse of secondary materials erected by the SWI rule will have significant adverse environmental effects and produce negative economic outcomes [Footnote: 7 EPA has claimed that the CISWI and SWI rules are separate and distinct and that the SWI rule does not, in itself, have any regulatory impacts. But the SWI rule is the sole determinant of applicability of the CISWI rule. For that reason, the impacts of the CISWI rule on specific source categories are wholly dependent upon the definitions in the SWI rule. With respect to regulatory impact, the two rules are inseparable. EPA's attempt to separate them is inappropriate because it creates a false pretext for avoiding analysis of the myriad negative impacts of the SWI rule. If those adverse effects were properly analyzed, they would paint a very different picture of the SWI rule vs. the 'blank slate' that EPA has attempted to justify.]

In the specific case of cement kilns that recover energy from scrap tires, EPA admits that using tires as fuel instead of coal (cement kilns' traditional primary fuel) significantly reduces indirect emissions of greenhouse gases and particulate matter. (75 FR 31849, footnote 9) [Footnote: Footnote 9: "For example, the GHG rate associated with the combustion of scrap tires is approximately 0.081 MTCO2E per MMBtu of scrap tires combusted, while the GHG emissions rate for coal is approximately 0.094 MTCO2E per MMBtu. Combined with the avoided extraction and processing emissions 0.006 MTCO2E/MMBtu for coal, the total avoided GHG is 0.019 MTCO2E per MMBtu. Substituting tire-derived fuel for coal would also avoid an estimated 0.246 Lbs/MMBtu of PM associated with extraction and processing of the coal. Please see the Materials Characterization Papers in the docket for further details on these estimates, and other estimates of avoided emissions associated with burning tires and other secondary materials as fuel."] Yet, despite these clear environmental advantages, EPA has proposed a definition of solid waste and a companion definition of "processing" that will cause many if not all cement kilns to stop using tires as alternative fuel, replace those tires with coal, and thereby cause increased emissions [Footnote: Most, if not all cement kilns that burn scrap tires also are permitted to burn 100%

coal. Thus, they could readily stop burning tires and burn coal and remain unaffected by the CISWI rule.] We challenge EPA to explain how these significantly increased emissions from the mining, processing, and transportation of coal will improve protection of human health and the environment [Footnote: EPA has said that it believes cement kilns will not stop using scrap tires as fuel for economic reasons. However, as shown below, the Agency's economic analysis is wrong, making its conclusions unsupportable.]

V. EPA's DEFINITION OF "PROCESSING" FOR SCRAP TIRES

UNIQUELY HARMS CEMENT KILNS

In a background document for the SWI rule, EPA has stated that using scrap tires as fuel in cement kilns yields significant emissions reductions [Footnote: Materials Characterization Paper In Support of the Advanced Notice of Proposed Rulemaking – Identification of Nonhazardous Materials That Are Solid Waste Scrap Tires, December 17, 2008 (Docket No. EPA-HQ-RCRA-2008- 0329-0297.11)]. On its website, EPA has proclaimed numerous environmental benefits gained by using scrap tires as fuel, noting that "it is better to recover the energy from a tire than landfill it." [Footnote: http://www.epa.gov/wastes/conserve/materials/tires/tdf.htm] And the Agency cites several advantages to using tires as fuel:

??"Tires produce the same amount of energy as oil and 25% more energy than coal."

??"The ash residues from TDF (tire derived fuel) may contain a lower heavy metals content than some coals."

??Using tires as fuel "results in lower NOx emissions when compared to many U.S. coals, particularly the high-sulfur coals."

EPA's web page also specifically discusses the use of scrap tires in cement kilns, noting the several advantages of using whole tires because "The removal of the steel is unnecessary since cement kilns have a need for iron in their processes." and that "...producing chips from whole tires increase[s] costs." (Id., emphasis added.) The Agency further explains that US cement kilns are among the largest users of scrap tires and that "A cement kiln is basically a large furnace in which limestone, clay, and shale are heated at extreme temperatures and a chemical reaction transforms them into clinker."

So, clearly, there can be no doubt that EPA understands the multiple environmental and economic benefits of using scrap tires as fuel in cement kilns. In addition, the Agency also understands that there are no negative environmental effects from using scrap tires to replace coal as fuel in cement kilns, as evidenced by the fact that it has cited none, either in the SWI or CISWI rules or in any other documentation it has published.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America

Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 7

Comment: Act on our recommendations in the NHSM rule to not include ingredients and provide for greater flexibility in the use of non-hazardous secondary materials as fuels under existing §112 standards.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 14

Comment: ARIPPA is convinced that coal refuse is not a waste and our plants will not be subject to this rule and we have submitted extensive comments to that point under Docket EPA-HQ-RCRA2008-0329.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 15

Comment: If EPA were to define solid waste in the SWI rule in a way that ensured that the CISWI rule did not apply to cement kilns, none of the claimed benefits of the rule would be sacrificed and many adverse effects would be avoided. EPA has ample latitude to promulgate such a definition.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 16

Comment: In the CISWI proposal, EPA states that the rule would diminish and deter resource conservation and recovery and would significantly increase land disposal of secondary materials that currently are reused [Footnote: "Perhaps the largest impact on solid waste would come from owners and operators who decide to discontinue the use of their CISWI unit and instead send waste to the landfill or MWC for disposal. Based on tipping fees and availability, we would expect most, if not all, of this diverted waste to be sent to a local landfill. As we discuss above, it may be that a good portion of the incinerators, burn-off ovens and small, remote incinerators would determine that alternative disposal is a better choice than compliance with the proposed standards. If this were the case for all of the units in these subcategories, we estimate that approximately 214,000 tons per year of waste would be diverted to a landfill." (FR 75 31967) It must be noted,

however, that EPA's diversion estimate of 214,000 tons per year completely ignores the impact of these rules on the use of scrap tires in cement kilns. If, as seems likely, these rules succeed in destroying that market, there will be an additional 847,000 tons per year of materials "diverted" to landfills. (See submittal for Attachment 7 provided by commenter.)] The rule would thereby deliberately thwart key goals of RCRA and violate Congressional intent. In the RCRA statute, Congress specifically found that "disposal of solid

waste...in or on the land can present a danger to human health and the environment" and that "millions of tons of recoverable materials which could be used are needlessly buried each year." (Emphasis added.) Congress further noted that "solid waste represents a potential source of...fuel," that "the need exists to develop alternative energy sources," and, finally, that "technology exists to produce usable energy from solid waste." [Footnote: USC, Title 42, Chapter 82, Subchapter 1, §6901]

Throughout the CISWI proposal, EPA frequently and euphemistically refers to the fact that materials currently used in energy recovery units will be diverted to "alternate disposal" techniques once the CISWI rule has its intended effect of causing "negative growth" (a.k.a. "destruction") of existing reuse and recycling technologies in energy recovery units such as cement kilns. "Alternate disposal" is EPA code-speak for "land disposal" and the its language in this rule seems to indicate that, notwithstanding Congress's clearly articulated goals in RCRA, the Agency has capriciously, irrationally, and obstinately decided to promote land disposal at the expense of recycling and reuse.

EPA seems oblivious to the clear intent of Congress, and instead of implementing the precepts of RCRA, the Agency has elevated its fascination with the meanings of "discard" and "processing" to a point where the proposed definitions would intentionally produce effects that run directly contrary to the statutory directives of RCRA [Footnote: EPA seems much more interested in figuring out how many secondary materials can fit into a definition of discard than in establishing policies actually designed to "maximize the utilization of valuable resources

including energy and materials which are recoverable from solid waste and to encourage resource conservation," which is the first and principal directive of Subtitle D of RCRA. Nothing in the statute compels EPA to "count angels on the head of a pin" by parsing the term "discard" into such infinitesimal and meaningless slices as exist in the SWI preamble. Aside from its misconstrued reference to a court decision in a Subtitle C case, EPA has not even attempted to explain how its theoretical preoccupation with the definition of "discard" in this rule will implement the clear Congressional mandate of RCRA Subtitle D.] In doing so, EPA does not even attempt to claim that the proposed SWI rule will in any way protect human health and the environment. Nor does the Agency attempt to make the case that the RCRA statute compels such a draconian and debilitating definition of non-hazardous solid waste. Instead, EPA has strung together a series of arbitrary choices apparently aimed at reaching a predetermined outcome and has not even bothered to try to 'connect the dots" in a logical and reasonable manner. EPA is not at liberty to develop regulations that ignore the plain language of RCRA and that, in effect, compel actions that inevitably will produce outcomes that violate the law's intent.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 17

Comment: The definition of "processing" in the SWI rule seems primarily aimed at maximizing the amount of secondary materials that would be captured under this rule and thereby regulated under the CISWI rule. It is not a logically-derived performance-based definition, but instead imposes arbitrary steps that are unrelated to and actually inimical to EPA's purported objectives of expanding recycling and reuse and protecting human health and the environment. This is particularly true in the case of scrap tire processing, where the type and extent of processing EPA has required for exclusion from the definition of solid waste is completely unrelated to what is actually necessary to make scrap tires amenable for reuse as fuel in cement kilns [Footnote: As EPA notes in the preamble, scrap tires require no processing or only very minimal processing to make them suitable for use as alternative fuel in cement kilns.]

EPA has offered no rationale for its definition of processing for scrap tires, nor has the Agency attempted to explain how its definition of scrap tire processing (shredded with metal removed) comports with its previously noted conclusion that "The removal of the steel is unnecessary since cement kilns have a need for iron in their processes." EPA also has not bothered to explain why a definition of processing that targets and adversely affects only the scrap tire reuse technologies developed and employed by the cement industry makes environmental or economic sense, especially given that EPA has concluded that regulating cement kilns under CISWI will yield no benefit. The Agency's arbitrary and destructive actions against the cement industry in this regard

and, in turn, against human health and the environment, demand explanation [Footnote: See submittal for Attachment 7 that details the numerous adverse impacts on human health and the environment that would result from cement kiln operators that end their use of scrap tires to avoid regulation under the Sec. 129 CISWI rule.]

The only rational way to define "processing" of an alternative energy source is as "whatever may be necessary to make a particular secondary material suitable for use as fuel in the device in which it will be utilized." It makes no sense for EPA to specify arbitrary techniques, technologies, or processing endpoints that are unrelated to both the intended use and the ultimate environmental performance of the alternative fuel in a particular application. A secondary material that inherently qualifies as a legitimate fuel, whether discarded or not, should not have to be "processed" into a "new fuel." Neither the RCRA statute nor subsequent case-law compels the approach taken by EPA.

Requiring the unnecessary processing of secondary materials (e.g., shredding and removing metal from scrap tires) that bears no relationship to the endpoints necessary for subsequent reuse, as EPA has done in the proposed SWI rule, is incredibly counterproductive. EPA's proposed definition of "processing" for scrap tires makes as much sense as it would for the Federal Aviation Administration to rule that "air travel" must include a stop in California regardless of the point of departure or the final destination; and to disallow (or require a special permit for) air travel that did not stop in California. Both approaches are equally ludicrous, as both would discourage existing productive activity, both would require very large and completely unproductive expenditure of money and fuel, both would significantly increase emissions of air pollutants, and both would produce not a single positive result.

Wholly at odds with its proposed definition of processing, in the preamble to the SWI rule EPA has cited the example of its past regulatory approach toward scrap metal to explain that the appropriate level of processing (baling, or shredding, or chopping, or crushing, or flattening, or cutting, or even just sorting) should be dependent on the specific secondary material and should be limited to what is truly necessary to make it amendable for its intended final use. If the mere simple alteration of the physical nature or packaging of scrap metal (baled, shredded, chopped, crushed, flattened, cut, or just sorted) without actually making it into a "new" material is all that was needed to deem it not a solid waste, then why should the same rationale not be applied to tires? After all, EPA promulgated these simple "processing" exclusions for scrap metal in the

context of its status as a Subtitle C hazardous waste, making the Agency's proposed elaborate processing requirements for scrap tires, by comparison, even more egregious [Footnote: "There are other examples beyond consumer recycled materials where discarded materials are processed into new products. These examples include specific exclusions from the hazardous waste regulations, which provide insight into how secondary materials can be processed into valuable products...Scrap metal that has been discarded is another example of a non-hazardous secondary material that is processed into a nonwaste. (EPA specifically exempted scrap metal that has been processed from the definition of solid waste (see 261.4(a)(13).) For scrap metal to be considered "processed," it must have been "manually or physically altered to either separate it into distinct materials to enhance the economic value or improve the handling of these materials. Processed scrap metal includes * * * scrap metal which has been baled, shredded, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e. sorted) * * * " (see 40 CFR 261.1(c)(10)). We believe this is a good example of where the level of processing necessary to convert a waste

material to a non-waste material is dependent on the material itself." (75 FR 31876) (Emphasis added.)]

EPA has not even attempted to explain why or how changing the mass or chemical make-up of a secondary material necessarily makes it more amenable or more "legitimate" as a fuel. If a secondary material is, by its nature, already amenable for use as a legitimate fuel, what benefit is gained by arbitrarily requiring processing? If processing has no appreciable effect on heating value or concentration of contaminants, then requiring processing serves no purpose and is, in fact, environmentally and economically counterproductive [Footnotes:Shredding scrap tires and removing the metal does not appreciably affect the heating value or concentration of "contaminants" in TDF. Nor does it affect the chemical make-up of TDF. While shredding and metal removal is a type of processing that may be necessary for certain TDF applications, it definitely is not necessary for cement kilns. The only "contaminant" that EPA has identified as existing in TDF in concentrations higher than coal, which TDF replaces in cement kilns, is zinc (which is not a HAP and not regulated under either Sec.112 or Sec.129 of the

CAA). EPA has said that "Removing the metal belts or wire will help reduce metal contaminants in the emissions and ash, and may improve the burning characteristics for some uses of the TDF." (75 FR 31877) But removing metal belts or wire from scrap tires has no effect on zinc content. So, to the extent zinc may be a "contaminant" in TDF, EPA's definition of processing will have no effect on it, regardless what type of unit burns it. And it is clear from EPA's preamble statements that the Agency knows shredding and metal removal have no bearing on "the burning characteristics" of TDF in cement kilns. This is yet further evidence that EPA's "reasoning" for requiring shredding and metal removal from scrap tires is arbitrary, capricious, and is not directed toward producing the outcomes EPA has identified; There is environmental and economic harm associated with consumption of additional resources (e.g., emissions from the production of the electricity needed to acquire and operate high-horsepower tire shredders, and wasted investment capital) that would be necessary to process a secondary material that, in fact, requires no processing to function well as an alternative fuel in cement kilns; For purposes of this rule, a substance should be considered a contaminant only if it has a materially adverse effect on the quality of the ultimate product or on emissions of hazardous air pollutants.]

We are confronted with yet another conundrum among myriad such puzzles in the SWI rule [Footnote: EPA has described its "Rationale for Processing Discarded Material Into Non-Waste Products" as follows: "Today's proposed rule identifies circumstances where materials that have been discarded in the first instance, and are thus solid wastes, can be rendered into new non-waste products through legitimate processing consistent with the definition outlined above. The basic principle that must be satisfied is that the discarded material must undergo sufficient processing that produces either a new fuel or ingredient product. The new product must have properties that provide the end user the assurance that the material consistently satisfies the fuel/ingredient product criteria based on the type of combustion unit the secondary material is used in (e.g., as a fuel in a boiler or as an ingredient in a cement kiln)." (75 FR 31876, emphasis added)] . EPA says the "basic principle that must be satisfied" to render a discarded material into a non-waste product is that the "discarded material" must be processed to produce "a new fuel or ingredient product." And the "new product must have properties that provide the end user the

assurance that the material consistently satisfies the fuel/ingredient product criteria based on the type of combustion unit the secondary material is used in." As EPA has acknowledged, whole scrap tires possess the "fuel/ingredient criteria" that cement kilns need. And because the

fuel/ingredient properties of tires are relatively constant, there is no question that scrap tires "consistently satisfy" the fuel/ingredient criteria needed for use in cement kilns. So even though whole scrap tires obviously satisfy EPA's "basic principle," the Agency has nonetheless arbitrarily concluded that tires must be shredded and the metal removed to be considered "processed." This is yet one among the many examples of EPA's failure to engage in reasoned decisionmaking in these rules.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 18

Comment: The opening statement of Executive Order (EO) 12866 says, "The American people deserve a regulatory system that works for them, not against them: a regulatory system that protects and improves their health, safety, environment, and well-being and improves the performance of the economy without imposing unacceptable or unreasonable costs on society; regulatory policies that recognize that the private sector and private markets are the best engine for economic growth; regulatory approaches that respect the role of State, local, and tribal governments; and regulations that are effective, consistent, sensible, and understandable." [Footnote: 58 FR 51735, October 4, 1993]

Section 1 of EO 12866 goes on to say, "In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach."

In the SWI rule, EPA has completely ignored EO 12866, bluntly stating that "the Agency has not prepared a separate economic assessment in support of this proposal." (75 FR 31889) And EPA failed to prepare an economic assessment despite having said in the Advance Notice of Proposed Rulemaking, "When EPA issues a notice of proposed rulemaking, EPA will address those [EO

12866] requirements. EPA expects to prepare an Economic Assessment (EA) in support of the proposed action." (74 FR 41)

The Agency's dereliction of its obligations under EO 12866 is inexcusable. EPA's claim that "This action alone does not directly invoke any costs or benefits." is disingenuous,

unsupportable, and plainly wrong. As noted earlier, the SWI rule is inextricably linked to the CISWI rule. CISWI can apply to sources only if the secondary materials they use are defined as solid waste by the SWI rule. And even if that were not the case, due to EPA's definition of "processing," particularly with respect to scrap tires, the SWI rule definitely has the capacity to independently "invoke" costs.

[See submittal for Attachment 7 – Comments on Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Proposed Rule provided by commenter] As described in detail in Attachment 7, the SWI rule, in and of itself, can impose significant costs and create extensive adverse environmental effects, which also have economic consequences. For example, if, as is likely, cement kiln operators conclude that the cost of unnecessarily processing tires (by shredding and metal removal) combined with the cost and stigma of subjecting their units to regulation as solid waste incinerators is unacceptably high, they will stop using tires as alternative fuel. The TDF they once used will be replaced by coal and the tires will be land disposed. Both actions will "invoke" significant economic cost and will cause significant environmental harm, with no offsetting benefit. And these effects will occur even though the cement kilns are never regulated by the CISWI rule [Footnote: A cement kiln operator does not have to be subject to CISWI to make a decision to abandon the use of scrap tires based on the definitions in the SWI rule.]

By inappropriately and unnecessarily defining solid waste in such a draconian manner, the SWI rule, by itself, has the potential to upset large segments of existing recycling and reuse markets. To the extent those upsets result in facilities' abandonment of the use of secondary materials, thus never becoming subject to CISWI standards, the SWI rule alone will impose costs and produce negative environmental outcomes that EPA is compelled by EO 12866 to analyze and justify.

Finally, EO 12866 directs federal agencies to "assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating." Thus, for example, EPA must evaluate the costs and benefits of "not regulating" scrap tires as solid waste (regardless of processing). The data presented in [See submittal for Attachment 7 – Comments on Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Proposed Rule provided by commenter] make it abundantly clear that defining solid waste in a way that would preserve the status quo of (i.e., "not regulating") scrap tire use in cement kilns would impose the lowest costs and generate the greatest benefit. A fair analysis by EPA could reach no other conclusion, and, as it acknowledged in the ANPR, the Agency is compelled to perform just such an assessment of the SWI rule.

In its "REVIEW OF COSTS, BENEFITS, ECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND OTHER IMPACTS" (Docket ID: EPA-HQ-RCRA-2008-0329-0528), EPA

make a truly bizarre statement, claiming that, "Despite the potential for whole tires to be diverted to land disposal as a result of the proposed rule, EPA's assessment of the cost data for cement kilns (the main users of whole tires) suggests that cement kilns will continue to burn whole tires following promulgation of the rule." This statement is bizarre because EPA's basis for saying it is so fundamentally flawed.

EPA arrived at this erroneous conclusion by fatally misconstruing its own data and analysis, saying that because the cost per kiln of compliance with the proposed Section 112 Portland

cement MACT "translates to $2.1 million per year," and the "per unit cost of the proposed CISWI standards under Section 129 of the CAA [is]approximately $1.3 million per year" and therefore "less than the $2.1 million in annual, per-unit compliance costs associated with the Section 112 Portland cement MACT, burning whole tires (and complying with Section 129 standards instead of Section 112) would not lead to increased air pollution control costs for cement kilns. Therefore, EPA concludes that these units are unlikely to stop burning whole tires as a result of the proposed NHSM rule." EPA is saying that compliance with the Sec. 129 CISWI standards will be a relative bargain for cement kiln operators compared to Sec. 112

compliance with the PC MACT rule, and that the favorable cost difference means they will be "unlikely to stop burning whole tires." But that is completely false!

EPA's contractor, Eastern Research Group, Inc. (ERG) sent a letter to EPA on April 28, 2010 that presented its analysis of "Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units." (Docket ID: EPA-HQ-OAR-2003-0119-0057) On page 2, ERG explains to EPA that "For waste-burning kilns, we assumed that these units would likely be complying with the final and proposed Portland Cement NESHAP limits prior to, or in absence of, complying with the proposed CISWI emission limits. As a result, for the pollutants that are covered by the Portland Cement NESHAP that are also CAA section 129 pollutants, the baseline emissions should reflect the Portland Cement NESHAP limits. We compared the available test data to the proposed Portland Cement NESHAP limits for pollutants that overlap the nine section 129 pollutants. If the measured value was lower than the proposed Portland Cement NESHAP limit, then the test data were used.

Otherwise, if the measured data were greater than the proposed Portland Cement NESHAP limit, then the Portland Cement NESHAP limit was applied as a baseline concentration for that unit." (Emphasis added.)

EPA's analysis (prepared by ERG) clearly assumes compliance with the proposed Portland Cement NESHAP as the emissions baseline for cement kilns. So there is no question that the annual $1.3 million per unit cost of cement kilns' compliance with the Sec. 129 CISWI standards is in addition to the annual $2.1 million per unit cost of meeting the Sec. 112 standards. And EPA's attempt to use these cost figures to dismiss the steep economic downsides of the SWI and CISWI rules disintegrates upon correct application of the Agency's own data.

In fact, the annual cost of CISWI compliance for cement kilns would be $3.4 million per unit per year, a 38.2% increase over PC NESHAP compliance cost!

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 18

Comment: Within its comments on EPA's Proposed Solid Waste Identification Rule, ARIPPA provided detailed information in support of the proper classification of coal refuse as a fossil fuel, and not a solid waste, based on EPA's longstanding regulatory practice under the CAA, RCRA, and the SMCRA. Because coal refuse should not be classified as a solid waste, the combustion of coal refuse should not be subject to the CISWI standards under the Proposed Rule, consistent with the D.C. Circuit's decision directing EPA to ensure that the combustion of materials that are properly characterized as solid wastes are subject to regulation under Section 129.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 22

Comment: EPA has indicated that:

"Some commenters have also argued that, as more non-hazardous secondary materials would be subject to CAA section 129 standards when combusted, this option would help promote traditional recycling, while ensuring more stringent emissions standards under CAA section 129 for those sources that elect to continue to burn these secondary materials. Depending upon local disposal and virgin material costs, increased recycling may occur as a result of market adjustments in response to higher materials management costs." (75 FR 31886)

As with many claims in the SWI proposal, this one also is completely unsubstantiated. And it is a red herring. This naïve notion, that discouraging or killing existing recycling/reuse technologies involving combustion will "help promote traditional recycling" has frequently been advanced by anti-combustion activists. Yet neither they nor EPA have ever established a correlation, much less a causal relationship between using secondary materials as fuels and reusing them by other non-combustion means. It therefore is irresponsible for EPA to give a nod to the potential legitimacy of this argument by saying that "increased recycling may occur as a result of market adjustments to higher materials management costs." The fact is that is increased recycling also may not occur. And, to the extent EPA has bothered to consider this question, which it did for scrap tires, the Agency has concluded that increased recycling most probably will not occur and that the only "materials management" technique that will increase is land disposal. [Footnote: Under the solid waste criteria outlined in the proposed NHSM rule, shredded tires (assuming a significant portion of the steel wire is removed) are unlikely to be considered solid waste, while whole tires are likely to be solid waste. If whole tires are diverted from their current combustion applications as a result of the rule, EPA assumes that they would be diverted to land disposal. While whole tires could potentially be redirected to TDF or civil engineering applications, the

size and structure of the scrap tire market suggests that this is unlikely. Given that demand for scrap tires in civil engineering applications has declined in recent years, the capacity of the civil engineering market to absorb additional tires is uncertain. In addition, because tire processors generally send whole tires to cement kilns when there is no demand for them as shredded TDF, it is unlikely that the TDF market would absorb a significant quantity of tires from the whole tire market." (Docket ID: EPA-HQ-RCRA-2008-0329- 0528, p. 30]

EPA has concluded, correctly, that redirecting scrap tires to "TDF or civil engineering applications" is "unlikely," noting that the demand for scrap tires in civil engineering applications has declined in recent years. EPA also observes that there is no demand for shredding the whole tires that currently are used in cement kilns and that it is "unlikely" that the TDF market could absorb tires from the whole tire market.

The plain fact is that the ultimate disposition of secondary materials is driven by economics. Using secondary materials as fuel is every bit as legitimate and "traditional" as any other form of recycling or reuse. Absent regulatory barriers, secondary materials will always gravitate toward

the highest value end-use. For example, if market demand exists for scrap tires to be used to produce metal-free crumb rubber, a relatively high-cost/high-value product, the scrap tires will move toward that demand. Conversely, if the demand for metal-free crumb rubber has been satisfied, and the next best economic option for scrap tires is as whole-tire TDF in cement kilns, the scrap tires will move in that direction. There is no basis for EPA or anyone else to assume that markets for non-combustion end uses can be created from thin air simply by choking-off the combustion options. And not only is it unsubstantiated, it cannot be substantiated because it is not grounded in reality. It is little more than a fairy tale---a poor excuse to act irrationally. Fortunately, the courts have expressed little tolerance for EPA acting in such a manner.

So rather than entertain and legitimize this silly and childish argument, EPA should summon the gumption to inform the commenters about the inescapable market realities that govern the flow of secondary materials. And, in the case of scrap tires, the Agency should make it clear that the alternative to TDF is not increased "traditional recycling" but increased land disposal, which brings with it significant negative environmental consequences and unacceptable adverse impacts on vulnerable populations.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 23

Comment: EPA has proposed that "the following are not solid wastes when combusted for purposes of the CAA: non-hazardous secondary materials used as fuels that remain within and are combusted within the control of the generator and that meet the legitimacy criteria..." (Emphasis added.) Yet EPA has also proposed that if the exact same non-hazardous secondary materials were

transferred to and combusted by a third party, they would be considered solid wastes. (75 FR 31856). This arbitrary distinction without a difference is but one more example of dangerously flawed decision-making in these proposed rules.

Under EPA's "reasoning," the regulatory status of a non-hazardous secondary material used as a fuel would be determined not by its potential to harm human health or the environment, but by who combusts the material and where it is combusted. For example, if a generator of secondary material "A" were to use the material as fuel in combustion device "B," the secondary material would not be a solid waste regardless how the secondary material is handled or the efficacy of the combustion unit. But if the same generator were to send the same secondary material "A" across the street to be used as a fuel by his neighbor in a combustion unit that is identical in design to combustion device "B," the secondary material would be a solid waste, even if the neighbor employed better handling practices, operated his combustion device at a higher level of performance, and even if emissions from his combustion device was fully regulated under Sec. 112 of the CAA!!! In other words, a generator of a secondary material gets a 'free pass' no matter how poorly he may handle the material; but someone who receives the same secondary material from that generator would be regulated no matter how safely he may handle the material. In a rule filled with bizarre contradictions, could anything make less sense?

EPA is compelled to explain why it has expended such great effort performing the complex legal gymnastics needed to justify such an unreasonable and arbitrary conclusion rather than simply applying logic and common sense to make a reasonable decision?71 EPA has failed to present even a shred of evidence showing that protection of human health and the environment would be enhanced by this proposed differentiation between the mere location of a combustion activity. The regulated community and the general public have a right to expect that EPA will make decisions that, at their most fundamental level, actually advance the primary purpose of the laws they are intended to implement - i.e., protection of human health and the environment. In this case, however, as in many other instances throughout the SWI and CISWI proposals, EPA has made decisions that either do nothing to protect human health and the environment or will cause them significant unnecessary harm.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 24

Comment: EPA has proposed a "non-waste determination" procedure as a means of secondary materials escaping from the definition of solid waste. This is a tacit admission of the undesirability of having a secondary material regulated by the CISWI rule. After all, if regulation under CISWI were "no big deal" or even preferable, as EPA has claimed, why would the Agency need to erect a petition procedure as a pathway out of CISWI applicability?

Notwithstanding the reasoning behind proposing a non-waste determination petition, the procedure EPA has proposed is complicated, lengthy, cumbersome, time-consuming, expensive, and freighted with huge uncertainties. It is difficult to imagine that anyone familiar with the ordeal of permitting under RCRA would elect to subject themselves to the procedure EPA has outlined.

The only appropriate solution is for the Agency to define non-hazardous solid waste in a way that actually promotes the statutory directives of RCRA Subtitle D. However, if EPA insists on a definition that opposes Congressional intent, it should defer any non-waste determinations to states' beneficial use programs, which should be exercised without EPA approval.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 77

Comment: EPA should include language in the recently proposed Definition of Solid Waste rule that combustion in such devices is not considered discard or that samples are not solid waste.

Response: The commenter primarily discussed issues that are being dealt with within the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking (NHSM). To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 7

Comment: EPA's intentions regarding the combustion of used oil: There are a large number of facilities in New York State that combust used oil in a wide variety of units, ranging from small space heaters to large industrial combustion units. The DEC is concerned that EPA's inclusion of used oil not meeting the specifications in 40 CFR§279.11 as solid waste has the potential to classify a significant number of these existing units as CISWI units.

Clarification is needed regarding EPA's intent and application on this issue. Is it EPA's intention for all facilities combusting used oil to test it for compliance with the referenced specification? The DEC is concerned that mandatory testing will place an unnecessary burden on small businesses that must pay for testing of used oil generated on site, and find an alternate method of disposal for any that does not meet the referenced specifications.

Response: This comment deals primarily with the Identification of Non-Hazardous Secondary Materials That Are Solid Waste rulemaking. To the extent the commenter has provided these comments to that rulemaking docket, they will be addressed there.

The commenter also mentions space heaters that burn used oil. Please see the CISWI preamble for discussion on space heaters.

1.3 Out of Scope: Boiler - Undesignated

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 2

Comment: We believe EPA has significant discretion in the MACT program to protect public health while avoiding the unnecessary burdens these proposed regulations could impose. Boiler MACT could cost the forest products industry alone over $6 billion in capital expenditures and hundreds of millions more in annual costs unless significant changes are made.

We are coming out of the worst economic recession since the Great Depression, and the forest products industry has lost over 350,000 jobs in the last three years. To be a sustainable industry supporting high-paying jobs and providing sustainable products, we need sustainable environmental regulations.

Otherwise, costs of this scale will force further mill closures and tens and even hundreds of thousands s of additional job losses, especially given other expected, significant environmental regulatory costs.

Exports will drop, and imports will increase since no other county is contemplating requirements this extreme.

We have identified four broad areas for improvement in the Boiler MACT.

First, EPA should utilize its authority in Section 112(d)(4) of the Clean Air Act to set health-based emission limits to protect the environment and public health. This would avoid

unnecessary controls where emissions of threshold pollutants, like acid gases, are low enough to be safe.

We are encouraged that EPA has invited comment on this approach and believe it should be adopted in the final rule for use on a facility-by-facility basis without complicated and unnecessary procedures that would restrict its use. It is the best way to target investments only to where problems exist as Congress intended. We can ill afford not to include such a health-based emission limitations given the economic implications of the rule.

Second, EPA should set more reasonable limits that would reflect the variability of real world, best performing boilers. Boilers go through warm-ups, shutdowns, load swings, fuel mix, and fuel quality changes, control efficiency differences, and performance testing adjustments.

For example, EPA should collect long-term carbon monoxide data from exhibiting CO monitors which show large variations, rather than conclude –- based on short-term data –- that CO performance is steady.

Finally, some boilers are used for limited periods of time for back-up and should be treated differently than boilers running day in and day out.

Third, EPA should base the limits on more realistic data. The data used in setting emission limits is heavily biased given the way it was collected and sorted. EPA required the best performing units to test and then took the best of that small data set to the point where they represent the best of the best performers –- the top one percent, not the top 12 percent as the law instructs.

Only a handful of existing units can meet all the limits when you'd expect 12 percent of boilers to achieve the limits. And for new units, it's unclear whether state-of-the-art boilers could be guaranteed to perform at the necessary levels.

In addition, we need to apply different statistical approaches that align the data sets and their use in the rule making. Ultimately, EPA needs to look at other available data to paint a more realistic picture of boiler performance for each HAP and subcategory and make sure real world best performing boilers can meet the SET of HAP limits

Finally, EPA should not penalize clean fuels like biomass. Several of the existing and new source limits for biomass are extremely low because the baseline of emissions is very low compared to other fuels. Emissions of mercury, dioxin, and hydrochloric acid are present in very small amounts in wood and are inconsequential sources of these HAPs, yet the costs become exponentially more expensive and can't be consistently achieved.

The biomass limits are unduly influenced by test that could not detect the HAP, which suggests that the emission limits should be dropped or at least replaced by alternative work practices as was done for natural gas fired boilers.

Finally, over 60 boilers burned biomass with as little as 10 percent coal, but the proposal classifies them as coal boilers, setting unachievable CO limits. The CO limits of these combination boilers should be the same as the ones for biomass fired boilers. If we want to continue to encourage and expand the use of renewable carbon neutral biomass, the rule needs to change dramatically.

Under Boiler MACT we need to – EPA should set numeric limits for CO for biomass and oil-fired limits located at small mills –- should not set numeric limits for those but instead, set good combustion practices and tune-up requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 25

Comment: I'm a Policy Advisor at the American Petroleum Institute. My comments today are on behalf of API and NPRA, the National Petrochemical and Refiners Association. API is the primary trade association of America's oil and natural gas industry which represents more than 400 members involved in all aspects of the industry. NPRA is a national trade association representing more than 450 members, including virtually all U.S. refiners and petrochemical manufacturers.

First and foremost, we support the work practices for natural and refinery gas units as proposed and believe that this approach should also extent to fuel gas from petrochemical operations. In the proposed rulemaking, EPA is taking comment on setting numerical emission limits for all gas-fired boilers and process heaters. In response, I'd like to summarize four specific points.

First, a sound national energy policy –-national energy and regulator policy must recognize the important role gaseous fuels play, both in our economy and in reducing both conventional pollutants and greenhouse gases.

Second, it cannot have been Congress' intent for EPA to set emission limits or MACT floors for multiple hazardous air pollutants for source categories without addressing or demonstrating whether or not they are achievable in combination. For this rulemaking, there is no indication that any of the so-called best performers are achieving these standards today; and in fact, from the data collected, there isn't a single unit currently achieving all five emission limits.

Third, there are unintended consequences of proposing emission standards that would require the installation of control devices that have not been demonstrated to achieve the proposed numeric emission limits and that would, in actuality, increase energy consumption and increase emissions.

Finally, gas-fired boilers and heaters have extremely low emissions, pose little or not health risk to the public; and, therefore, EPA should use its authority to encourage their use by allowing work practices that give operators the flexibility they need to maximize combustion efficiency and thereby minimize emissions.

I'd like to provide some additional detail on these points. First, a vast majority of our industry's boilers and process heaters rely on clean-burning fuel, whether it's natural gas, refinery gas, or gas from our petrochemical operations for the efficient operation of our facilities. However, we

are not alone as many other industries, institutions, and government facilities also rely on these gaseous fuels to keep this nation going efficiently. EPA should continue to recognize the benefit of these clean fuels.

Second, there appears to be a shift in the method that EPA is using to set emission limits, and we all know its name – Franken MACT. Franken MACT comes to life when EPA sets emission limits based on the best performing units on a pollutant-by-pollutant basis without considering whether or not those limits are achievable in combination. In fact, in this rulemaking, EPA has used emissions in calculating numerical limits that are at the very bounds of our ability to even measure the pollutant. As a result, there's not a single gas-fired boiler or process heater that's been demonstrated to meet all five of the proposed numerical emission limits for such units. It cannot have been Congress' intent for EPA to set emission limits without regard to feasibility. This is a drastic shift from EPA's historical technology-based approach which has been practiced and proven effective over the past 30 years. EPA needs to get back to setting achievable standards that are based on sound science.

Third, there are unintended consequences of requiring the installation of pollution control devices that have not been demonstrated collectively to achieve the standards. For instance, the proposed CO limits for gas-fired units will require operating at much higher oxygen levels than typical, which will lead to increased fuel use and, as a result, increased CO_2 emissions. This is also true for oil-fired units. In fact, emissions of all pollutants other than CO will also increase because of the increased fuel use. Remarkably, the proposal does not indicated how the low CO levels will be achieved. Are we to take this as an indication that EPA's own analysis shows that it's unachievable? TO complicate matters, EPA has also included in this proposed rule precedent-setting energy assessment and ongoing energy management requirements that apply well beyond this source category which, we believe, will further highlight the inconsistency between the low CO levels and the optimum operation of boilers and process heaters.

Fourth, with regard to this rule, the Agency should avoid promulgating provisions that despite requiring significant capital and operating costs, will result in negligible emission reductions, could have the perverse effect of discouraging gas use, and could increase the emission of other pollutants. It's well known that gas-fired boilers and process heaters have very low emissions and pose negligible risk to the public. Therefore, EPA should establish final work practices as Congress intended in this situation, which give operators the flexibility they need to maximize efficient combustion and thereby minimize emissions.

In closing, we support work practices for natural and gas-fired –- natural and refinery gas units as proposed and believe EPA should extend this to include fuel gas from petrochemical operations. While my comments today have focused on gas-fired boilers and heater, I should add that many of the same issues apply for liquid-fired sources as well. Our detailed comments will expand on points raised and will include additional information on the standards for oil-fired units.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Comment Excerpt Number: 27

Comment: When the court vacated the earlier ICI Boiler MACT rule and state and local permit authorities were faced with developing case-by-case MACT permits, NACAA collected existing test data from state and local permitting agencies. Over 40 agencies provided hundreds of data points that NACAA used to calculate MACT floors, which were substantially lower than those adopted by EPA in its earlier rule. The NACAA database was provided to EPA in June of 2009.

Many units combust mixtures of fuels. No clear correlation has been established to evaluate the emissions performance of different units combusting different mixtures of fuels –-and indeed, when switching fuels, emissions of one HAP may increase while those of another HAP may decrease. In its model permit guidance NACAA considered only those results where a source was burning 100 percent of one category of fuel during the test. Under NACAA's recommended approach, sources would be separately tested for compliance with each applicable limit. NACAA also noted that during compliance testing, sources may be able to establish unit-specific correlations for operation of different fuels.

EPA apparently did not use the testing in the NACAA database to establish the MACT floors. The EPA data includes numerous entries where a source was combusting different fuel mixes, which NACAA believes will be difficult to translate into enforceable MACT limitations. While the NACAA and EPA data sets often produce generally consistent results, EPA cannot exclude from the calculation of the top performing 12 percent the testing conducted for other compliance purposes as required by state and local permit officials.

EPA's approach is to categorize source categories according to fuels that they are designed to combust and allow sources to comply with what EPA apparently considers the least stringent standard for any of the fuels that it may combust. NACAA believes that this approach is likely to be unworkable for many sources.

Several options have been proposed for which EPA offered little or no justification and analysis. Some are of doubtful legality o—in particular, the clearly erroneous suggestion that EPA could establish risk-based exemptions at levels less stringent than the MACT floor. NACAA recommends that EPA avoid options that carry a substantial risk of a lawsuit that delays implementation of these important public health protections.

The proposal to not set a MACT floor or MACT emission limit for large, gas-fired boilers is another example. EPA's principal argument for it is that imposing MACT limits on gas-fired boilers doubles the anticipated cost of the rule. However, unlike the beyond-the-floor analysis, there is no cost test for the MACT floor. Moreover, EPA has apparently not considered or provided information in its proposal that would enable the public to evaluate whether excluding natural gas units from numeric MACT limits is in the public interest. Further, while the discussion of cost to the industry is extensive, EPA fails to analyze or calculate the full benefits of these rules to the public.

With respect to variability, without any justification EPA applies a statistical test that requires 99 percent confidence that a standard has been exceeded before a violation is established. EPA also appears to calculate this factor on the basis of variability of individual test runs, even though the applicable standard requires averaging three individual test runs to reduce the variability that would be present in individual runs. In other rules EPA has used a 90-percent confidence factor applied to the average of three runs to calculate variability. The general result of requiring a higher confidence level is that the standard is higher than it otherwise would have been.

In conclusion, the proposals are a marked improvement over EPA's earlier efforts. If the Agency follows the law and simply bases its decisions on the available data, very significant reductions of both toxic and criteria pollutants will result at costs that appear to be reasonable and manageable. NACAA urges EPA to complete these rules in a timely, thoughtful, and lawful manner.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 31

Comment: I am the Director for Energy and Resources Policy at the National Association of Manufacturers. The NAM is the largest industrial trade association in the United States, representing over 11,000 small, medium, and large manufacturers in all 50 states.

The NAM is the leading voice for the manufacturing economy in Washington, D.C., which provides millions of high-wage jobs in the U.S. and generates more than $1.6 trillion in GDP. In addition, 80 percent of NAM members are small businesses which serve as the engine for job growth.

The EPA's proposal to impose more emission standards on industrial boilers will cut across all sectors of the NAM membership, including the chemical, auto, metalworking, petroleum refining, and forest and paper sectors. New standards for industrial boilers will have an immediate impact on our members' bottom line.

In that regard, NAM and its members have an important interest in EPA's proposed Boiler MACT Rule and appreciate the opportunity to provide the following comments:

Manufacturers are attempting to fully recover from the steepest economic downturn since the 1930's and bring back the 2.2 million high-wage jobs lost during the previous recession.

Federal policymakers should create conditions that will lead to economic expansion and not stifle the vitality necessary to create jobs and technologies that will continue to improve the nation's air quality. Imposing stricter mandates on the manufacturing sector will not accomplish any of these objectives.

NAM and its member companies are confronting an avalanche of additional rules and regulations from EPA, including the reconsideration of the 2008 ozone standard, the reconsideration of the 2007 PM standard, the Proposal to Regulate Coal Ash, and the imposition of first-time regulations on greenhouse gas emissions.

While there are aspects of the proposed rules that the NAM supports, our overriding concern is that compliance costs associated with the more stringent Boiler MACT rule will hinder manufacturers' ability to add jobs as the recovery attempts to gain more attraction.

The NAM supports EPA's decision to rely on work-practice standards in lieu of emission limits for certain gas-fired boilers and believes that EPA should provide for work-practice standards on all gas-fired units within this rule.

The NAM believes that EPA's HAP-by-HAP approach to setting the MACT floor violates the Clean Air Act. EPA has essentially cherry picked the best data in setting each HAP standard without regard for the sources from which the data came. This results in a combined set of standards for purely hypothetical boilers that may never have actually been achieved by any single real world source.

EPA's new floor MACT policy is setting extreme limits that are drastically different than EPA's GACT limits which will confuse the public about the real health risks of such units.

Furthermore, the NAM believes that the data EPA gathered to support these rules were biased towards so-called top-performing facilities. This has resulted in proposed standards that are far too stringent and not representative of the subcategories to which they apply.

The NAM is continuing its review of the data and analyses underpinning the proposed rules and will be providing more complete comments once the review is finished. Manufacturers are particularly concerned about how EPA addressed the issue of the variability of the data. EPA's proposed limits may not appropriately address the variability in emissions of various HAPs.

In addition, NAM is examining whether EPA's proposed limits were unduly impacted by issues associated with the limits of detection.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512

Comment Excerpt Number: 34

Comment: I am the Director of Utilities for the City of Orrville, Ohio, a small city of about 900 residents and a small coal-fired electric plant that would be subject to the Boiler MACT rule. I also testify today as the Chair of the Generators Group at American Municipal Power, which is composed of other small municipalities who also generate electricity primarily by burning local coal resources with increasing investments in hydroelectric and other renewable and energy efficiency projects. The Generators Group includes the Ohio cities of Painesville, Shelby, Dover, and Hamilton; and we help coordinate the concerns of other small municipal generators in other states. Together with my home city of Orrville, we represent a unique subset of the Boiler MACT source category because we generate electricity as part of our primary output. We operate as electric utilities, but we are too small to be included in the Utility MACT source category.

Municipal electric plants provide reliable electricity for public services, like police and fire protection, and for hospitals and schools. We also serve residents and businesses with electricity priced at the cost of generation. Low-cost electricity helps entice businesses to locate in our areas and long-term price commitments encourage businesses to stay and grow in our communities. In these difficult economic times offering reliable low-cost electricity is an important incentive for attracting and retaining jobs in our communities.

We have many concerns regarding the proposed Boiler MACT rule and how it will affect our operations.

First, we understand the Boiler MACT rule is due to come out before the Utility MACT rule, which means that our small municipal public power plants will be facing the cost of emission controls for hazardous air pollutants many months, if not years, before the investor-owned utilities. The timing of these two regulations places our generators at a significant disadvantage to the much larger investor-owned utilities. EPA can mitigate this burden by establishing a separate subcategory for small municipal utilities and setting a compliance schedule for us that is consistent with the schedule for large investor-owned utilities to comply with the Utility MACT.

Municipal electric plants are also concerned with the significant projected cost of the Boiler MACT rule. To install all the control equipment anticipated by the Boiler MACT rule would cost over $20 million for our facility alone. We certainly understand how important it is to protect the environment, and as city officials, we are committed to providing a safe environment for our residents. However, we have to ask ourself this level of expenditure is necessary to protect our citizens and our environment. We think that this rule fails to strike the right balance between job preservation, and growth, and environmental protection.

The Clean Air Act offers U.S. EPA discretion in certain areas that can and should be used to help balance economic and environmental interests. Exercising this discretion is particularly important in difficult economic times as regulatory burdens can become the straw that breaks the economic backs of U.S. manufacturers and jeopardizes the jobs that are crucial to sustained economic recovery.

We ask that EPA exercise this Clean Air Act discretion with strength and vision to focus resources on serious health threats from air emissions and offer relief from economic burdens when such health threats are not indicated.

To relieve some of the burden for these boilers and process heaters, EPA should exercise the health threshold discretion that Congress allows under Section 112(d)(4) of the Act. Congress recognized that some pollutants are safe at low concentrations, and they allowed EPA to consider this health threshold when setting emission limits. Hydrogen chloride is a common acid and one of those compounds that is safe at low concentrations. EPA may use health risk information to test emission standards that reflect health thresholds so that we are not spending money on control equipment that is unnecessary required to protect human health.

In these strained economic times, EPA should certainly exercise its discretion to stop the regulatory burden when health is adequately protected. This can reduce environmental expenditures by two t three million dollars per unit at each of our municipal electric plants.

The Act also allows less burdensome work practice standards when it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard. This is taken from Section 112(h) of the Clean Air Act.

We encourage the EPA to utilize this discretion as liberally as court decisions allow to relieve the burdens of emission standards, particularly where work practices provide effective emission control assurances at lower cost and burdens to the operators.

The Clean Air Act also provides EPA with broad discretion to subcategorize within the Boiler source category based on size, type, and class of source to help ensure that the emission limits are determined by the best performing similar sources and that the emission standard can be ultimately achieved in practice.

Then within the proper subcategory, EPA has the discretion to use a method for setting emission standards based on what real world best performing units actually achieve so that the units setting the bar for the rest of the subcategory will not have additional emission control obligations.

If the EPA were to use the discretion provided in the Clean Air Act, it could significantly alleviate the burden of this rule without compromising the environmental benefits that Congress intended. Flexible approaches in the Boiler MACT rule that appropriately address the diversity of units, operations, sectors, and fuels could prevent severe job losses and billions of dollars in unnecessary regulatory costs.

Two of our largest customers, the JM Smucker Company and The Quality Casting Company have sent concerns to lawmakers, and I'd like to offer a few of their comments.

Tim Smucker, Chairman of the Board and Co-CEO for the JM Smucker Company stated, our company has elected to remain in the Orrville community for many reasons, including low rates, reliable service, and community benefits of working with a city-owned and operated electric utility. The Orville municipal utility plays an essential role in the community to ensure competitive electric rates for residential and business customers as well as emergency services. Certainly, public utilities should be held to high standards as we work to preserve our environment, but such standards should reflect regulations that are industry and size specific. It appears as though municipal utility representatives have offered viable options to the EPA for alternative and effective regulations.

Our utility will continue its proactive efforts in the areas of improving plant efficiency while making investments in hydro and energy efficiency projects and participating in this rulemaking

project. We all have the responsibility of developing standards that are realistic and economically achievable without sacrificing health risk.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 42

Comment: Thank you very much for giving me the opportunity to speak today and to present what I would call an insider's view of what the issues could -– that the rules generate that could change the face of the pulp and paper industry as a whole and a company in specific.

I represent Domtar as Director of Environment Sustainability, and we will be submitting more elaborate comments in written form towards the end of July.

I would like to present first off an overview of Domtar. For those of you who don't know, we are the largest uncoated free sheet paper manufacturer in North America. We make copy paper, business papers, food and specialty papers, and also pulp for various applications such as diapers and other hygiene products.

We have 10 paper mills in the U.S., spread out over 9 states. Our use of renewable energy is remarkable. Where we have 75 percent of our energy that is used –- that is -– that we use –- sorry, that comes from renewable sources, 69 percent of the electricity we use within the company is self-generated, and about 60 percent of that electricity also comes from renewable sources such as biomass and hydroelectricity.

The company itself has a strategy that –- in place that we –- to reduce our dependence on fossil fuels and to reduce our environmental footprint as can be evidenced by two recently announced biomass cogeneration projects in Wisconsin and in South Carolina.

To go a little bit over the impact of the rules –- sorry, the four rules on our operations, the rules will cover 32 boilers that we operate in 10 mills, both in liquid, the gas coal, and biomass categories.

Let me start by saying the purpose of EPA in putting this rule is definitely a noble one. It is -– and it will go a long way towards making America a world leader in environmental conscious actions.

However, the rule could in its present form have devastating impacts on both the pulp and paper industry in the entire manufacturing sector in the U.S. as the limits are way too restrictive, and in some cases, unachievable.

As was pointed out earlier, the data that was used to set the MACT floors ignores the vast majority of boilers and emissions data that exists out there. EPA needs to consider all of the data available to set the rules and not just a select few.

Also, the variability of the emissions need to be better considered, especially events of start-ups, shutdowns, and the variability in fuel mixes, the variability in steam loads, something that is very common in the pulp and paper industry.

As the rule stands now, even some of the boilers identified as top performers such as biomass boiler that we have at our facility in Kingsport, Tennessee, which was identified, as I said, as a top performer for CO, could not meet the rule standard at all times.

The rule discourages the use of biomass, and that goes against all of the efforts that Domtar has made to maximize the use of biomass and will likely cause us to reverse some of our –- some of our practices, which will mean an increase in fossil fuel and increase in landfill of materials.

Some limits such as mercury, and dioxins, and furans were set using non-detectable test values, which could mean that at a facility that has never measured detectable amounts of these compounds could be in non-compliance. And to me it appears to be a little -– excuse me for the word –- silly to be in non-compliance with a compound that you have never measured in detectable quantities.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Comment Excerpt Number: 44

Comment: On a financial aspect, the anticipated cost of the rule for Domtar will be well in excess of a hundred million dollars. Thirty percent of these costs, however, will be related to non environmental improvements such as redesigning stacks to account for the provisions of emissions averaging which do not allow us to average over subcategories when –- for boilers that burn similar fuels .

An example of this is one of our facilities burns -– has three boilers connected to a common stack. Two of them burn coal with tangentially fired units; the other one is stoker fired. They had different limits. Under the current rule we would not be able to emissions average these boilers; therefore, a significant amount of investment required to just separate the stacks in order to meet the rule. Again, these investments under the current rule would not benefit the environment at all.

And even after all these monies have been spent, we cannot guaranty EPA, our stockholders, our employees, our customers, and the public that we will be able to meet the rules at all time because of the issues of variability and -– excuse me -– and the fact that in some cases there are no investments or no technology that is existing out there to actually meet the requirements at all time.

And this is clearly in violation of our own environmental policy which states that we will meet all requirements at all time, and it will cause us to make harsh decision to the future of some of our facilities.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Comment Excerpt Number: 51

Comment: I work -– I'm an hourly worker. I work for MeadWestvaco in Covington, Virginia, at the Covington plant, and I'm here to speak on Boiler MACT.

I'm a fourth generation paper worker at the Covington Paper Mill. My great grandfather started there in 1899. The four generations of my family -– immediate family have worked there for over a hundred and twenty-five years. Many uncles, cousins, nephews, brothers, and brothers-in-law have worked there and are working there at present.

I have bought cars, trucks, a home, and I paid for two kids to go to college. I have lived the American Dream. Sadly, for many Americans, in recent years, this dream is vanishing.

I joined the Pulp and Paperworkers Resource Council over 10 years ago when I saw American jobs leaving at an alarming rate. We're hourly workers from competing companies, working together as brothers to save our jobs. The economy, higher fiber and energy costs added to the need for a profit, combined with increasing regulatory costs, can be the nail in the coffin. Creating new jobs is a must, but don't get rid of the remaining jobs we have left.

Our company is a leader in sustainability and has been for generations. We support efforts to protect the environment and have voluntarily worked to reduce emissions in our manufacturing operations. Together with other leaders in our industry, paper and forest products manufacturers have reduced air pollution from our operations by more than 50 percent in the past 20 years.

As you know, the industry is one of the most heavily regulated in the United States. It harms our ability to compete with manufacturers in countries that do not share our commitment to environmental performance. Despite this burden, new regulations, such as the Boiler MACT,

continue to be proposed that would require additional investment with no substantial environmental benefit.

Requiring this investment means additional job losses in our industry and in the important manufacturing sector of our economy. At a time when we should be promoting job and economic growth at home, we are handicapping U.S. industry with a new layer of regulations that are unproven to provide any health or environmental benefit.

Two particular components of the Boiler MACT regulation are of particular concern. The first is the lack of any health-based assessment. When the Clean Air Act was first developed, Congress established that lowering emissions further would only be necessary when there are clearly-defined health benefits. Without a health-based assessment, the regulation could require significant investments in actions that would not provide any corresponding benefit.

The second is the need for a real-world assessment of individual emission reductions on the overall boiler systems. Greatly reducing one component of a total emission can be done, but it may cause other emission values to vary. Best performing boilers –- excuse me.

Best performing boilers should be identified on their overall capacity and capability, not on an emission-by-emission basis. Otherwise, it would in result in the establishment of standards that cannot be achieved.

Just in Virginia these regulations could impose an additional one billion in capital cost for manufacturers, increasing operating costs, and actually decreasing energy efficiencies. These monies spent to comply with this regulation would not substantially improve our air quality but will cost us jobs and future growth investments. We cannot afford to limit our ability to compete in the global marketplace by layering additional costly regulations on our manufacturing. The EPA should develop reasonable approaches to emission reduction. They should strive to achieve measureable health and environmental benefits. They should consider the investment of time and resources that will be necessary for compliance. They should include a health-based compliance alternative and a realistic review of the best performing units that can meet all the regulated pollutants. They must consider the impact on jobs, economic growth, and the global competitiveness of American manufacturers.

MeadWestvaco and our workers are committed to doing our part to protect and enhance the environment. We support reasonable, balanced efforts to responsibly reduce emissions. We hope the EPA will join us in developing solutions that do not harm America's manufacturers and manufacturing employees.

Just in review, our industry has lost 350,000 jobs since 2006. They lost a hundred thousand jobs in 2009 alone.

You know, us, as Americans, we've got to keep manufacturing here in the United States and produce good products so we can pay taxes and raise our families. And I ask that the EPA use discretion in their regulations and help keep our jobs in America.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

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Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 52

Comment: I'm –- work for Smurfit-Stone Container, and I'm also a member of the Pulp and Paperworkers Resource Council.

I'm a General Mechanic for Smurfit-Stone Container Corporation, a Kraft liner mill in Florence, South Carolina. I am a member of the United Steel Workers' Local 1877. I am also the Southeast Region Director for the Pulp and Paperworkers Resource Council.

The PPRC is a grassroots labor coalition concerned with fiber supply, the Endangered Species Act, and the environment in an effort to protect and preserve American Forest Products jobs.

My mill is located in rural Florence County on approximately 2,000 acres and employs 525 people and meets a yearly payroll of $46 million. This facility also pays $1.6 million annually in property taxes and annually moves 3.9 million tons of freight.

Back in the late fifties and early eighties, the textile industry was a strong, thriving industry. Both my grandparents and most of my aunts and uncles worked in this industry. I also had family members that worked in the furniture industry in North Carolina. These were good-paying, tax-generating, stable American jobs. Both of these industries have become –- have almost become extinct in the United States. The small towns, communities, local businesses, schools, and churches that they supported have withered away, as did the cities of the old west.

It is our concern that if Boiler MACT continues in its present form, the American forest products industry and the communities it supports will ultimately meet the same fate.

Our nation's recent economic down turn has not been very kind to the forest products industry. In the past two years, our industry's profits were approximately $1 billion. Over 40 mills closed, and another 150 had to take idled down time. Tens of thousands of high-paying jobs have been lost, and the way of life as we knew it has drastically changed. The capacity of these mills has been shifted to emerging overseas' markets such as China and Brazil, where companies can operate with little or no environmental or labor regulations.

If these current standards are implemented, the cost to an already struggling industry will be devastating. As I have previously stated, our industry's profits were approximately $1 billion. And that is for our whole industry, not just Smurfit-Stone Container -– the whole industry was $1 billion. For the past two years that's about what we made.

To meet these new standards and be EPA compliant, our industry will have to spend approximately 6 to $7 billion, and this could be the final blow to the American forest products industry, forcing our companies to close their doors, move their operations overseas. When this happens, we will not only have lost a high-paying, tax-generating jobs that help support our country, we will also be multiplying the very same emissions that we are trying to control in the first place, causing the American people to lose all the way around.

The forest products industry would be glad to work with EPA to protect both public health and jobs by targeting environmental investments where they are needed. We hope that the EPA will provide a more flexible approach in Boiler MACT rule and appropriately address the diversity of boilers, operations, sectors, and fuels it could meet -– it could meet its goals while preventing severe job losses and billions of dollars in unnecessary regulatory cost.

The motto of the PPRC is to seek a balance. And what we're after is we understand we have to have the environment for our industry to thrive. If we don't have good trees and we don't replant trees, then we won't have a place to work.

So, we need to seek a balance between these two things so that we can work and we can have our environment.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 53

Comment: I'm a member of the IBEW and a Special Projects Director with the Pulp and Paperworkers Resource Council. I've worked at GP, Cedar Springs operations for 37 and a half years -– hourly worker -– Cedar Springs, Georgia. Cedar Springs produces containerboard, which is linerboard and medium. After it's made, the containerboard is shipped elsewhere and the end product is corrugated containers and drums.

The mill sits on 1,400 acres in Early County and employs approximately 550 people with green jobs. In 2009, ad valorem and sales taxes paid in Early County from this facility were almost $3 million. We sit in the corner of Georgia, bordering Florida and Alabama. Sixty-nine percent of the workers are from Georgia; 28 percent of the workers are from Alabama; and 9 percent -– 3 percent are from Florida. The mill has a significant impact on all three states. The annual payroll is more than $50 million a year. As you can see, these are good paying jobs and important to the small counties to survive in this area.

In 2009 our Number 3 paper machine was shut down due to economic downturn. As a result of this shutdown, some 110 people were out of work for about a year. But it's not just the mills that are affected; there is a ripple effect on the jobs in the community as well. There are 4 to 10 jobs related to every one job at the mill. As a result, many other families were affected during the machine's downtime as well. Thankfully, this machine is back up and running in 2010, and most of the workers are back on the job. These jobs are so important to rural areas where median wages so very low even with mill workers' salaries figured in.

Georgia-Pacific Cedar Springs operation has spent more than a hundred million dollars in capital projects in the last five years. We have already spent over $40 million on Boiler MACT. This was before the thing was vacated earlier, before the testing was done and updating and the boiler numbers were figured. To comply with the new figures that we're seeing, we will spend upward of another $7 million.

I've painted you the picture of where I work and what we face, but there is a much larger picture. The paper and forest industry employs nearly 900,000 workers. The forest products industry has lost more than 350,000 jobs since the beginning of the downturn in 2006 –- a hundred thousand of these jobs last year alone. Approximately 75 mills have been closed in the last five years. These mill closures were not due to Boiler MACT but the economy and foreign competition. China and Latin America are the major players and are not held to the same rigorous environmental standards as American companies face. We need a level playing field. The entire paper industry made only one billion dollars in the last two years, as you previously heard. The cost of Boiler MACT in the State of Georgia alone is going to be somewhere around $520 million, and across the industry in the next two to four years could be 6 to $7 billion.

The proposed Boiler MACT rule could damage the manufacturing sector's ability to recover during these hard economic times and is far more restrictive than needed to protect the environment.

Trees are the most powerful concentrators of carbon on earth. The paper industry does more to restore –- to store carbon than any other industry. Carbon is stored within the product -– paper, boards, wood, furniture. More trees are planted to help manage the forest, and the new trees help absorb more carbon. Forests and forest products absorb and store enough carbon dioxide to equal 10 percent of the annual carbon emissions in the United States in a year. On average, paper and wood product mills generate 65 percent of their own industry needs with renewable biomass. Our increase -– the increased use of renewable energy has allowed the industry to reduce its use of carbon-intensive fossil fuels and purchased energy per ton of product by 19 percent since 2000. The industry has continually increased efforts to recover recyclable paper which saves space in landfills, reduces methane emissions, and minimizes waste. The forest product industry is the leading producer of carbon-neutral renewable biomass energy and produces more energy from biomass than all the energy produced from solar, wind, and geothermal sources combined.

This is who we are, but most importantly, we're American workers trying to survive.

We hunt, fish, hike, and love the environment just y'all do. We all want clean air. We also believe in balance between protecting the environment and preserving American jobs. We believe this balance can be reached. We question how American industry and green jobs can continue with the high cost of environmental regulations. We ask that EPA examine the new limit and the long-term effect they will have on America's green jobs.

I thank you for your time, your assistance in helping save my job, community, and keeping green jobs in America by examining and raising limits on Boiler MACT.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and

Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 57

Comment: I'm here today representing SFK Pulp. I'll take a little bit of a different approach than my colleague to my left.

SFK Pulp is the largest recycled market pulp company in the world. We want to thank you for the opportunity to briefly highlight our initial reactions to EPA's proposed Boiler MACT rules published on June 4th.

SFK Pulp is a Canadian based market pulp manufacturing company headquartered in Montreal, Canada. With three mills in North America we employ approximately 500 people. Our Quebec mill produces northern bleached softwood kraft market pulp while our –- both our U.S. mills produce recycled bleached kraft market pulp. They're located in Fairmont, West Virginia, and Menominee, Michigan. These mills represent two of only three air-dried RBK market pulp mills in operation today.

With relatively new installations and modern technology, the Fairmont and Menominee mills commenced operations in the mid nineties and have built a reputation as a market-leading source for high-quality RBK.

As the national economy continues to recover from the recession and the unemployment rate hovers at near 10 percent, the Clean Air Act rules recently announced by the EPA will be economically unsustainable for the pulp and manufacturing community and the high-paying jobs it provides unless greater flexibility is allowed in meeting targets.

Due to the methodology EPA is using under the reissuance of Boiler MACT rule, the emission limits are expected to be exceedingly stringent, approaching levels that can barely be detected.

Even boilers using clean fuels like biomass, such as ours in Michigan and West Virginia, which I'll discuss in further detail later, will be subject to ultra low emission levels that will be unreasonably burdensome to meet if they can be met at all.

Achievement of the limits established in this rule would require installation of up to four different air pollution control devices that will conflict with other existing control requirements and will impose tens of millions of dollars in unnecessary capital costs at thousands of facilities around the country.

The standards for new boilers are so stringent that boiler manufacturers cannot guaranty compliance, which will assuredly stifle investment in new systems that feed economic growth.

The total capital costs for the forest products industry alone are estimated around 7 billion for the next two to four years, which I heard mentioned earlier. And the cost for all manufacturing could be 20 to 50 billion. Those are huge numbers.

In Michigan and West Virginia, the states where SFK has operations, the boiler MACT costs for the forest products industry are expected to be approximately 270 million and 20 million, respectively. Those numbers are staggering by themselves, but take into account that the entire forest products industry only made one billion dollars in each of the last two years.

This will result in severe hardship and tens of thousands of job losses in the forest products sector alone. Given the cost of other likely environmental programs, the compounded effects will result in hundreds of thousands of job losses in a sector that lost 350,000 jobs since 2006.

If this rule remains in its current form, SKF's plans to invest $300 million in two industrial scale projects converting both its U.S. mill operations to renewable biomass cogen facilities will be lost. The new facilities would include bubbling fluidized bed boiler system and condensing extraction turbine generators designed to produce approximately 31 megawatts of renewable electricity for the region and also supplying the facilities' thermal requirements, replacing natural gas.

The cogeneration facilities would be fueled 100 percent by woody biomass or a combination of wood and recycled pulp mill residue. Significant investments have been made in both states to secure proper engineering and design, environmental permitting, electrical interconnection, and fuel availability studies.

The two projects would take approximately two and a half years to complete and include the hiring of 400 contract employees to help in construction, with an additional 60 employees hired for operation of the facility.

The local logging and trucking industry can expect to see an additional 200 jobs to carry the increased load. We want to continue with this project.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 59

Comment: During the worst economic crisis since the Great Depression this rulemaking is heading toward imposing unsanable (phonetic) regulatory burden. I hope you can appreciate our concerns and act accordingly when crafting the final rules.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 78

Comment: We –- I want to just switch to the institutional boilers and commercial and institutional boilers. And we're very concerned about that. We have looked at the boilers in cities throughout Connecticut, and the institutional boilers are the –- generally the largest polluters are the electrical power plants; then the second is the trash-to-energy facilities; and then the third are the institutional boilers.

And I'm particularly concerned about some of the boilers like at schools. The boilers at schools tend to be high up on the rank of -– you know, they tend to be Number 4, or Number 5, or Number 6 in the highest polluting sources in the cities in Connecticut.

We're also concerned about the hospitals. The hospital boiler emissions have increased over the 2000s. From 1998 through the year 2008 the emissions from the hospital boilers has increased dramatically, and -- even though they're required to meet back standards. And I believe that that's because they're switching from using natural gas to Number 6 fuel oil. There's no -– there is no penalty. The BACT standards for Number 6 fuel oil are obviously much higher and allow many times more emissions than the BACT standards for natural gas.

We believe that there should be -– you know, and obviously if -– as a physician, your body doesn't care what kind of fuel you're using. Well, the issue is how much pollution there is and what the emissions are and how many toxins are in those pollution –- is in that pollution.

So we're very concerned about that, and we believe that there should be some kind of incentive to use the cleanest fuel possible for these facilities and to get them to use at least Number 2 fuel as their back-up fuel.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 79

Comment: And speaking of back-up fuel, there's no definition of what back-up fuel is, so they can use back-up fuel for 90 percent of their operations and their primary fuel for 10 percent of their operations. And that's a real problem that we believe needs to be corrected.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 80

Comment: We're also concerned about biomass and the definition of biomass. It only –- that if you're going to use biomass, it would only be clean wood, not treated wood, not lead -– wood with lead in it and other types of contamination. We believe that there needs to be stronger regulation of these -– of what's defined as biomass also.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 4

Comment: The mill has upgraded its operations and is in compliance with MACT I and MACT II, along with other federal and state compliance requirements. It's also considered a small pulp

and paper company as defined by the Small Business Administration. The mill has two boilers that are subject to these rules -- a 1976 Stofer-Fired Biomass Boiler and a 1996 Oil-Fired Package Boiler that's used as a backup or auxiliary boiler. Here are our concerns: PTPC volunteered to be on the SBA committee to review the impact Boiler MACT would have on small businesses. We are dismayed that the recommendations from that work have been, chiefly, ignored. Our oil-fired boiler is used as an auxiliary or intermittent back-up boiler. It runs on reprocessed fuel oil also known as fire coal. And this oil is processed to meet Washington State designated specifications. Natural gas is not available in our area. The cost of the additional pollution control equipment is exorbitant when compared to the amount of pollutants that would be collected from this unit. This may lead us, ironically, to shut down our most modern boiler, run our other units harder and/or curtail our production. The trickle-down effect includes having the fuel supplier having to decide whether or not it's worth it to continue processing the RFO if, indeed, it loses its biggest customer. This product was developed in conjunction with the state's need to provide a beneficial use for the oil and to get the used oil out of the storm drains and landfills around the state. This certainly would be an unfortunate unintended consequence from these rules. PTPC also provided section 114 data to EPA. And after much time, care and expense, we find it unfortunate that EPA chose to ignore or waste this data because it did not fit the norm for what EPA considered relevant.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 11

Comment: Flambeau River Papers is a pulp and paper mill that has been in operation in Park Falls since 1895. This mill has numerous boilers, the largest of which is the coal and biomass coal-fired boiler, number 6. Number 6 produces approximately 60 percent of the energy needs for the pulp and paper mill on a daily basis. In the four years we have owned and operated the mill, we have been able to increase the efficiency of the boiler while at the same time decreasing our usage of coal from an historic average of 60 tons a day to being virtually free of coal today. The mill's previous owner's reliance on fossil fuels is truly what drove the mill into bankruptcy back in 2006. Sky rocketing fossil fuel costs, including coal and natural gas, increased the energy costs from a budget of approximately $400,000 a month to over 1.4 million a month. It was with this in mind that we made the commitment to ourselves, and the 313 employees at the mill, that we would become the first pulp and paper mill in North America to be fossil-fuel free. Because of that commitment, Flambeau River Papers has been able to reduce its carbon footprint by approximately 92,000 tons a year since 2005. This is another reason why we invested over $3

million to develop a new industrial biomass fuel boiler that burns at approximately 10,000 Btu's per pound to replace the coal that was used in the number 6 boiler in Park Falls. And it's the reason we are continuing to partner with the Department of Energy on a second generation biofuels project that we built next to the pulp and paper mill, and it will produce 17 million gallons of second generation transportation fuels, electricity, and have enough steam left over to replace 100 percent of the natural gas needs at the pulp and paper mill. With Flambeau River biofuels heat sinqed, the pulp and paper mill will be the first pulp and paper mill in North America to become fossil-fuel free. At Johnson Timber we utilize a small biomass boiler to produce the heat and steam required for the approximately 147 heating days at this facility. The biomass utilized by this boiler is bark from our manufacturing process. We have used this biomass for heat and steam for over 30 years so we can have that facility be virtually fossil-fuel free as well. Our current plans to become fossil-fuel free at our facilities and continue to employ approximately 400 people through our organization in the forest products industry, however, is in jeopardy through the proposed stringent Boiler MACT rules. Our main concern with the proposed rules is that the limits are not achievable. The methodology EPA is using to set emission limits is extremely stringent, often approaching levels that can barely be detected and unachievable. The limits that EPA has set are unnecessarily stringent because they do not reflect the variability that occurs in real-world, best performing boilers. Boilers go through warm ups, shutdowns, load swings, fuel mix, fuel quality changes, control efficiency differences, and performance testing adjustments. When EPA relies on HAP test data from a short period of time, it is missing this inherent variability that occurs even at the most well-operated boilers. Our rough estimate of $1.5 million to attempt to get close to the limit for the main boiler at Flambeau River Papers does not even ensure that compliance will be met with these proposed limits. Flambeau River Papers is a small one-mill company that is striving to lead the forest products industry environmentally. We cannot afford to spend $1.5 million on new control technology on one boiler. The expenses that this rule would create go directly to our bottom line. These rules are -- these are not expenses we can pass onto our customers. This rule will increase our costs and make us less competitive in the marketplace. Another problem with the rule is that the "other process gases category" restricts companies that are trying to move away from natural gas and other fossil fuels, like we are at Flambeau River Papers. These restrictions are going against the direction that our country is moving forward with. Why would a company attempt to meet the lower limits required by this new category when higher limits are allowed for more traditional fuel sources. This other process gas category will inhibit companies like ours that are trying to meet other greenhouse gas agendas. Specifically for our company, this category creates limits we have not yet been able to find; even new equipment that we have investigated cannot meet these limits. Our biofuels project may not be able to move forward if these limits stand. Will any second generation biofuel project in the country be able to move forward? How many pulp and paper mills in rural America will have to shut down due to a lack of capital in today's economy? The pulp and paper mills in North America have been utilizing renewable biomass fuels for many decades. Approximately 65 percent of the energy needs in our industry come from carbon-neutral biomass. It would be unfortunate for this proud industry to have to cut back away from carbon-neutral fuel and have to convert to fossil fuels to meet the proposed rules. As the American Forest and Paper Association has stated before in testimony, there are areas for improvement in the Boiler MACT. Allow me to highlight again just four of the areas they have mentioned: One, EPA should use its authority in section 112(d)(4) of the Clean Air Act to set health-based emission limits to protect the environment and public health. In order for companies

to deploy capital to the right mills, tests for compliance should be done on a facility-by-facility basis. With the many different types of boilers utilized by the industry, one size does not fit all. Two, more reasonable limits should be set to reflect the variability of the best performing boilers. Warm-ups, shutdowns, load swings, fuel mix, fuel moisture, fuel quality, control efficiency difference, et cetera, can cause varied results. Relying on HAP test data, again, for short periods of time is missing variability that occurs at the best-run boilers. Three, best of the best performers are not a realistic sample to set the limits. Use the 12 percent rule as you heard before. Four, do not penalize or discourage the use of clean, renewable fuels like biomass. Coal-fired boilers using coal and biomass are classified as coal boilers even though they may utilize 90 percent biomass.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 12

Comment: [PANALIST]: You indicated that these limits aren't achievable. Are you talking about all the limits in there or just with certain HAPs?

[COMMENTER]: They're just certain HAPs.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 13

Comment: We have several technical and policy concerns and I will touch on these briefly. First, EPA needs to account for fuel and operational variability at biomass boilers -- you heard

about that previously -- setting limits that reflect the real world variability of these boilers. EPA needs to consider such issues as fuel sources, seasonal moisture variability, start-ups and shutdowns, and the ability to reliably maintain best performing emissions. The fact is that biomass fuels vary widely in fuel quality such as moisture levels from season to season. And even in northern operations we have to deal with such things as ice in the fuel. For example, EPA should analyze and/or collect more long-term carbon monoxide CO data from existing CO monitors, rather than conclude from the short-term data and longer trends at only two boilers -- biomass boilers -- that CO performance is steady. Further, though we recommend that EPA remove the carbon monoxide standard for area sources, if area source emissions standards are adopted, EPA should abandon a one-size-fits-all approach for biomass boilers. At the very minimum, EPA needs to recognize the various boiler types as is already done in the MACT proposal. Second, EPA needs to revise the data analysis to arrive at realistic standards. The data used in setting emission limits is heavily biased given the way it was collected and sorted. By requiring the best performing units to test, and then taking the best of that small data set, EPA's basis for limits is actually the top 1 percent and not the top 12 percent as the law requires. Only a handful of existing units can meet these limits and it's questionable whether any new boilers could actually meet the entire suite. Also, the EPA needs to apply better statistical approaches that align with the data sets. Finally, the EPA needs to look at other available data to paint a more realistic picture of boiler performance and to make sure that any actual performing boilers can meet the entire suite of limits. Third, EPA needs to provide cost-effective approaches. For one, EPA should reconsider the application of a carbon monoxide standard to area sources. The EPA has the authority to mandate work practices for these sources. Setting good combustion practices and tune-up requirements will produce effective environmental results at far lower costs. EPA also has the authority in section 112(d)(4) of the Clean Air Act to set health-based emission limits to protect the environment and human health. This would avoid unnecessary controls where emissions of threshold pollutants are low enough to be safe. We're encouraged that EPA invited comment on this, and we believe it should be adopted in the final rule on a facility-by-facility basis. The best way to target investments is where actual problems exist. Now, some policy considerations: First, the EPA needs to revise the rules so they do not create disincentives to greater biomass utilization. How ironic that EPA would propose rules that create serious disincentives for biomass use at a time when many states have renewable portfolio standards mandating that up to 40 percent of their energy use come from renewable sources. While wind, solar and geothermal are important parts of that equation, biomass is a well-developed energy source that does not suffer from the inherent variability of many other sources. Further, biomass offers important atmospheric carbon advantages. We share the consensus opinion that biomass is carbon neutral, but beyond that, many of these facilities are associated with wood products production. And those -- you know, those are a good source of not only -- they're a source of carbon sequestration. A 2X4 goes in a building and it's a source of carbon sequestration for some time. An analysis of our carbon footprint shows that we're carbon neutral or actually net carbon storage, and we expect to be that way for some time. Unfortunately, the cost of adding controls for many biomass boilers covered by the MACT rule, and especially the GACT rule, will exceed the original capital costs of the boiler, or even the cost of a new one. If a biomass GACT source is unable to achieve the carbon monoxide limits by simple means such as combustion controls, more exotic technologies will be needed. While EPA states that fuel switching is not part of their control strategy, the reality is that operators may find it cheaper to purchase a new gas-fired boiler than to put controls on existing biomass units. So much for

transitioning to a sustainable energy economy. The reality is that the proposed rules penalize clean fuels like biomass, whose proposed limits are extremely low because the baseline of emissions is so low relative to other fuels. Biomass is an inconsequential source of mercury, dioxin and hydrochloric acid. Yet, the marginal course of controlling such small quantities is exponentially more expensive and with no guarantee of consistent compliance. Finally, EPA needs to look realistically at the economic impacts of these proposals. And I just add that many of our facilities in the forest products industry are in rural areas where manufacturing family-wage jobs are hard to find. And so we're a major part of a vital and green economy in rural areas. We've been challenged by the recession, which has impacted our industry dramatically. We've lost 350,000 jobs in the industry in total. Some will say we're crying wolf on jobs. I think I can confidently say that these rules, as they're proposed, you're going to find more plant closures.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 18

Comment: I'm very concerned about the Boiler rule. I think that it poses a tremendous danger particularly here in Southern California where we're over-burdened with an enormous amount of boilers. The chemicals and things that come from the processed boiling down these -- this waste is very dangerous to our community. We have very little control of our communities as it stands. This is the most heavily impacted area of the United States. Our air quality is turbulent and it has the potential to become very much worse. We are concerned about the open process with regard to the chemicals and the things that are being put into these boilers. Our concern goes to the regulatory officials, the EPA and all of the other agencies. We have been dealing as environmental justice advocates for years over regulations and the enforcement of rules. Very often our communities suffer because laws are not enforced, rules are not applied, and community members are not informed about the process as the process unfolds. We think that in order for us to have a fair opportunity to have clean air, to have a safe environment, to have a place where our children can grow and we can trust our air quality, we have to have strongly regulated boilers. This is an attempt to -- as we see it, to allow industry to get away with burning a lot of chemicals that they can't otherwise get rid of. It's unconscionable to me that we have processes where we're going back to incineration -- we're actually going back to incinerators. We've had a very difficult time over the years with these power plants and these incineration devices in our community. It's with the utmost respect but, at the same time, with a lot of fear and trepidation that I suggest to you that you hold back on allowing these boilers to do what you intend for them to do.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 19

Comment: We are the trade organization of the solid fuel woodchip-fueled biomass electric power plants in California. There are 33 biomass power plants in California which together produce almost 2 percent of California's electricity. These plants are spread across 19 different counties, all in the rural areas. California has a 20 percent renewable portfolio standard that operating biomass plants today produce about 17 and a half percent of the renewable energy in California and provide about 2,000 jobs, counting those in the fuel supply infrastructure. All are regulated by the appropriate air pollution control district under local permits and under the Federal Title 5 permits. There are a variety of technologies for combustion, but all are direct combustion steam-cycled plants. And because of the variety, I'm speaking to the Boiler MACT and the Area Source Rule. These are utility scaled but not utility boilers. Our group uses over 6 million tons a year of wood residues and otherwise unmarketable wood to produce the power. Our fuel comes from agricultural forests and mill residues. Those residues are processed, chipped, screened, metal removed and transported. It is a commodity and a fuel, not waste. Our plants provide solutions to the problems of open burning of agricultural residues and forests waste either in prescribed burns or wild fires. Our plants operate under long-term contracts to the regulated utilities selling power wholesale. Now, I understand that many commenters to these rules will complain about the costs. I shall do so also but want to point out that under the contracts we have with the utilities there is absolutely no pass through or mechanism for recovering additional costs which would be incurred by complying with the retroactive regulations. All of our plants employ the best available technology as defined here in California. And our engineers to date have found no retrofits or mods that would meet the entire suite of regulations. I would point out that efforts to reduce carbon monoxide will, in our plants, invariably reduce -- increase emissions of NOx, which is an undesirable reaction. We note in the database that although fully one-third of the biomass power industry is in California, only one of our plants was included in the database. We would like a much more thorough explanation of how the best performing or even the plants in the database were selected. We have a question about exemptions. In Section 60.020, which cites Section 129 of the Clean Air Act, it appears to our reading that QFs -- QFs meaning Qualifying Facilities of which renewable power generators are members may be exempt from this. So we pose that as a question. Our readings haven't clarified that at all. All of our biomass plants are, in fact, qualifying facilities. Now, it's probably never a good idea to complain about something without offering a solution. We suggest the use

of a health risk analysis in lieu of the one-size-fits-all regulations that are proposed. Some years ago California enacted what is called the Air Toxics Hot Spots Program, the AB2588 program, which requires a health risk analysis based on power plant emissions and toxics. This was done in California and a number of years ago. All biomass plants were suggested to the health risk analysis and all passed. We burn clean wood chips. Unfortunately, the category of fuel known as Construction and Demolition Wastes referred to as C and D, they're looped together. Our plants take construction waste with clean cutoffs. Our permits prohibit painted or otherwise treated wood in our fuel plant. So demolition waste is generally completely ruled out. We would suggest that in lieu of either the Boiler MACT or the Area Source Rule for biomass power plants not burning waste but burning clean wood chip fuel, be subjected to a health risk analysis based on measured stack emissions and accepted health risk methodologies.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 20

Comment: I thank you for the opportunity to address the Boiler MACTs. And I'm addressing them specifically in regards to biomass. I want to sort of take a step back and talk about the overriding policy context in which these rules would go into effect. And I think that as an overriding context of where we want to go with environmental policy, I want to stress four issues: One, I think that we all want to promote renewable energy development in this country, and we all want to promote local and regional environmental improvement. We all want to promote healthy forests. And we all want to reduce greenhouse gas emissions. While, in fact, biomass industry production both today and in the foreseeable future promote all of these policy goals. And if the MACT were to go into effect the way it's written right now and were to seriously shut down much or all of the biomass industry, we would lose all of those benefits that biomass is actually contributing to. What I think we have here is a very serious example of what Voltaire called the perfect being the enemy of the good. Biomass plants in California -- and I'm going to talk specifically about California where we have more than a quarter of the U.S. biomass industry. Biomass plants in our Central Valley are key to promoting or facilitating the burn ban on open burning of ag material. In fact, just this past month the San Joaquin Valley Air Pollution Control District delayed the implementation of that burn ban because they were worried that there weren't enough outlets for that material. The biomass industry is the logical of both for -- or the outlet for any biomass materials that can't be used for higher-valued purpose. Biomass plants around the state are keeping a significant quantity of clean wood waste out of landfills. That helps our counties comply with their AB30 -- AB939 requirements which is a

diversion requirement that we have. And, of course, as you know, when you bury waste in landfills you get both greenhouse gas emissions and toxic emissions. So keeping them out avoids those things. Biomass plants eliminate pile burning of forest harvesting residues in the forest. And, in fact, when there are commercial harvests in the forests in California, the harvesters are not allowed to simply leave the residue in the fill. They can either bring them to a biomass plant or they have to pile-burn them in the field. And finally, biomass plants contribute significantly to healthier forests. And I want to say there's been a lot of misinformation recently about biomass and its effects on the forests. It's very important to understand: Energy is the lowest-valued use for biomass. Anytime that there is a higher-valued use for biomass, even the biomass power plants would rather see it go there. Nobody cuts down a forest to power biomass plants. In fact, we have a number of examples in California where the -- and we have a lot of national forest land in California that's in rather poor condition. But around some of the biomass plants that have taken forest residues, we have some of the healthiest of the national forest lands in California. Biomass fuel producers will never pay enough to promote actual harvesting of fuel for the purpose of fueling a biomass power plant. They will simply take the residues produced and they will also facilitate but not pay the full cost of forest treatment operations. So it's very important in my view that we do what we can to promote renewable energy; biomass being one of the key renewable energies across the country and that we keep in mind that anything we do that will actually impede them. And this is kind of a marginal, economically speaking, industry to begin with. Anything we do to increase their costs or restrict their ability to get fuel will simply shrink the industry, promote the greater use of fossil fuel and impede our ability to meet the important environmental goals.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 31

Comment: I'm here representing Longview Fibre Company. My role at the company is the Pulp Operations Manager and I also oversee our environmental and safety efforts. Thank you for the opportunity to address the proposed Boiler MACT rules. First, let me provide some background on our company. Longview produces light-weight kraft papers for an established domestic and global customer base. We produce container board and corrugated boxes. We operate a pulp and paper mill in Longview, Washington and have seven converted plants across the Western United States. Our mill is one of the largest and most diverse paper mills in North America. We employ just under 1,700 people. Founded on sustainable practices, we pioneered the use of sawmill waste in the 1930's. Our raw materials still come from that waste today. Our stewardship of the

Earth has continued for the entire length of our company's time. We've recently earned Sustainable Forestry Initiative certification for both our paper mill and box plant products. Nearly 90 percent of the energy used at the mill comes from renewable resources. We have reduced water consumption by one-third since 2005 and continue to decrease our electrical consumption since the year 2000. In total, we have reduced our greenhouse gas emissions in the state of Washington by more than half since the year 2000. We are a founding member of the Climate Registry and the first North American pulp and paper mill with a Certified Greenhouse Gas Inventory. In fact, later this week, we will be accepting an award at the Climate Registry associated with our inventory efforts. Not only are our operations sustainable but so are our products. We make products with high-recycled content for quick-service restaurants and grocery bags, and also reducing packaging weight by making a product called Fibre Shield. To position the mill for the future, earlier this year we announced plans for a proposed 650,000-pound-per-hour biomass boiler. If the project moves forward it would support our goals to use biomass-based energy, improve efficiencies and solidify the long-term viability of the company. The electricity generated by the boiler would qualify as green power and displace fossil fuels. We are working toward approval of this project by the end of this year. The proposed Boiler MACT rules would be cost prohibitive for our company. As defined today, the equipment needed to meet the proposed limits would easily kill the project. Additionally, our existing boilers would have to remain in service. These are older units with higher emissions and would incur a very high burden to try to reduce their emissions to retrofit. In the state of Washington the cost to our industry is estimated at $210 million. The proposed rule would be devastating to the forest industry as a whole. This is an industry that employs more people nationwide than automotive or chemical industries. Across the U.S., Boiler MACT would impose a monetary burden of 6 to $7 billion on the forest products industry as well. Comparatively, the industry has only profited $1 billion over the last two years. It's not very hard to see that that sort of imbalance from a cost to improvement ratio is hard to sustain. In discussing the proposed rule with the boiler manufacturers, we learn that the technology required to comply with the new rule does not exist. Today, we cannot purchase a new boiler that would meet all of the proposed MACT emission limits. And since the new limits apply to any boiler purchased after June 4th, it effectively leaves us in limbo. It is not logical to us to require a company with solid environmental performance, in a industry known to be based on renewable resources, to comply with the rule as currently written. If the new rule goes into effect in its current form, the EPA is putting jobs in our community and business in general at a great risk. It would impose extremely costly controls where there is no real environmental or health benefit. The EPA's proposed limits in Boiler MACT often approach levels that can barely be detected and, in many cases, are unachievable. They fail to target the areas where improvement can be made and instead require installation of multiple air pollution control devices that conflict with other control devices in existence. Our mill has a long history of installing pollution control equipment prior to regulation and that is well below scientifically supported emission. We support efforts to address serious health threats from air emissions and believe the EPA can craft regulations that sustain both the environment and the people that work. Unfortunately, the rule proposed does not accomplish these objectives. If the EPA were to provide more flexible approaches in the Boiler MACT rule, we believe it could achieve its goal and our administration's goals of energy independence while preventing severe job losses. We urge the EPA to consider the following. First, use a reasonable method to set the MACT limits based on what real best performing units can actually achieve. Second, EPA should revise its approach for biomass boilers to ensure that these boilers are not

penalized because they start with a cleaner fuel. Third, EPA should include a health threshold standard in the final rule to target environmental investments where there is a real need based on a rigorous demonstration of pollutants like hydrogen chloride and manganese do not pose an adverse risk. We will continue to operate our mill and box plants in a sustainable manner. I ask that you reconsider the current proposed rule. And I thank you for your time and the opportunity to talk today.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 35

Comment: I would like to reiterate support of comments made earlier by Jane Williams and Mitzi Shpak. And although the rule that you have created will require reductions with major sources of air toxics and will require minimal reductions from sources that are not major, I think it's important to note that of the 180,000 boilers and process heaters operating in America, that only 14,000 are major sources. So EPA has proposed essentially do nothing regulatory with minimum control requirements, and no monitoring or reporting requirements for the remaining 166,000 boilers and process heaters. Schools and communities living or working near these plants that are not major will receive little, if any, relief from EPA. And let me give you an example, if I may. Across the United States large schools all have boilers and there would be no notification. This is our most vulnerable population and no knowledge of what was actually being burned in those boilers and they would be exposed. You know, we're living in a time today of natural and manmade disasters that are horrific. Please, let's try and work together to create a rule that is more protective and a rule that ensures protection of human health and our environment.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 36

Comment: U.S. EPA database at facilities with boilers and process heaters is significantly in error and fails to list numerous facilities. For example, in Wilmington you left out Tesoro Oil Refinery, Valero Oil Refinery, Ultramar Special Products Refinery, which is an asphalt facility, and the Valero Wilmington Asphalt Plant. In the city of Carson, which is not in the database, is the BP Arco Oil Refinery, the ConocoPhillips Asphalt Specialty Products Facility, the Equilon Enterprises Asphalt Facility and the Tesoro Refinery Marketing Salt Recovery Facility. In the city of El Segundo you left out the Chevron Oil Refinery. To give you a quick reference, you can see by this map that was put together by the California Air Resources Board. Going back in 2005, Wilmington was part of a study to identify toxic sources. This one right here shows you different little dots that identify the various toxic sources. And what I'm referring to here is that Wilmington is a poster child for having the most significant human impact resources in one community. The next step that we were supposed to do was a follow-up in doing a ground trooping that had anything else that was missing, but ARB has not continued the project since that time, and so we only have achieved up to this point -- and I will be submitting a copy of this map in a smaller volume and a digital format so that you do have it. We request that the U.S. EPA validate its boiler and heater facility list with state regulatory agencies such as CAL-EPA, California Air Resources Board and our local HMDs and, in our particular case, South Coast Air Quality Management District. If the U.S. EPA boiler facility list is off by at least ten major facilities in Wilmington, that means the total emissions inventory is also significantly underestimated by at least ten times. And if the emissions inventory is estimated by at least ten times, that means our health impact assessment and the numbers that are coded are also underestimated at least by ten times in our community. We object to the U.S. EPA using only health risk assessments as its only measure of public health impacts. HRAs are not based on any public health baseline from a scientifically conducted health survey of impacted environmental justice communities. HRAs do not identify all public health impacts by illness category; do not identify how many people are afflicted, and cannot tell you if cancer is increasing or decreasing. We request the U.S. EPA include a health impact assessment to provide information not provided in a health impact assessment. EPA also failed to include an assessment of individual hot spot EJ communities. Wilmington is one of those communities that should have been looked at more thoroughly to identify what the standard in an appropriate measure to protect a hot spot EJ community, and we ask that you do that. Your standard identifies specific chemicals that we feel is not adequate. There are over 100 plus toxic HAP chemicals that have been identified and we want a standard to be applied to every single one of them. You have stated in there that you have identified or called a category of a surrogate or CO, for example. Well, you can't compare a thousand pounds of benzene to a thousand pounds of CO by average in. You quote in there -- as one of my final things -- that you would be avoiding 110 to 300 premature deaths in 2003. Obviously, the staff did not look at our figures in the harbor. We average that number of deaths every single day in the L.A. harbor community. So before quoting a number you need to look at the actual data, which you're going to get from the Los Angeles County Department of Health and the California Department of Health. And those will provide you reliable numbers.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 37

Comment: [PANALIST]: And with regard to the health assessments you will be describing, will you have some further description as to what those assessments should be considering? [COMMENTER]: Yes. There is a provided consulting firm, Health Impact Partners, that conducts these. And U.C.L.A. and U.C. Berkeley both have institutes or departments within the universities that also specialize in health assessments. So that you do know, U.S. EPA Region 9 last year attended a class and sent about six to seven members. As well as L.A. County Department of Health sent about four to five staff members, in addition to about 15 of us E.J. organizations and attended a class here in Los Angeles. Actually, it was about two years ago. And in all of the public comments that have been made regarding that course and movement, they have recommended a health impact assessment to perform in addition to an HRA.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 39

Comment: I am concerned that your list of toxic facilities with boilers or incinerators is not accurate and complete. Your list doesn't include BP-Arco Oil Refinery. It also doesn't include specialty product oil refineries such as: A) ConocoPhillips Company, Carson Refinery. B) Equilon Enterprises, LLC, Shell Oil Products U.S.A. Desoto (phonetic) Refinery and Marketing Company, a sulphur recovery plant. Specialty products include sulphur recovery facilities and asphalt refineries. Point two, as a result, your boiler toxic emissions are significantly

underestimated in my environmental justice community of Carson. Point three, therefore your public health risk assessment is also significantly underestimated and must be updated and a monitoring system must be implemented. So we need to create and build up. These are some thoughts that I would like to share with you. And then I know my colleague and executive director, Jesse Marquez will be giving you written comments and solutions. But a comprehensive database has to be developed with the due diligence for future generations with regards to the health assessment that we are asking for. It's just -- Wilmington and Carson, specifically in the harbor area, it's really affecting our lungs, our air quality for our breathing, for our young people that you see here today. And we would like to see a health risk symposium comprehensive environmental justice compact with the written policies that will be submitted before you, the honorable EPA Agency, by August 3rd.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 42

Comment: I am speaking as a member of the Coalition for U.S. Environment in L.A. community. I have discovered several problems with your proposal. The amendment -- excuse me, the number of facilities is not correct in my environmental justice community. Your database does not link to oil refineries near to my home that have boilers and release hundreds of tons of air pollution every year. Valero Oil Refinery is not on your list. Tesoro refinery is not on your list. So your inventory air pollution inventory is only an estimate. If your inventory is on there -- is underestimating. The public health risk assessment is significantly underestimated. Your definition of the main source of ten tons is not acceptable in my EJ community because we have many toxic sources and no pollution is acceptable when you (inaudible) to toxic source.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 43

Comment: As a community representative, this ruling is very much in our thoughts. The major source ruling for emission control is good and will dramatically affect our environment in a good way. But the minor boilers -- churches, schools, banks, markets, are very much a concern to me as a parent raising my family in an already impacted environmental community. These buildings are part of our everyday life and we will be impacted by double or triple exposures to these unregulated emissions exposures that will go unchecked. Our children, mine and yours, need to be assured that our government agencies are really out to protect us. Our very lives depend on it.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 44

Comment: Dow Chemical, Exxon Mobile, two superfund sites, toxic chemicals floating on our ground water and hundreds of permitted and non-permitted facilities, and two major freeways surround our impacted community. The major sources that surround our community, we are very grateful that finally some standards are coming out. It's a long time coming and we appreciate that.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 53

Comment: The total benefits far outweigh the costs of cleaning it up. The EPA estimates that the cleaner air from cutting emissions from major and area source boilers will save nearly $18 billion to over $43 billion each year beginning in 2013. The capital costs for installing equipment on all the boilers are estimated to range from $10.5 billion to $12 billion, with total annual costs for operations, maintenance and other routine requirements of $3.9 billion.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 56

Comment: First and foremost, we echo the testimony of NPRA and others and support work practices for natural and refinery gas units as proposed and believe that this approach should also extend to fuel gas for petroleum operations. A sound national energy and regulatory policy must recognize the important rule gaseous fuels play both in our economy and in reducing conventional pollutants and greenhouse gases. We do have a concern, though, with respect to oil-fired plants and that's the key reason why I'm here today. We believe that it was not Congress's intent for EPA to set emissions limits or MACT limits for multiple-air pollutants designated as hazardous without demonstrating whether or not those limits are achievable. For this rule-making there does not appear to be any indication from the data that even one of the best performers is achieving the proposed emission limits today. Now, we all understand there are often unintended or adverse consequences of proposing emission standards that would require the installation control devices that have not been demonstrated to achieve the proposed numeric emission and that would, in reality, increase energy consumption and very possibly increase emissions. This proposed regulation affects Hawaii in a particularly draconian fashion because they do not have natural gas or gas supplies available and the option of switching to a different fuel does not exist. Hence, it seems infeasible for those facilities to comply with the proposed standard. This is clearly an issue where compliance is simply, physically, not possible. As others have said in previous hearings, EPA's proposal sets emission limits based on the best performing units on a pollutant-by-pollutant basis without considering whether all of those limits are achievable in combination. This approach differs from EPA's historical technology-based approach that has been proven effective in the past 30 years. The impact of this approach is to, perhaps, unintentionally make the MACT limits unachievable.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial,

Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 2

Comment: I work for Weyerhaeuser, and I'm a manager of a lumber mill in Philadelphia, Mississippi. In Philadelphia, we have two boilers that burn renewable biomass that will be subject to the major source Boiler MACT group. In fact, Weyerhaeuser has some 40 boilers and process heaters at 28 product mills and pulp mills located across the U.S. and will be subject to the Boiler MACT or the area source boiler areas as proposed by EPA . Because meeting the Boiler MACT requirements for our fleet of boilers would both economically and technically challenge, we are keenly interested in providing input and thank you for the opportunity to do so today . We also intend to provide additional written comments detailing technical concerns during the comment period. You can tell I don't do this for a living. Weyerhaeuser has long-supported efforts to address serious health threats from air emissions. However, we also believe that air regulations can and should be balanced so that both our environment is protected and jobs are sustained . This is especially critical as we get -- as we and the rest of the country try to merge and recover from one of the most significant recessions in the nation's history. Our initial evaluations of the proposed rules indicate the cost impacts will be a serious challenge to most of the current running mills. Additionally, the cost impacts hit just as the economic conditions might otherwise allow facilities that currently are shut down to restart. For example, extreme costs may prohibit restarting some of our wood-product facilities that were curtailed due to impacts of the recession on the housing market. This result -- this result would be opposite to the administration goals of rebuilding jobs. It would be a devastating blow to the families and the communities dependent on these facilities . In fact, to give these costs some scaled perspectives, the Wood Products Council, in which we are members, compiled a projected cost to comply with the proposed rules for some 34 broilers at forest product industry facilities in the State of Mississippi where my mill is located. Those costs projections totaled $290 million. And incredibly, that amount is more than a quarter of the total forest product industry's profits in 2008 and 2009 in the U.S . While I'm not ready to discuss specific cost projections for my facility, the figures for the forest product industry in Mississippi are indicative. In Philadelphia, we would need to consider adding on at least three control devices to address at least four of the five hazardous air pollutants that EPA has proposed to strengthen and regulate on the Boiler MACT group, and we would have to do so not knowing whether the controls with extremely low levels of pollutants such as mercury and dioxides would be effective or could even be measured with certain. There's got to be a better way. What we'd like EPA to do with the cost impacts for the rules that are proposed so large, and numerous technical issues that others will detail, we urge EPA to make this a win-win and use its discretion and improve the rules significantly to reduce

the compliant's cost. Weyerhaeuser believes EPA can do this by adjusting the stringency of the limits, by modifying its approach to defining what is technically achievable, by allowing use of health-based compliance alternatives where appropriate in lieu of the hydrogen chloride and manganese limits as EPA did in the original Boiler MACT, by establishing an exclusive work practice or other approach for limited-use boilers, by streamlining the performance tests, monitoring and other compliance demonstration requirements such as that are aligned with emission testing and reporting requirements for other air emission regulations by streamlining performance -- by eliminating carbon monoxide limits for biomass boilers under the area source rule, and its -- and instead regulating these small sources using the tune-up work practice requirements

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 6

Comment: My comments today are on behalf of the API, the American Petroleum Institute, and NPRA, the National Petrochemical and Refiners Association. API is the primary trade association of America's oil and natural gas industry, representing more than 400 members involved in all aspects of the industry. NPRA is a national trade association representing more than 450 members, including virtually all U.S. refiners and petrochemical manufacturers . First and foremost, we support work practices for natural- and refinery-gas units, as proposed, and believe that this approach should also extend to fuel gas from petrochemical operations. A sound national energy and regulatory policy must recognize the important role gaseous fuels play both in our economy and in reducing conventional pollutants and greenhouse gases . With regard to oil-fired units, it cannot have been Congress's intent for EPA to set emission limits, or MACT floors, for multiple hazardous air pollutants without addressing or demonstrating whether or not the limits are achievable in combination. For this rulemaking, there is no indication from the data collected that even one of the "best performers" is achieving all the proposed emission limits today. There are unintended consequences of proposing emission standards that would require the installation of control devices that have not been demonstrated to achieve the proposed numeric emission limits and that would, in actuality, increase energy consumption and increase emissions . API/NPRA members have oil-fired boilers and heaters located in Hawaii, Alaska, and U.S. island territories, areas that do not have gas supplies available, where the option of switching to a different fuel does not exist. The overly stringent proposed standards for oil-fired units will likely mean that a number of existing boilers and heaters will have to be replaced with new units due to the infeasibility of retrofitting existing units with pollution control devices

capable of achieving the proposed standards. We are operating in a business climate in which our members are evaluating their operation assets to determine whether they will remain economically viable. A regulatory mandate for significant capital investment to replace equipment and install new controls could well contribute to a decision to simply shut down some facilities . Second, there appears to be a shift in the method that EPA ses to set emission limits and we all know its name... Franken MACT. Franken MACT "lives" when EPA sets emission limits based on the best performing units on a pollutant-by-pollutant basis without considering whether or not those limits are achievable in combination. In fact, in this rulemaking, EPA has used emissions in calculating numerical limits that are at the very bounds of our ability to even measure the pollutant. This is a drastic shift from EPA's historical technology-based approach, practiced and proven effective over the past 30 years. EPA's new floor MACT policy is setting extreme limits that are drastically different than EPA's proposed GACT limits, resulting in confusion about the real health risk of such units. EPA needs to return to setting achievable standards that are based on sound science . There are unintended consequences of requiring the installation of pollution control devices that have not been demonstrated collectively to achieve the standards. For instance, the proposed CO for gas- and liquid-fired units will require operating at much higher oxygen levels than typical, which will lead to increased fuel use, and as a result, increased CO_2 emissions. Remarkably, the proposal does not indicate how the low CO levels will be achieved. Are we to take this as an indication that EPA's own analysis shows that it is unachievable? To complicate matters, EPA has also included in the proposed rule precedent-setting energy assessment and ongoing energy management requirements that apply well beyond the source category, which we believe will further highlight the inconsistency between low CO levels and the optimum operation of boilers and process heaters . In closing, we support work practices for natural- and refinery-gas units, as proposed, and believe EPA should explicitly extend the work practice to include fuel gas from petrochemical operations. EPA should establish achievable limits for oil-fired units, giving operators the flexibility they need to maximize combustion efficiency and thereby minimize emissions . Our detailed written comments will expand on the points raised and will include additional information on the standards for both gas and oil-fired units. Thank you for allowing me an opportunity to provide this testimony.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 23

Comment: I work for Georgia-Pacific in Crossett, Arkansas. I am a member of the United Steelworkers Union and a regional secretary for the Pulp and Paperworkers Resource Council. I have worked for Georgia-Pacific for 31 years and currently work in the pulp mill . A short history about our mill is, we -- they employ approximately 1,200 employees. We have seven hardwood batch digesters and six pine batch digesters. We supply eight paper machines; two communication papers, one container board machine, and five tissue machines. Our mill is one of Georgia-Pacific's largest mills. Our biggest products are Angel Soft Tissue and Sparkle Towels. We also have a plywood plant, chemical mill, and extrusion plant all at the same mill site. In 1997, Georgia-Pacific added the eighth paper machine at our mill adding some 100 jobs. This was $120 million capital improvement . Now, I would like to talk to you about the proposed Boiler MACT rule the EPA issued on June 4th. The proposed Boiler MACT rule could strike a severe blow to the manufacturing economy and is far more than is needed to protect our environment. The cost to individual mills could be tens of millions of dollars in additional capital expenditures, which may not be sustainable given the down the economy and fierce international competitiveness. No other country in the world is imposing requirements like these putting U.S. manufacturers at a competitive disadvantage . Small facilities such as sawmills, which are a big supplier of raw materials to paper mills, will also be severely and economically harmed by EPA's boiler rules for so-called area sources even though their emissions are tiny and not harmful. We believe the EPA should not set numerical limits for these boilers located in small mills, but instead set good combustion practices and tune-up requirements that will achieve the same results at a far lower cost. The EPA should use its own discretion so as not to burden facilities that are still hurting from the building downturn . Given the jobless nature of the economy recovery, the rulemaking will add excessive burdens to the expense of the manufacturing workers. The total capital costs just for the forest products industry alone are estimated at about $7 billion, and the costs for all manufacturing could be between $20 to $50 billion. A wide range of sectors and the jobs they sustain would be severely harmed . Georgia-Pacific supports efforts to address serious health threats from air emissions, and supports regulations that sustain both the environment and the nearly 900,000 men and women that our industry employs. Unfortunately, the rule proposed by EPA in June does not accomplish these objectives . Georgia-Pacific is prepared to work with the EPA to protect both public health and jobs by targeting environmental investments where there is a real need. If the EPA were to provide more flexible approaches in the Boiler MACT rule and appropriately address the diversity boilers, operations, sectors, and fuels, it could achieve its goal while preventing severe job losses and billions of dollars in unnecessary regulatory costs.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111

Comment Excerpt Number: 29

Comment: Ensure the highest data quality. EPA has collected significant data over the past several months. It has worked to make that data available for review. As the public has reviewed this data it is clear that EPA needs to perform additional quality assurance to ensure that the data is accurate. Data review has found inconsistent treatment of non-detect values, improper classification of boilers, and gaps in data that could be improved with additional quality assurance. MeadWestvaco believes that this step is crucial before EPA can realistically propose such standards. Next, consider whether proposed limits are achievable. The Maximum Achievable Control Technology Standards are driven by very good controls that also result in achievable targets. In its rush to complete these standards, EPA has allowed the process to become a mathematical exercise that is not based on achievability. By its construct, the standards are intended to be set based on the average of the top 12 percent performers in a source category. MeadWestvaco believes that by its data collection methodology, failure to consider adequate variability of operating conditions, and failure to fully evaluate all of the data it has, EPA has proposed a rule that fewer than one percent existing boilers can achieve. The situation is worsened when reviewing the new source standards that even EPA is predicting will result in no new biomass or coal burning facilities. MeadWestvaco believes that EPA should revisit its methodology for establishing these standards and propose standards that are achievable . Next, include a Health Based Compliance Alternative. EPA included options in the original standard to allow sources to demonstrate an alternative standard that was protective of health and the environment. EPA has chosen not to do so in the proposed rules. Further, it has set up a nearly impossible standard to meet in the Preamble to the Boiler MACT Rule, if it were to consider such an alternative. MeadWestvaco believes that EPA has an obligation to ensure that standards it requires are imposed due to a reasonable risk to the health and the environment and not due to a mathematical exercise . Last, impose an adequate timeline for compliance. EPA has proposed a three-year compliance timeline for sources. We believe that this timeline is in adequate due to the number of effected sources and the fee engineering solutions available to industry.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 32

Comment: I would use the EPA term "absurd results" to describe the boiler proposals. As an example, the proposed dioxin limits for a clean biomass boiler are as much as four orders of magnitude lower than the standards in place for hazardous incinerators.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 33

Comment: Facilities that originally met the very conservative health-based compliance option must now install a series of control device costing millions of dollars. Without a health-based compliance alternative, most wood products facilities would either close down or purchase natural gas boilers, which can be obtained at a fraction of the cost of the required control . The biomass fuel would then be sent to a landfill where it would degrade to methane. The Boiler MACT concludes there will be no biomass boilers constructed major sources. That would be an absurd result, given the government's push for renewable energy. The floor analysis for area source boilers is based largely on boilers so small they're exempt from the numerical limits, rather than boilers typically found in area sources . It takes a very large boiler to be a stand-alone major source. Most major source boilers would be area source boilers if located elsewhere. An absurd result is that a 100 million BTU-per-hour biomass boiler located at an area source has a much lower CO limit and a much shorter compliance averaging time than the same boiler at a major source . Biomass boilers at area sources represent a low risk and the CO limits should be eliminated in favor of tune-ups and work practices. If CO limits are retained, they should not be more stringent than for major sources. The Agency has done an inadequate job of verifying data quality. There is data used in the analyses for both rules that look suspect to a knowledgeable individual, and there are some clear errors such as the inclusion of data from a boiler reportedly burning only heavy oil in the floor analysis for biomass . Appendix B-2 of the area source MACT floor analysis shows that that limit was calculated using the raw data, which checked as non-normal while the log data was shown to be normal. Therefore, it would appear that the CO limit in the proposed for biomass area sources is incorrect. It is likely that many more errors exist in other places. Rules should not be promulgated on suspect data, and EPA should halt these proceedings until a thorough data validation has been completed. Most boilers burning biomass burn only biomass. The major source floor data for biomass includes much data from boilers burning significant percentages of materials other than biomass, including natural gas, heavy oil, tire-derived fuel, and undefined sludges. Each of these materials has different combustion characteristics and different levels of fuel-based HAPs. It would be technically incorrect to consider this as a representative of biomass combustion. EPA should set limits for biomass

boilers based on data from units burning only biomass. EPA should consider a subcategory for green biomass, which -- since it combusts differently than dry biomass . Combination boilers, those burning multiple fuels, can be addressed through subcategories. EPA's MACT floor analysis for biomass boilers is flawed. Far less than the expected 6 to 12 percent of biomass boilers anticipated by the statute can meet the proposed limits without additional control. This is the result of analyzing the data on a pollutant-by-pollutant basis rather than source-by-source, relying on data obtained from the top 12 percent of a subset of best performing boilers, rather than the population of boiler as a whole having insufficient data and relying on as few as two or three data points largely at or below detection limits to set limits for subcategories with large populations. Setting limits for fuel-based pollutants for biomass boilers without taking into consideration the natural variability of biomass fuel as a whole.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 35

Comment: I represent Hood Industries, Incorporated, a lumber and plywood manufacturer based in Hattiesburg, Mississippi. We're a privately held company with three sawmills, two plywood plants, and 14 distribution centers. We employ approximately 1,000 people in 13 states . I would like to focus on the following issues in the proposed regulation. Number one, the regulations being proposed are excessively stringent, and the methodology used to define the "ideal" boiler operation do not reflect real world operating conditions. Two, the regulation will negatively impact the use of biomass fuels, which is in direct conflict with the political rhetoric of the current administration and significantly increase the cost of operations at wood products facilities . Three, the regulatory impact analysis does not accurately assess the impact of the regulation on the subcategories of the wood products industry. Four, the economic impact of these regulations will be significant and will cause the closure of many facilities that have been suffering multiple years of business losses. The regulations are extremely stringent and approach levels that are barely detectable. The methodology used by the EPA to define the regulatory levels do not, in my opinion, accurately reflect real world conditions or operations. Boilers in the real world are subject to a significant number of operating variables including changes in fuel conditionings, operating load swings in the manufacturing operation being served, controls efficiency just to name a few . My experience has been that when control devices are added to a piece of operating equipment, the control devices introduce additional operating variability that make consistent outcomes more difficult to achieve. Biomass boilers utilize clean wood residuals as the fuel, and that fuel is inherently cleaner than many other types of fuel. That creates a low base line of

emissions and the cost to reduce those levels to even lower regulatory limits is disproportionate to the benefits achieved . The proposed regulations will negatively impact the use of biomass fuels for industrial boiler use. The wood products industry has been using clean wood residuals as a primary fuel for decades. In other words, we were green before green was cool. The current administration touts the use of biomass fuels as part of the new energy policy. On one hand, the USDA has given away over $148 million under the BCAP program for fuels that were already being used and now these regulations will restrict the use of these biomass fuels in the future. Any new business models that may be contemplating the use of biomass fuels may find the cost of the regulation prohibitive. To me this is another case of one body of government not acting in concert with the direction of another body of government . Conversion of a wood products plant to natural gas is not economically viable. In our case, we have calculated that the increase in operating costs to use natural gas to be $31 million annually. That would be a 34 percent increase in operating costs at a time when the industry has sustained multiple years of losses, and would not be economically sustainable. The Regulatory Impact Analysis does not accurately measure the impact on smaller plant facilities. By combining all plant facilities together, the conclusions drawn do not represent the economic impact to smaller operations. The cost of capital investment to install control is disproportionate when comparing a facility that generates $100 million in annual revenue to a facility that may only generate $50 million in annual revenue. The equipment cost is -- the equipment cost does not correlate to revenue and the ability to absorb the capital cost is a disproportionate penalty to the smaller plants. The Impact Analysis contains only data through 2007 and thus ignores the most devastating impact on shipments, employment, and other operating parameters by not including the worst years of this recession, which have been 2008 and 2009. If one looks at the capacity utilization chart, Figure 2-15, one can visually see that the elimination of 2008 and 2009 data will skew the data and impact any conclusions drawn from it . The criteria used to classify an "establishment" as large versus small is based on number of employees. This is not a good methodology, in my opinion, since some manufacturing processes are labor intensive and others are highly automated. Production capacity and emissions volume do not necessarily correlate to facility employment . The collapse of a new housing markets and the recessionary decline in the U.S. economy has severely impacted the wood products industry. I would estimate that 35 to 40 percent of the industry capacity has been curtailed or shut down. These regulations will further reduce the probability of many of these facilities restating when economic conditions improve . In addition, I would predict that the economic cost of complying with these new regulations will cause new closures as small privately held sawmills and plywood operations and other wood products businesses come to the conclusion that trying to sustain an operation that has had multi-year losses is simply not a good decision. These closures will disproportionately impact rural lower income communities . In our business, lumber prices have fallen 31 percent since the peak in 2005. It will be difficult to rationalize the cost of installing additional control equipment when that capital does not produce any benefits to the business, and in fact will make U.S. producers less competitive against off-shore suppliers from Brazil, Chile, and China. No other nation in the world has the environmental costs that we have in the United States . I am not anti-environment, but at some point, if the cost of achieving improved environmental metrics is the destruction of an economy then some balance must be achieved. The EPA has the opportunity to strike that balance by doing the following: One, ask the court for more time to refine the relations and achieve a more reasonable set of rules. Two, use EPA discretion to protect public health while avoiding unnecessary capital and operating costs. The estimated costs for the wood products industry, for

the installation of control devices, is $6- to $7 billion. We must ensure that the benefits derived from this expenditure are real, and not just estimates by a panel of experts who vary widely on their estimates of benefits . Three, set health-based emission rules that reflect the true impact on people. Four, change the methodology used to determine what the ideal MACT boiler would operate like. The EPA's approach severely biased the data and is not representative of the current universe of operating boilers and in conflict with the law . I will conclude by anticipating that some interest groups will characterize my comments as a typical strategy of crying "poor man" when faced with new environmental regulations and costs. After suffering multiyear losses, the smaller privately held business -- businesses are in fact poor . To those who would attack my comments as a typical business reaction, I would invite them to walk in my shoes with the responsibility of trying to sustain a company in the worst economic conditions of the past 70 years and maintain good paying jobs with good benefits for over 1,000 families.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 47

Comment: I only have a general comment as far as changes in regulation, is that in the issue of biomass and comparing it with coal-fired, biomass is one of the renewable energies that we certainly are trying to develop more. We're trying to develop a renewable energy system to replace the current fossil fuel technologies, and there are a lot of challenges with that . Any additional restrictions to emissions related to biomass certainly adds additional challenges to what is already existing. One of the issues with biomass is the cost. You know, we're always trying to develop new biomass-type facilities and new plants, but we always have to compete with cost of existing fossil fuel plants, so we're trying to always watch those costs. Any new regulation -- this is in general -- any new regulations that restrict emissions on biomass plants, while small, any small changes can add additional costs, which makes -- could make biomass plants slightly less economically feasible . So those small changes have a big impact, and I know from overall, the -- the federal government, the state government, and local agencies have been certainly pushing for renewable energy, and where -- areas where there is an abundance of biomass, pushing for biomass. I mean, that's a good thing that helps clean our environment. So on the one hand, it helps to have biomass being pushed forward, but if on the other hand we have additional regulations, which restrict the usage of it, that creates a lot of hindrances . So all I'm asking is that those considerations be put in place into new regulations to really free biomass to let us develop the biomass facilities and -- and receive the continual encouraging of the federal, state, and local levels. Biomass is a very challenging technology, and we certainly want to

continue . Right now in the country, only 4 percent of the power generated is from biomass where 49 percent is generated from coal-fired plants. So if -- if you want to put regulation, you know, as a comparison, it is good to put more regulation on coal-fired plants because that's where majority of the emissions are coming from, whereas biomass, it's such a flea bite right now. To put more regulations on that really doesn't have an impact on the environment, and it has a detrimental affect because you impede growth in renewable energy.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 60

Comment: I'd like to thank the Environmental Protection Agency for their efforts towards reducing toxic air pollution for the entire nation and the City of Houston. Thanks a bunch . It's been, yeah, a good ten years coming, and within the ten years, we know that our asthma rates have doubled in the past ten years. The standards for better air quality are way overdue and it's time that we move forward into the right direction, which is a clean and healthy future for ourselves and our children here in the City of Houston and the whole country, the whole world. You know, we all breathe the same air and drink the same water, right? So -- so yeah, the EPA's decision to eliminate unreasonable exemptions from refineries and chemical plants, paper mills and other major polluters is a huge step in that direction, so again, thank you.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 79

Comment: We are very concerned that these proposed rules are far more restrictive than needed to protect the environment. Industry cost estimates for compliance with these rules is in the range of $20 to $50 billion and significantly higher than EPA's cost estimates . These high costs, at a time when the nation is recovering from the recession, are not sustainable and will result in further loss of high-quality manufacturing jobs in the United States as companies close or relocate offshore.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Bill Wickman and Laurel Brent-Bumb
Commenter Affiliation: Sustainable Forest Action Coalition (SFAC)
Document Control Number: EPA-HQ-OAR-2003-0119-1512.1
Comment Excerpt Number: 1

Comment: The Sustainable Forest Action Coalition (SFAC) is writing to express our great concern over EPA's proposed Boiler MACT rule and the implications therein that would significantly burden, and have the potential to limit or shut forest products industry boiler and cogeneration facilities. Further, the impacts of having to use non-woody/biomass materials such as natural gas to provide steam or electricity to the industry would only add additional cost burdens and dependence on fossil and foreign fuels - both of which further limit the viability of the wood-products industry. On July 14, 2010, SFAC sent a letter outlining our concern and disappointment over the EPA's final PSD Tailoring Rule changing current proposed language in the Energy Bill to exclude biomass combustion emissions in calculating Green House Gas Emissions. In case you did not receive our earlier letter we are enclosing another copy to assure that you have received this, as well as, our earlier concerns.

As our July 14, 2010 letter outlined, the main objective of SFAC, which is to work at the State and Federal level to bring regulatory reform to restore our watersheds through healthy forests while maintaining and expanding the existing forest products and bio-energy infrastructure. By meeting this objective, the coalition also recognizes the additional benefit that thinning to improve forest health provides to their watersheds and furthering their efforts in protecting their natural resources from catastrophic wildfires.

Currently there are 18 biomass power plants within the SFAC area of influence with a net production capacity of 342.4 megawatts. The supply consumption is approximately 2,739,200 bone dry tons of fuel. In addition, there are two additional existing biomass power plants that could easily be restarted given the right economic indicators which have a net production of 18.5 megawatts of power capacity.

We strongly encourage you to consider the overall benefits that the forest products industry in general and the specific benefits that the biomass energy infrastructure related to this industry

offers. As our July 14, 2010 letter outlined for you, data from the National Forests within the geographic region represented by SFAC, and it shows that less than 10 percent of annual net growth of forest on these National Forest land is actually treated and removed. If these lands were properly managed, a large percentage of the 18.9 percent of annual net growth that is lost to mortality each year could be available for biomass energy and still have over 70 percent of the annual growth available for carbon sequestration.

In that same July 14th letter, SFAC outlined the critical issue related to catastrophic wildfires. Again, those specifics include:.

Since the start of the 2001 National Fire Plan, Californian's have suffered through three new state records with 1.0 million acres burned in 2003, 1.5 million acres burned in 2007 and our latest state record of 1.6 million acres burned in 2008. Furthermore, a new 75-year national record was set by the 2006 fire season. During the summer of 2008, while most of Northern California was enveloped in a smoke cloud from mid-June to the beginning of August, the Northern Sierras were experiencing the largest fires in their history. Furthermore, in 2009, Northern California lost approximately 500,000 acres to wildfire In addition to the direct threat to public health and safety; these large catastrophic fires are also destroying the forests that are needed for carbon sequestration. Often the Forest Service, for a variety of reasons, is not able to reforest these lands and they type convert to brushfields, which sequester far less carbon dioxide than a healthy forest. These fires are also degrading the watersheds that are the prime source of California's domestic and agricultural water supply.

SFAC offers the following information from the report found at www.cbmjournal.com. This report discusses just one fire that burned in Southern California in 2007. According to the report, this single fire spewed the same amount of greenhouse gases as what is produced in about one week from the state's burning of fossil fuels, according to scientists at the National Center for Atmospheric Research.

The preliminary data by the center and the University of Colorado at Boulder show that the fires emitted 7.9 million metric tons of carbon dioxide between Oct. 19 and 26. That's equivalent to 25 percent of the monthly emissions from all fossil fuel burning throughout California.

The study used satellite observations and a computer model to determine emissions based on amount of vegetation that burned. Large fires in western and southeastern states can pump as much carbon dioxide into the atmosphere in a few weeks as a state's entire motor vehicle traffic in a year, according to the paper, which will be published online Thursday in the journal Carbon Balance and Management.

The study estimates that fires in the contiguous United States and Alaska release about 290 million metric tons of carbon dioxide a year - 4 to 6 percent of the nation's total carbon dioxide emissions from fossil-fuel burning.

Coupled with this information is the following;

The number of acres that burned in wildfires in 2009, and represents 115% of the 20-year average for acres burned. There were 78,792 reported wildfires across the country in 2009. In the past 20 years, the number of wildfires has not increased dramatically, but the size of the fires has. A report from the Pew Center For Global Climate Change says since snow melts earlier resulting in a longer fire season, and warmer summer creates dryer soil, climate change has been a contributing factor to higher fire activity.

Given the above mentioned facts, it seems overwhelming that any new regulations that EPA is proposing should surely take into account the overall benefit that the woods products infrastructure offers in this continuing and ever increasing catastrophic wildfire issue.

The proposed Boiler MATCT rule sends a powerful message to the wood-products industry that limits are going to be imposed that are un-achievable and that are not representative of actual existing boilers, their varying fuel types, grate designs, or overall emissions. Instead, the proposed rule has taken a select group of boilers, disregarded significant variables, and isolated individual Hazardous Air Pollutants (HAP) that do not reflect overall boiler performance (e.g. comparing Particulates versus comparing Particulates, CO, NOx for boilers). This HAP by HAP comparison has resulted in the lack of this rule being achievable.

SFAC respectfully request that all biomass-related portions of the rule be omitted and/or that a new section, specific to non fossil-fuel is developed. The new section may utilize some of the ERG MACT Floor Analysis referenced in the rule, however, should be supplemented to consider each boiler on a case by case basis, rather than a HAP by HAP basis, and to include data from at least 75% of all boilers. This could be done as a mandatory reporting (potentially electronic) through the current EPA Title V Program or the Electronic Reporting Tool (ERT) reference in the rule. Further, we request that EPA consider national differences in fuel usage, pollutant attainment levels, and flexibility that should be allowed to the state, air districts, and other agencies in determining MACT Floor limits.

As stated in our July 14th letter to you, SFAC's seventeen member counties are all considered small rural counties. All seventeen counties are in mountainous locations and are sparsely populated. Given this fact, the overall air quality impact is insignificant as well as being located in the center of a high carbon sequestration area with millions of acres of National Forests. Knowing this fact, it seems reasonable to consider a final rule that would provide local air districts with leeway to recognize these variations and not have a rule that is ridged and expected to be a one size fits all approach.

It is critical that there is an awareness of the need to maintain and enhance the existing bio-energy infrastructure to provide needed forest and ecosystem treatments to reduce the amount of carbon dioxide released from catastrophic wildfires. Currently, air quality districts within some of our member counties require a maximum limit of 0.03 lb/MMBtu. The new proposed MACT limit is 0.02 lb/MMBtu. Given that the majority of our bio-energy plants are relatively small in mega watt capacity, this minor change can cost between $1-2 million per plant or a 25-30% reduction in output. SFAC respectfully asks if this change in California is needed given the high risk of losing current infrastructure over this minor change as well as restricting new development.

SFAC members implore you to consider the information we provided in our July 14th letter as well as this letter. It is critical that EPA research the true benefits of bio-energy and all of the positive effects that it provides when you are discussing the reduction of green house gases. If we can provide you further information that would assist you in your evaluation, please contact us.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and

Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Joe O'Rourke
Commenter Affiliation: F. H. Stoltze Land and Lumber Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1467.1
Comment Excerpt Number: 1

Comment: We are a family-owned sawmill located in Columbia Falls, MT. We produce up to 70,000,000 boardfeet of lumber per year. We have been in business in the same location since 1923. We employ 117 people.

We have a bank of four boilers that are now 100 years old. Those boilers burn woody residues that are a byproduct of sawmill lumber production. We are currently examining replacing these old boilers with a newer boiler system that would also be capable of power generation. The cogeneration boiler would produce both process heat for our lumber drying operations, as well as generating electrical power that would be sold as renewal, carbon-neutral (green) energy to the power grid.

The EPA proposed rules referenced above would not only make our goal of generating a combination of process heat and green power from a renewable resource, much more difficult, it would threaten the very existence of our business and the jobs of our employees.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: R. Wade Mosby
Commenter Affiliation: Collins Companies
Document Control Number: EPA-HQ-OAR-2003-0119-1480.1
Comment Excerpt Number: 1

Comment: On June 4th, EPA published four rules in the Federal Register which will regulate emissions from industrial boilers, including existing boilers at three of my facilities in Chester, CA, Lakeview OR and Kane, PA. This has triggered a 45 day comment period and EPA is under court order to adopt final rules by December 16, 20 I O. The effect of these four proposed rules is that they threaten the viability of these three facilities that include 3 sawmills, a biomass power plant and a hardwood dimension plant. Currently no boiler manufacturer is willing to certify that

their wood fired boilers will meet the proposed standard. Our facilities bum forest -derived biomass. which is classified a "traditional fuel" instead of solid waste.

The Chester, CA plant consists of a sawmill and biomass co-generation power plant that produces 12 MW of electricity. The stearn also fires the lumber dry kilns and provides plant heating. This plant provides 108 union (Carpenters & Jointers) family wage jobs and is the largest employer in this small rural Sierra Nevada community. Replacement cost of a boiler with no guarantee of meeting the proposed standards would be approximately $20 million. This facility in 2009 had a payroll of$5.9 million, with $1.8 million in employee related taxes and $606 thousand in local property taxes.

In Lakeview, OR we operate a sawmill with a wood fired boiler that produces steam for the dry kilns and plant heating. This facility employs 76 people with family wage jobs and is the largest private employer in this small rural Eastern Oregon town located 95 miles from the nearest regional shopping and medical facilities. A replacement boiler with no guarantee of meeting the proposed standards would be approximately $ I 0 million. The Lakeview facility in 2009 had a payroll of $3 million, with $900 thousand in employee related taxes and paid $1 10 thousand in local property taxes.

Our Kane, PA facility is a hardwood sawmill and dimension plant that utilizes a wood fired boiler for dry kilns and plant heating. We employ 99 people with family wage jobs and this is the largest private employer in this small rural Northern Appalachian town. A replacement boiler with no guarantee of meeting the proposed standards would run approximately $10 million. The Kane facility had a 2009 payroll of $3.7 million, with $1.1 million of employee related taxes and paid $593 thousand in local property taxes.

Keep in mind that due to the current recession and housing crisis, these plants ran at a one shift reduced basis. In normal times we'd operate at a higher production level with the attendant increase in employment and payroll

To put the proposed EPA standards in perspective, CO and PM limits proposed for area source biomass boilers are not achievable by the most current boiler designs in existence; our boilers would fail the standard.

The dioxin limits for new units are more than 100 times more stringent than the recently promulgated medical waste incinerator rules. And by EPA's own admission, those rules are so stringent that every existing medical waste incinerator in the country will close because they will not be able to comply. An early review sent to us by the American Forest and Paper Association indicates that the limits are un-achievable and that no existing wood fired biomass facility in the data base will meet all the proposed limits with existing controls.

I urge you to please consider alternative rules that will avoid the impact these proposed rules will have on my three facilities. Our plants are an important part of our countries timber infrastructure and renewable power portfolio. These three rural communities cannot stand further family wage job losses that would result from the promulgation of this rule.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and

Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Nathan McClure
Commenter Affiliation: Georgia Forestry Commission
Document Control Number: EPA-HQ-OAR-2003-0119-1268.1
Comment Excerpt Number: 1

Comment: This comment is to clarify a comment sent previously be the Georgia Forestry Commission. The comment included the statement:

Shavings, sawdust, wood chips and bark are considered by-products and are not waste. US Forest Service Timber Product Output reports show that 99.9 % (10,000 tons of 6,895,000 tons) of these "residues" were utilized for products during the last survey period . (Timber Product Output database) In fact, there are over 8 new industries in Georgia that produce wood shavings directly from roundwood (small trees) to meet market demand. Anecdotal evidence has also shown that shavings, sawdust and bark from sawmills has been one of the few products producing profits for mills since the 2008 economic downturn.

Although the statement may have been understood correctly by EPA, the statement should state:

Shavings, sawdust, wood chips and bark are considered by-products and are not waste. US Forest Service Timber Product Output reports show that 99.9 % of these "residues" were utilized for products during the last survey period with only 10,000 tons not being utilized out of a total of 6,895,000 tons produced. (Timber Product Output database) In fact, there are over 8 new industries in Georgia that produce wood shavings directly from roundwood (small trees) to meet market demand. Anecdotal evidence has also shown that shavings, sawdust and bark from sawmills has been one of the few products producing profits for mills since the 2008 economic downturn.

The reference source for the above information is the Timber Product Output database; Southern Research Station US Forest Service , 2007; http://fia.fs.fed.us/tools-data/other/default.asp

database) In fact, there are over 8 new industries in Georgia that produce

wood shavings directly from roundwood (small trees) to meet market demand. Anecdotal evidence has also shown that shavings, sawdust and bark from sawmills has been one of the few products producing profits for mills since the 2008 economic downturn.

* Over 91% of Gerogia's forests are privately owned. (Forest Inventory and Analysis database) These forests are purposely managed for a variety of objectives, but with the majority of these managed in ways that result in the planned harvest of timber. This is supported by the fact that Georgia produces more wood products than any other state.

* Logging residues are produced at an average annual rate of 10.1 million green tons (Timber Product Output database). These logging residues can be used for solid fuel in renewable energy systems. The alternative is to have the residues decay on site with CO_2 and other greenhouse gases being emitted in the decay process.

* The GFC has been working to encourage additional use of Georgia's forest biomss for energy. There are 11 biomass-to-electricity plants proposed to be constructed in Georgia that represent 630 MW of renewable energy that would offset fossil fuel electricity production and their associated greenhouse gas emissions.

* Studies conducted by the National Renewal Energies Laboratory (Mann and Spath, 2004) have shown that wood diverted from waste streams into biomass-to-electricity direct-fired systems reduce greenhouse gas warming potential by 148% over coal-fired systems. While not usually landfilled, logging residues are left in the field to decay and release greenhouse gas emissions. EPA is proposing that all solid fuels be classified as solid waste. We do not agree that woody biomass from forest product manufacturing byproducts and logging residues should be classified as solid waste. However; if EPA concludes that wood biomass from mill byproducts and logging residues are in fact "solid waste", then the logic of this proposal would also demand that all wood residues including logging residues should be considered the same as wood waste diverted from landfills, as listed in the NREL studies, when performing analysis for greenhouse gas impacts.

* The NREL studies also show that greenhouse gas warming potential is reduced by 94% over direct fired coal power plants when using dedicated biomass feedstock in an integrated gasification combined cycle system.Small diameter trees removed during thinnings and other operations on managed

forests in the South are also "dedicated" to harvest for market products, including biomass.

* Therefore, new rules that increase air emission monitoring requirements and costs to meet these requirements on biomass-fired systems will discourage retention of renewable energy systems and be a roadblock for new ? investments in these type systems. This will likely further result in reversion to fossil fuel systems that could increase greenhouse gas, NOX, and SO_x.

* In addition, new rules that increase air emission monitoring requirements on biomass-fired systems could also affect a transfer of wood product manufacturing to other countries. This would result in the loss of jobs and other negative impacts on the economies of rural communities in the US, as well as a net increase in all pollutants from the manufacturing operation, because of less regulation on air emissions in Asia and South America where the manufacturing will likely occur.

• References for the above information include

o Energy Information Administration; http://www.eia.doe.gov/cneaf/solar.renewables/page/readata/table 120.pdf

o Forest Inventory and Analysis database, US Forest Service; 2009 http://fia.fs.fed.us/tools-data/other/default.asp

o Georgia Forestry Commission forest industry survey, 2008

o Riall, William; Economic Benefits of the Forest Industry in Georgia, 2008; Enterprise Innovation Institute, Georgia Institute of Technology; 2008; http://gatrees.org/ForestMarketing/EconomicImpactsofForestIndustry.cfm

o Spath, P. and Mann, M.; Biomass Power and Conventional Fossil Sstem with and without CO_2 Sequestration – Comparing the Energy Balance, Greenhouse Gas Emissions, and Economics; National Renewable Energies Lab; 2004

o Timber Product Output database; Southern Research Station US Forest Service , 2007; http://fia.fs.fed.us/toolsdata/other/default.asp

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Joe O'Rourke
Commenter Affiliation: F. H. Stoltze Land and Lumber Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1467.1
Comment Excerpt Number: 3

Comment: The proposed MACT standards for Major Source boilers as well as Area Source boilers would be highly detrimental to our business too. The cost to comply with these new, stringent standards would jeopardize our ability to continue in business. That in turn would negatively affect our employees, our contractors, our suppliers, and the local and regional community. AF&PA has estimated that these new rules would cost the wood products industry $6 to $7 billion dollars over the next four years. In our own State of Montana, they estimate that there are seven Forest Products in operation, and that it would cost $60,000,000 in capital costs to bring those boilers into compliance with the new MACT standards. That works out to an incredible $8,500,000 per boiler. Don Wolf, of Burns & McDonnell Engineering Co. of St. Louis confirms this when he says "…the average capital cost of retrofitting biomass-fired boilers will be nearly $5 million". Furthermore, he estimates that "…air-pollution-control retrofit projects/fuel-switching projects can take 18 months to three years from the start of compliance planning through engineering and construction to startup." Our company has struggled mightily over the last several years to survive the severe economic downturn. Our business simply could not bear an added expense of that magnitude.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Joe O'Rourke
Commenter Affiliation: F. H. Stoltze Land and Lumber Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1467.1
Comment Excerpt Number: 5

Comment: The EPA should exercise its discretion under section 112(d)(4) of the Clean Air Act to set health-based emission limits. Doing so would eliminate the need for additional controls where threshold pollutants are now low enough to be safe. We at Stoltze agree with AF&PA that the EPA should make the health threshold an integral part of its final rule.

The EPA must base its standards on reasonable limits that can be achieved in the real world. These standards will have to be based on a large volume of real-time data that is meticulously collected and scientifically analyzed, in order to identify actual results that are currently being achieved by the top 12% of all boilers in the country, as the CAA demands. The data gathered to date is limited in scope and reflects highly selected conditions. It is not representative of conditions at the top 12% of existing boiler plants.

The EPA's analysis punishes clean fuels like woody biomass. Because it is so clean, the new source limits are extremely low. In some instances, they are so low that they are almost undetectable using today's technology. Clean fuels, like biomass, should not be singled out and punished for their natural advantages and virtues.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Ronald W. Gore
Commenter Affiliation: ADEM
Document Control Number: EPA-HQ-OAR-2003-0119-1524.1
Comment Excerpt Number: 3

Comment: Similarly, it is this Department's belief that the utilization of the 'FrankenMACT' approach to establish limitations for new sources will also, in effect, prohibit construction of new solid fuel-fired boilers.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Ronald W. Gore
Commenter Affiliation: ADEM

Document Control Number: EPA-HQ-OAR-2003-0119-1524.1
Comment Excerpt Number: 4

Comment: While the purpose of the MACT regulations is to reduce health impacts from Hazardous Air Pollutants, the "eliminate emissions at any cost" strategy that EPA is utilizing in establishing these MACTs has no correlation to actual health impacts. In fact, with the exception of Hg, HCI, and dioxinJfurans, these proposed regulations do not establish limitations on any HAPs but instead draw on generalized correlations to criteria air pollutants for which standards are proposed. In effect, EPA is establishing limitations for pollutants regulated under other sections of the Clean Air Act; limitations which could not be justified otherwise. Therefore, Health Based Compliance Alternatives similar to those included in the prior version of the Agency's boiler MACT should be included. It would likely be determined that many small to moderate size boilers have little to no health-based impacts from their HAP emissions, rendering the addition of costly emissions controls unnecessary.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Randy Thurman
Commenter Affiliation: Arkansas Environmental Federation (AEF)
Document Control Number: EPA-HQ-OAR-2003-0119-2018.1
Comment Excerpt Number: 1

Comment: The memberships of the AEF and AFPC are concerned about the proposed Boiler MACT rule –the Maximum Achievable Control Technology rule for industrial, commercial and institutional boilers and process heaters – that was published June 4, 2010. Arkansas is in the midst of severe economic distress, as is the rest of the nation. Since June 1995, Arkansas has lost nearly 100,000 manufacturing jobs, roughly 40 percent of that sector's employment. The proposed Boiler MACT will stymie economic recovery for many industrial sectors, particularly for the forest products sector.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Robert E. McKenna
Commenter Affiliation: Motor & Equipment Manufacturers Association (MEMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1964.1
Comment Excerpt Number: 1

Comment: While we support EPA's decision to establish work practice standards in lieu of emission limits for certain gas-fired boilers, EPA should provide for work practice standards on all gas-fired units and biomass boilers with this rule. EPA has properly exercised its authority by proposing to rely on work practice standards in lieu of emission limits for certain gas-fired boilers. 75 Fed. Reg. 32025. By doing so, EPA is taking one important step toward making sure that these rules do not unduly harm certain segments of the nation's critical manufacturing base. As EPA recognizes, the capital cost of emissions controls for the numerous existing gas-fired boilers would be extraordinarily high. Id. Further, EPA correctly concluded that imposing emission limitations on gas-fired boilers would create a disincentive for switching to gas from oil, coal or biomass as a control technique. Id. In fact, it could create an incentive for facilities to switch away from gas to other fuels. Both outcomes should be avoided.

EPA should, however, take the necessary next step and extend the work practice approach to all gas-fired units. Despite the exceedingly strict emissions limits that are proposed, EPA has not identified a demonstrated path to compliance for the remaining gas-fired units for which EPA has not proposed to make work practices available. Rather than imposing undue and unrealistic costs and standards on these remaining gas-fired boilers, EPA should allow work practices rather than require emissions limitations.

EPA should also establish annual tune-up work practice as the MACT standard for biomass boilers. For example, in the forest products industry alone, the estimated cost of complying with the proposed hazardous air pollutant (HAP) emissions limitations for biomass boilers is $3.3 billion. This is an extraordinary cost that, in the context of the forest products industry, equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly severe economic impacts are expected in other industry sectors where biomass boilers are widely use, such as the furniture, sugar, and agricultural products industries. Thus, there is strong economic justification for prescribing work practice standards for biomass boilers in lieu of numeric emissions limitations.

In addition, EPA has overreached in crafting the proposed work practices and "beyond the floor" requirements. The energy assessment and management work practice requirements are too broad, too intrusive, and exceed the scope of EPA's authority for Clean Air Act MACT rules. EPA should more narrowly tailor these requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Laura Colban
Commenter Affiliation: Skanden Energy
Document Control Number: EPA-HQ-OAR-2003-0119-2109.1
Comment Excerpt Number: 1

Comment: Skanden Energy supports the EPA in setting emissions standards, which will ban the use of poor quality, high-emissions boilers, such as traditional outdoor wood-boilers. However, we have the following concerns:

1. The EPA's data set included no emissions related to the combustion of non-woody biomass.

This is problematic for a variety of reasons. First, your assumptions that PM and CO emissions are indicative of heavy metals and POM is unsupported and incorrect with regard to non-woody biomass. Mercury and other heavy metals are significantly more prominent in trees that absorb acid rain for decades than in fuel crops that grow for a season. Second, to our knowledge, no boiler can meet your proposed CO limits when fueled with non-

woody biomass. When fueled with wood pellets, chips, saw dust, and similar wood fuels, emissions from Skanden MultiFuel boilers are generally well under the proposed limits. However, when MultiFuels are fueled with switch grasses, miscanthus, straw, corn stover, and most non-woody biomass, our CO emissions are often double the proposed limits. These fuels also produced up to ten times the PM as non-woody fuels, making it more expensive and difficult to meet PM limits. Additional research is needed in the area of fuel crop combustion. The national energy labs should be involved with testing a variety of fuels to determine appropriate limitations. Funding for this must be supported by the U.S. government.

2. The cost of annual testing is prohibitively high.

The annual testing requirement is cost prohibitive for all thermal biomass systems, regardless of size. Annual testing may be feasible for boilers generating electricity, which receive substantial tax incentives, but it is not feasible for thermal-only systems. Many of our customers are rural schools, municipal buildings, greenhouses and similar. They are located in remote areas, far from experts capable of testing emissions. Recently, I tried to obtain comprehensive emissions testing for a boiler located at a public school in central Maine. Eventually I found one firm in New York and one in Massachusetts that were capable of doing the required tests. The cost of bringing these firms to central Maine, was nearly $20,000. This is equal to about 1/2 of a teacher's salary. There is no possibility that a public school can afford to pay this testing fee even once, let alone annually. The best solution is to require two tests:

- an annual fuel test, to ensure that fuels do not contain high levels of toxins, and

- a one-time certification of boilers, whereby firms such as Skanden Energy, would be required to have one unit tested and third-party certified.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 2

Comment: As a part of the information gathering activity in 2008, Westlake Styrene LP provided a Stack Test Report from a 1992 Test of a Process Heater at the Westlake — Lake Charles Complex. The Stack Test Report was identified as a Natural Gas fueled source. Upon further review of the Stack Test Report it was determined that the fuel for the Process Heater during the 1992 Stack Test was a combination of natural gas and process gas. The process gas stream is primarily Hydrogen. We feel that the use of this Stack Test for the MACT Floor for Natural Gas Boilers and Process Heaters Carbon Monoxide emissions is incorrect and should be corrected. Westlake apologizes for this discrepancy.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 5

Comment: The Proposed Rule relies on Carbon Monoxide emissions as a surrogate for organic HAP emissions. While this may seem to be a logical and simplified approach, there is no testing data or proof that this surrogate is an appropriate approach to establishing a MACT Standard. Further, using the Carbon Monoxide emissions from historical stack test results solely as the data to establish the MACT Floor for Organic HAP emissions is inappropriate.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 9

Comment: The Proposed Rules provide special provisions for Refinery Gas combustion sources, which does not appear to include Petrochemical Off-Gas Streams. We think the Petrochemical Off-Gas Streams (with non-halogenated hydrocarbons) should be afforded the same regulatory accommodations as refinery gas. An excellent example of Petrochemical Off-Gas Streams that should be afforded this accommodation is ethylene plant process fuel gas, which is primarily hydrogen and methane, and is an ideal fuel source.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 11

Comment: The Proposed Rules establish many new definitions, fuel categories, and compliance requirements. As a result, it becomes confusing and difficult to evaluate the requirements for process liquids that have been historically collected and utilized as fuels on-site. Under the RCRA rule, based on the Legitimacy criteria, those liquid streams would not be considered a waste. Under the Boiler MACT rule, those liquids streams do not appear to be included in the definition of liquid fuel. Where do those liquid streams fit into these Proposed Rules? Shouldn't the nature of the process be considered in the categorization of these liquid streams — whether the stream included halogenated hydrocarbons or metals, the BTU Content of the liquid stream, etc.?

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 1

Comment: New and overly stringent standards for industrial boilers will have an immediate impact on our members' bottom line without demonstrated environmental benefits. Compliance costs associated with these harsh and inflexible proposed rules will cost U.S. manufacturing jobs and hurt global competitiveness, just as the economic recovery attempts to gain more traction. Further, as described below, the severity of the proposed standards may lead to the perverse effect of disincentivizing projects that otherwise would realize environmental improvements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 2

Comment: While the MACT floors are calculated based on the fuel consumed during the test, the EPA section 112 proposal sets out a different test for determining which limit would apply to a particular unit in the future. EPA calls this test a "designed to combust" test, asserting that the limits will apply depending on the nature of the fuel that a unit is designed to combust. However, any unit that burns a fuel must be "designed" to combust that fuel and units that combust multiple fuels are, in fact, designed to combust each of those fuels. Under the proposal, the applicability of different limits is based on whether a source has combusted a prescribed amount of a type of fuel, not necessarily the fuel it combusts during a compliance test, and not the fuel that might be expected to dominate its current emissions profile. Thus, a unit would be

"designed to combust" coal if at some unspecified time it generated at least 10 percent of its annual heat input from coal. EPA's proposal continues with a tiered system where, if the source did not burn 10 percent coal, it would look to see if it burned more than 10 percent biomass, and if it did, it would be subject to the biomass limits. If a source burned less than 10 percent solid fuel and any liquid fuel at all, it would be subject to the limits for liquid-fired units (even if it obtained 99.9 percent of its heat input from natural gas). Under this scheme a unit would be a coal-fired unit, [Footnote: The proposal does not set out how the percentage of annual heat input is to be determined, but sources will need to know in advance of the commencement of a given year which limits apply to operations during that year] subject to the emission limitations based on the emission profile of coal-burning units, even if today it is burning 100 percent biomass.

This would result in a situation where the CO limit is unattainable at the source, while the mercury and hydrogen chloride (HCl) limits are overly lax. This scheme also unfairly affects those who co-fire natural gas and oil, since the combustion of any oil at all would remove the exemption from emission limitations that EPA proposes for natural gas-fired units.

The proposal does not set out a rationale for this new approach or why the procedures set out in the vacated rule to address fuel mixtures are inadequate. NACAA recommends that MACT limits be established for each major category of fuels and that the procedures found at 40 CFR 63.7530 be used to address fuel mixtures.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 3

Comment: While we support EPA's decision to establish work practice standards in lieu of emission limits for certain gas-fired boilers, EPA should provide for work practice standards on all gas-fired units and biomass boilers with this rule. EPA has properly exercised its authority by proposing to rely on work practice standards in lieu of emission limits for certain gas-fired boilers. 75 Fed. Reg. 32025. By doing so, EPA is taking one important step toward making sure that these rules do not unduly harm certain segments of the nation's critical manufacturing base. As EPA recognizes, the capital cost of emissions controls for the numerous existing gas-fired boilers would be extraordinarily high. Id. Further, EPA correctly concluded that imposing emission limitations on gas-fired boilers would create a disincentive for switching to gas from oil, coal or biomass as a control technique. Id. In fact, it could create an incentive for facilities to switch away from gas to other fuels. Both outcomes should be avoided.

EPA should, however, take the necessary next step and extend the work practice approach to all gas-fired units. Despite the exceedingly strict emissions limits that are proposed, EPA has not identified a demonstrated path to compliance for the remaining gas-fired units for which EPA has not proposed to make work practices available. Rather than imposing undue and unrealistic costs and standards on these remaining gas-fired boilers, EPA should allow work practices rather than require emissions limitations.

EPA should also establish annual tune-up work practice as the MACT standard for biomass boilers. For example, in the forest products industry alone, the estimated cost of complying with the proposed HAP emissions limitations for biomass boilers is $3.3 billion. This is an extraordinary cost that, in the context of the forest products industry, equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly severe

economic impacts are expected in other industry sectors where biomass boilers are widely use, such as the furniture, sugar, and agricultural products industries. Thus, there is strong economic justification for prescribing work practice standards for biomass boilers in lieu of numeric emissions limitations.

In addition, EPA has overreached in crafting the proposed work practices and "beyond the floor" requirements. The energy assessment and management work practice requirements are too broad, too intrusive, and exceed the scope of EPA's authority for CAA MACT rules. EPA should more narrowly tailor these requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 9

Comment: In order to evaluate whether EPA's procedure for calculating variability is appropriate, one first has to examine what "variability" EPA is calculating and whether it is relevant to some matter under sections 112 or 129. EPA's procedure involved determining the 99th percentile

UPL of the difference in performance between all test runs for all units in the top 12 percent [Footnote: EPA does not have sufficient replicate testing information for each of the top units in each of its subcategories to accurately determine the variability in replicate testing performance for each unit. In many instances only one replicated test was available, in others, the source was tested only once.] This calculation improperly combines two factors: (1) the inter-unit difference between the "best performers" and "the best of the best performers" and (2) the expected variability in performance for each of the best-performing units. EPA does not have the resources to evaluate each of these situations in detail to determine whether the difference represented inherent variability in performance of the unit or is a consequence of factors (such as fuel composition or specific hardware design) that are within the control of the source, and so it simply, and incorrectly, assumes that each of the units within the top 12 percent is identical and that all of the difference in performance is a "variability" in performance that is essentially random and therefore susceptible to statistical analysis. The difference in performance between units in the top 12 percent is unrelated to the variability in performance of any of those units. While we understand the resource constraints, the procedure to which EPA defaults seems to have no relationship to the average performance of the top 12 percent, the variability in performance that one might expect of a top-performing unit or the effect of such variability on the computation of the average [Footnote: Indeed, the result of this procedure is a higher MACT

floor than would be obtained by calculating the 99th percent UPL of the performance of the 12th (or even 50th) percentile unit.]

EPA's approach leads, in some instances, to wildly exaggerated predictions of "variability of performance" that are not reflected in the real world and to MACT floors that are not reflective of Congressional intent [Footnote: Thus, we see the result, above, where the average of the top 12 percent is 0.75 ppm and EPA's calculation process yields 90 ppm. Based on the intra-unit variability calculated by NACAA in its Model Permit Guidance, the probability of a unit that emits 1 ppm over the course of a reference test then emitting 90 ppm in its next reference test is orders of magnitude less than 1 per cent. EPA employed this procedure in its recent Portland Cement NSPS, but that does not mean that it is correct – then or now.] While the courts have held that EPA has discretion in how it calculates the MACT floor, Congress has specifically determined how EPA is to calculate differences in performance among units in the top 12 percent – average them.

Other approaches are available under the statute that would yield reasonable results and that are more logically related to the statute. Rather than calculating a level of performance that is highly unlikely for each source, EPA could as a first step examine the variability in test results of the top performing 12 percent of performing units individually and ascertain the extent to which that variability might affect the calculation of the MACT floor. The probability that each of the units in the top 12 percent would experience its highest probable emissions during the same measurement period is vanishingly small and so the variability factors assigned to the actual average for this purpose would be negligible.

To understand this point, imagine that 30 sources constitute a MACT floor group and that this group is tested 100 times. Imagine that the mean value of the emissions for this group, based on the first round of testing, is 30, that emission results are normally distributed and that each unit has a 99 percent UPL of 50. As this group is tested and re-tested there will be some units that emit 35 or 40, or even occasionally 50. However, with a normal distribution of the data, there will also be some units that emit 25 or 20 or occasionally 10. As the number of tests increase, there will be a tendency for the average of these tests to approach a true "mean" value,

perhaps 30.3 or 29.5. Any given calculation of the mean will vary slightly, but the probability that all 30 units in the MACT floor group will emit at 50 during a test is exceedingly small and so an average of the 99 percent UPL of the MACT floor units (i.e., a mean value of 50) would represent an extremely unlikely [Footnote: Determining this probability is similar to calculating the odds of flipping a coin 30 times and having all 30 results being "heads," except that the probability for each individual occurrence is 1/100 rather than 1/2. For our example, we calculate this probability at 1 in 1060] approximation of the effect of variation of the performance of those units on the calculated MACT floor. In our hypothetical example, EPA's calculation procedure does in fact lead to a value of 50, which EPA would then increase to 75 or more based on a fuel variability factor described below. The actual probability of variation in the arithmetic average of the top performing 12 percent, due to variation in individual measurements, is susceptible to calculation, but EPA's method does not address it and it is likely to be so small as to be irrelevant.

Having established the variability in the "average" due to the variability of individual units that make up the average, it would then be reasonable for EPA to establish a compliance margin such that "complying" units within the "best performing units" group are not in jeopardy of failing a

replicate compliance test when operating as they did when their test results formed the basis of the MACT floor. Since nominally half of the top 12 percent do not meet the average and therefore are not complying units [Footnote: Those units in the top 12 percent, but with emission levels greater than the average of the top 12 percent (i.e., the 6th through 12th percent best performers), do not "comply."], the development of a compliance margin should be limited to an evaluation of the variability of the top 6 percent performing units under the compliance conditions imposed by the regulation. Unfortunately, we largely only have data that reflect emissions variability when emissions are unconstrained, and do not have available a significant body of information that reflects how variable emissions might vary when sources are attempting to control them [Footnote: There are data in other contexts that demonstrate that facilities that employ continuous emission monitors (CEMs) are able to reduce emissions variability by controlling process and other parameters. Some sources in both EPA and NACAA's data sets were subject to some emission limitations. In many instances however, compliance margins were so large that close control of emissions variability was unnecessary.] For this reason any calculation of variability using pre-regulation testing will likely overstate the post-regulation variability to some degree. Nonetheless, some evaluation of variability must be conducted and some statistical norm employed at this time. EPA has suggested the use of the 99th percentile UPL of pre-regulation testing and argued that its use is justified because EPA used the same approach in the medical waste incinerator MACT rule. This rationale does not explain why EPA believes the 99th percentile UPL is appropriate and not the 50th, [Footnote: Civil enforcement of environmental standards is based on a "preponderance of the evidence," which merely requires that a violation be more likely than not (51st percentile).] 90th or, for that matter the 99.99th percentile [Footnote: Some in industry have argued that the levels should be set so that there is no significant probability that a facility would fail a compliance test at any point in its useful life.]

The decision matters because with each increase in the "guaranteed" compliance margin the standard increases and there comes a point where the compliance margin is so great that sources can merely accept the risk of a failed compliance test rather than reducing emissions [Footnote: The selection of a 16,100-percent variability factor, discussed above, meant that no source within the subcategory could fail the standard, even if it made no attempt at compliance.] If a source fails a compliance test it will ordinarily be afforded the opportunity for a retest and only

if a source has a confirmed deficiency in its control equipment will a modification be ordered. We are unaware of any situation where a source that is willing to make such modifications as are necessary to meet an applicable limit has ever been ordered to permanently cease operation on the basis of a single failed stack test. In contrast, where emission standards are overly lenient, emissions remain high, and people do become ill.

Fortunately, there are additional facts to help guide EPA's determination of a standard compliance margin to be applied to all subcategories – the compliance obligations and testing conditions that are imposed by the standard. It seems that an equitable balance is struck when the same conditions used to establish the compliance margin are thereafter used to set the compliance obligation (and vice versa). If a source is required to be regularly tested under conditions that represent the 99th percentile "worst-case" conditions, then a 99th percentile compliance margin might well be appropriate. Additionally, a larger compliance margin is ordinarily appropriate for standards with short averaging periods and continuous emission monitors than for standards that have long averaging periods or where compliance is determined

by scheduled stack tests conducted by contractors engaged by the source [Footnote: We do not intend to cast aspersions on such contractors. Our point is that the source has substantial prior notice of such tests and is in control of the operating conditions during the test.] We would agree with EPA that a larger compliance margin is warranted where the emission limit is at or near the detection limit of the reference method.

EPA observes that standards are to be complied with "at all times," but this is a truism that is not particularly helpful [Footnote: EPA also asserts that the failure of a compliance test is not a violation of a standard until and unless some governmental authority agrees. We understand the reference in the context of the annual certification of compliance (where EPA does not intend sources to have to "confess" to a violation of law), but not otherwise.] What are helpful are the provisions in the rules that set out the conditions under which compliance will be determined. In years past, facilities were to be tested under "reasonable worst case conditions." Today, that standard has been reduced to "representative" conditions – a phrase that suggests that a compliance margin based on a 99th percentile projection [Footnote: We understand that a 99th percentile UPL is not precisely the same as a 99th percentile worst-case condition, but the differences are extremely subtle.] of possible emissions may be too large and that industry projections of severe test conditions may be overstated. Moreover, the structure of the compliance obligations itself suggests that the 99th percentile may be too stringent. The following factors, among others set out in the proposed rules, bear on a determination of the appropriate compliance margin:

1. For sources that intend to comply with mercury and HCl fuel sampling, the rules require that a source conduct a stack test and demonstrate compliance using 90th percentile worst-case fuel (employing the student's t-test to determine that percentile);

2. For other purposes (e.g., PM and CO compliance) the source may select a "representative" operating condition (suggesting that neither a 90th percentile nor a 99th percentile worst-case test is required for these pollutants);

3. A source whose emissions during a test are less than 75 percent of the applicable limit is entitled to a reduced frequency of stack testing (suggesting that EPA does not really believe that replicate testing of sources will vary by more than 33 percent);

4. Parametric operating limits may not generally be less effective than demonstrated during the stack test (a useful provision, but also one that suggests that EPA believes that in-use emissions variability is zero);

5. Many of the applicable standards and other requirements contain exclusions from full compliance at all times (e.g., six-minute exclusion under opacity requirements, 5-percent exclusion for bag leak detection systems); and

6. Power (voltage or amperage) to ESPs may not fall to less than 90 percent of that employed during a stack test [Footnote: If power to the ESP falls below that employed during the test, PM control efficiency would be reduced. The amount of this reduction is presumably unit-specific and so we can think of no justification for this provision.] (for which we can think of no justification).

While EPA may have used the 99th percentile UPL in one recent NSPS, in other NSPS rulemaking exercises, such as the mercury limits under the utility NSPS 40 CFR Part 60, Subpart Da [Footnote: See, Memorandum from Robert Wayland, OAQPS, to William Maxwell, OAQPS,

"Revised new source performance standard (NSPS) statistical analysis for mercury emissions" (sic), May 31, 2006,] it has employed a 90th percentile statistical test (t-test) coupled with the same test for the fuel-sampling compliance demonstration.

Since we believe EPA is actually developing a reasonable compliance margin to apply to the best-complying sources, rather than anything to do with the calculation of the effect of individual unit variability on the average of the top performing 12 percent of units in a subcategory, we do not believe EPA is constrained to set a different compliance margin for each subcategory. Rather, we think that EPA could develop a factor for each of the complying units (i.e., top 6 percent) for which it has sufficient replicate testing, numerically average all such factors and apply this average factor to each of the calculated MACT floors (at least to all floors within a fuel category) and adjust this factor to reflect the realities of the compliance obligation for different pollutants. In this way the wide disparity in calculated floors occasioned by small sample sizes would be reduced and differences in the stringency of compliance demonstration methods can be accommodated.

EPA takes the result of its 99th percentile UPL calculation and applies a second variability factor, what it styles as a "fuel variability factor" to determine the overall variability to apply to a "best performing unit." This constitutes double counting and should not be permitted [Footnote: EPA also contemplated separate "load" variability but ultimately concluded that this variability was incorporated in the test-to-test variability of sources. We suggest that the same result should apply to consideration of fuel variability.] This double counting occurs because fuel variability is part of, and in many instances the major part of, the test-to-test variability that forms the basis of the 99th percentile UPL calculation.

Where the "adjusted" average emissions of the top 12 percent is "near" the detection level, EPA proposes [Footnote: EPA employed this technique in the cement kiln NSPS rule.] to increase the calculated average so that the floor is not less than 300 percent of the detection level. To justify this increase EPA observes that when measurements are near the detection level the measurement uncertainty can be as high as (+/-) 40 percent, while such uncertainty is reduced to (+/-) 15 percent if the measured value is three times (300 percent) the detection level. Since such measurement uncertainties are necessarily part of the overall

variability determined in step one of EPA's procedure there is no need or basis to substitute this arbitrary figure for the actual emission data that the statute requires be used. Additionally, it also makes no technical sense to introduce a known error of 300 percent in the MACT floor in order to avoid a possible error of 25 percent [Footnote: The difference between the potential error at the detection level and that at three times the detection level.] in any individual measurement. This step constitutes yet one more bias in favor of allowing higher levels of HAP emissions.

EPA's approach to "rounding" introduces an additional inappropriate bias to the calculation of MACT floors and should be revised to reflect technically correct rounding procedures and the requirements of the statute. In determining the number of units in a subcategory to include in the MACT floor analysis, EPA rounds the product of 0.12 times the number of units upward. For example, in a category with 103 emissions test averages (representing 103 units), 12 percent is 12.36. In this instance EPA based it MACT floor calculation on the performance of the top 13 units rather than the top 12 units, asserting that its process is consistent with the approach used by statisticians in survey sampling. NACAA does not take issue with this particular set of choices, but notes that it does bias the MACT floor calculation upward and leads to less stringent

limits. However, in several other steps in the calculation of the MACT floor, such as the application of calculated UPLs, EPA "rounded" the interim values and in each such instance EPA rounded the values up. In most engineering calculations, rounding protocols provide for rounding down as well as up. Rounding ordinarily includes truncating the number of significant digits that are employed in a calculation and occurs at the end of the calculation process. EPA justifies its decision to only round up by asserting that to do otherwise would deprive sources of the "variability" cushion they were otherwise entitled to. Again, this argument ignores the public interest in reducing emissions of hazardous air pollutants as well as normal engineering protocols. It would also seem to be contrary to written EPA policy concerning rounding for NSPS compliance purposes [Footnote: See, "Memorandum: Performance Test Calculation Guidelines", William Laxton, OAQPS, and John Seitz, OAQPS.] This policy, which has not been revised to our knowledge, adopts ASTM standard rounding protocols – carry at least five significant digits throughout all intermediate calculations and employ ASTM Procedure E 380 (round down if less than 5; round up if greater than 5) for the final calculation. Where a MACT floor would otherwise be calculated at 2.27, it would seem that "rounding" a final standard to 3.00 would be technically unjustifiable and would not comply with the requirement of section 112 that the MACT standard be not less stringent than the average of the top 12 percent.

EPA's "rounding" policy also addresses the issue of the number of significant digits that should be in an emission standard and states that all then-existing NSPS should be construed as having no less than two nor more than three significant digits. This was important at the time because the new rounding policy replaced an earlier policy that did not allow rounding at all. If a standard were set at 3, under the earlier policy a test result of 3.0001 would be a failure; under the new policy sources could "round down" to compliance. The expression of a standard in a minimum number of significant digits limited the adverse environmental effect of this change. Since that policy only retroactively changed the number of significant digits in standards in existence, EPA has been careful (where it chose to be) to set out standards in the appropriate number of significant digits. For example, in the gasoline sulfur rule EPA had forgotten to include any number after a decimal place in the proposed standard but incorporated two numbers

after the decimal place in the final rule. When asked about the reason for this change, EPA responded:

EPA included the decimal places to ensure that the sulfur standards are not exceeded by rounding down actual average sulfur levels. We do not believe reporting the average sulfur level to two decimals creates any additional burden as the averaging calculation will yield this result to any number of decimal places. Although the decimals were not included in §80.216(a)(1)(i) for the geographic phase-in area (GPA) standard, EPA intends to revise this provision to include the decimals in a future rulemaking [Footnote: See, EPA420-F-00-018, May 2000.]

In the current proposal EPA identifies the mercury emission standard to only one significant digit, (for example, 3 lb/TBtu expressed in other units as 3 x10-6 lb/MMBtu or 0.000003 lb/MMBtu [Footnote: This is still only one "significant" digit in this figure, irrespective of which of these two ways it is presented.]). Under EPA's 1990 rounding policy, this will allow sources with emissions as high as 3.4999 lb/MMBtu to "comply." If the emission limitation were expressed as 3.00 lb/TBtu (0.00000300 lb/MMBtu) sources could still round down under the existing policy, but only from 3.0049. Since, as EPA's earlier memo points out, the calculation of the average of the top 12 percent, including a compliance margin, can be carried out to any number of decimal places, there is no reason to round the result. In this example, the average of

the top 12 percent is 0.292 lb/TBtu [Footnote: From EPA Appendix C-2, Table 1.] After application of its several "variability" factors (including the double counting associated with fuel variability), EPA increases this result by a factor of nine to 2.64 lb/TBtu [Footnote: From EPA MACT Floor Analysis, April 2010, p.10.] This should be more than sufficient as a compliance margin for well-controlled units. But EPA then rounds [Footnote: Technically, this is not "rounding" but simply "increasing" the number since at this point EPA did not truncate significant digits. Later, EPA truncates.] up to 3.00lb/TBtu and truncates the result to 3, thereby allowing an additional 33-percent increase in mercury emissions to 3.4999 lb/TBtu without any technical or policy justification and without any discussion of the adverse effects of such an increase on public health and welfare. There is no reason to anticipate that a MACT floor, which is based on an average, should be a round number. In this example, if a recalculation in accordance with our comments and good engineering practices, yields a MACT floor of 2.15 lb/TBtu; EPA should set the standard at 2.15 lb/TBtu – unless, of course, it exercises its "beyond-the-floor" authority to set a more stringent standard.

Other examples of an upward bias can be found in EPA's calculation process [Footnote: The rounding process employed by EPA can increase MACT floor results significantly. The other biases we mention are unlikely to have a large impact on the MACT floor. The use of log-normal statistical procedures may or may not result in lower MACT limits than would otherwise be the case, but is technically justified where non-normal distributions are observed] including: (1) exclusion of test results where the result provided is "zero" or "non-detect," but the detection limit is not provided, and (2) failure to include homogeneous waste material combusted by some biomass boilers in the fuel variability analysis (EPA argued that such data should be excluded because it is not a representative material for other boilers in the biomass subcategory).

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 10

Comment: EPA has proposed to exempt natural gas-fired units from all emission limits related to HAPs in favor of a work practice standard – an annual "tune up" that would reduce HAP emissions by a small and unquantified amount by encouraging sources to improve the fuel efficiency of their units [Footnote: EPA observes that 80 percent of the small boilers surveyed already conduct annual tune-ups to improve fuel efficiency. We note that EPA's proposed work practice only requires an evaluation of options to improve fuel efficiency and no obligation to actually do so.] EPA asserts that enforcing a MACT standard for these units would double the

cost of the Boiler MACT rule by, among other things, mandating expensive fabric filters and acid gas scrubbers at natural gas-fired units. However, since there is no cost exemption from MACT floor requirements, EPA also asserts that it would be infeasible to enforce emission limitations on this group of sources because monitoring costs for some sources would be too expensive, especially units with stack diameters less than 12 inches. In support of its argument EPA points out that the "conventional" configuration of Method 5 testing equipment would block a significant portion of a 12-inch diameter stack.

Given the low concentrations of PM and mercury found in the exhaust gases of natural gas-fired units, NACAA agrees with the notion that natural gas-fired units should not be required to install fabric filters or acid gas scrubbers to control those pollutants. However, there is no reason why they should have to if EPA undertakes to establish emission limits based on the MACT floor calculation process. The "best performing" natural gas fired units do not have these controls and so the average emission level of the "best performing" 12 percent, combined with an appropriate variability factor, should be sufficient to address PM, mercury and HCl limits without use of these controls [Footnote: We also note that the definition of MACT technology includes the use of cleaner fuels. While we agree with EPA that this should not go so far as to require the use of natural gas in lieu of coal or other fuels, it may include such responses as chlorine limits on fuels to control emissions of HCl, dioxins and furans.]

EPA overreaches when, without any discussion or analysis, it attempts to exempt natural gas-fired boilers from CO limits, as a surrogate for organic HAPs [Footnote: Both NACAA and CIBO (the Council of Industrial Boiler Operators) encouraged EPA to conduct testing to further evaluate the correlation between CO emissions and emissions of organic HAPs, but EPA declined to do so.] In doing so the agency again puts at risk a common-sense solution for those pollutants that it makes sense to exclude and undermines its credibility on other issues. EPA also undercuts its rationale for establishing MACT floors for other units, such as oil-fired boilers, with stacks less than 12 inches. Why, some will undoubtedly ask, is it feasible to measure PM, dioxin/furan and mercury emissions at oil-fired ICI Boilers and medical waste incinerators and not at gas-fired units? Does EPA believe that it can expand the notion of work practice standards instead of emission limits to any subcategory where some sources might have to install temporary scaffolding to conduct a test?

EPA points to the "conventional" configuration of the Method 5 testing equipment. However, Method 5 is a PM measurement procedure, not a CO measurement process, and sources with smaller stacks are able to work around this issue and measure PM. There is nothing in the rulemaking record that we are aware of that shows that it is infeasible to measure CO in

natural gas-fired boilers. Federal, state and local authorities have routinely required these measurements for years, since CO is a criteria pollutant under the CAA. Further, the rulemaking record is replete with CO measurements from units of all sizes. In fact, there are more measurements of CO at natural gas-fired units (of all sizes) in the rulemaking record than any other pollutant/fuel combination.

NACAA's data base encompassed CO measurements of 161 gas-fired boilers. This universe included a number of what we would call "gross emitters" that will likely require measures beyond what would be included in a tune up, such as new burners and/or modification of the air supply system, to substantially reduce CO levels. For these units, in particular, the notion of a "voluntary" tune up work practice standard is not an adequate substitute for a MACT standard as

required by the CAA. Under section 112(h), a design, equipment, work practice or operational standard is authorized if it is not practicable to prescribe or enforce an emission limitation. However, that section requires that such work practice requirements must be consistent with the MACT and MACT floor provisions of section 112(d) and must contain such requirements as will assure the proper operation and design of those elements. In other words, there must be a reason to believe that the alternate standard will achieve a level of emission reduction that is consistent with MACT floor requirements (at a minimum). Such standards must also be consistent with the obligation to require the use of maximum achievable control technology even if measuring the in-use performance of that technology is infeasible. This could be accomplished, for example, by requiring the use of certain types of low-CO burners that have been tested by manufacturers to meet minimum efficiency requirements. Even if the "tune up" required mandatory improvements rather than merely encouraging such improvements, EPA's proposed work practice requirement would not achieve emission reductions that are consistent with the definition of MACT.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 18

Comment: THE RECORD DOES NOT SUPPORT "RISK BASED" EXEMPTIONS

EPA has solicited comment on whether the agency should adopt "risk-based" exemptions for manganese and HCl. Section 112(d)(4) of the CAA provides:

With respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection.

After careful review, NACAA has concluded that these exemptions are not authorized by the CAA and are not in the public interest. The factual predicate for the use of section 112(d)(4) for acid gas HAP and metal HAPs – the establishment of a health threshold for each of these pollutants – has not been met. Congress authorized risk-based standards only "where health thresholds are well-established...and the pollutant presents no risk of other health effects, including cancer, for which no threshold can be established...." [Footnote: S. Rep. No. 228, 101st Cong. 1st Session, (December 20, 1989), reprinted in A Legislative History of the Clean Air Act Amendments of 1990 (Comm. Print 1993), at 8511.]

Many of the HAPs for which HCl and PM are surrogates are potential or demonstrated carcinogens. Moreover, because no meaningful studies have been conducted, EPA has identified

both HCl and manganese as unclassifiable for carcinogenicity. For this reason it cannot be asserted that a "well-established" threshold exists and that there is no risk of cancer. EPA's Integrated Risk Information System (IRIS) reports that no studies have identified a No Observable Effects Level (NOEL) for neurological effects for manganese [Footnote: See,http://www.epa.gov/iris/subst/0373.htm;http://www.epa.gov/ncea/iris/subst/0396.htm.] Further, the CAA requires that a section 112(d)(4) standard include "an ample margin of safety." EPA's IRIS report concludes that the scientific confidence in the Oral Reference Concentration for HCl

employed by EPA in the ICI Boiler "risk-based exemption" is "low." [Footnote: The IRIS report concludes "[t]he chronic study used only one dose and limited toxicological measurements. The supporting data consist of two subchronic bioassays; the database does not provide any additional chronic or reproductive studies. Therefore, low confidence was recommended for the study, database, and the RfC".] For this reason, it cannot be said that the "well established" threshold that provides an "ample margin of safety" has been established for HCl. Broader approaches for alternate emission standards were specifically rejected by Congress in the development of section 112 [Footnote: Congress specifically rejected an amendment that would have provided that individual sources "could comply with alternative emission limitations in lieu of standards under this section, if the owner or operator presents evidence sufficient to demonstrate that emissions from the source in compliance with such limitations present a negligible risk to public health under criteria issued by the Administrator." 2 Legislative History, at 3939. The Act itself provides a specific alternative emission standard for coke oven batteries. Thus, a risk-based exemption for specific sources is contrary to the statutory structure and would not be approved under a deminimis test, even if the emissions impacts were trivial. EPA's history over the past 40 years in attempting to develop a risk-based approach to regulations of toxic air emissions, and in particular the development of residual risk programs under section 112, demonstrate that these issues are far too complex and significant to be delegated to individual sources as EPA intended.]

On August 6, 2010, EPA adopted a NSPS for Portland Cement plants. In its final rule EPA specifically rejected adoption of risk-based exemptions for HCl and manganese, making many of the points identified above and also relying on the benefits associated with the co-removal of SO2. There are no differences sufficient to warrant a reversal of that decision in this standard. Moreover, EPA has not identified a proposal for an exemption with sufficient specificity to allow for meaningful comment for a final rule. Finally, there is no record sufficient to support such a proposal and insufficient time under the applicable statutory and judicial deadlines to develop such a proposal and rulemaking record.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arnold Schwarzenegger

Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 1

Comment: California has adopted some of the nation's most ambitious renewable energy and greenhouse gas reductions goals and I am concerned that rule changes being considered by your agency will undermine the progress we are making.

While I understand the need to update standards to reflect new technologies, U.S. EPA must carefully consider the trade-offs that must be made in meeting California's ozone reduction and greenhouse gas reduction goals. The attached comments by our energy and environmental agencies outline major concerns about how your proposed boiler standards may cause California's existing biomass-to-energy facilities to close.

California's 40 biomass plants provide approximately 800 megawatts of electricity generation capacity that last year produced 5,700 gigawatt-hours of electricity, representing about

three percent of California's total in-state power generation. In addition, these facilities employ 750 people on-site and support 1,200 to 1,500 jobs in the fuel supply infrastructure. I know the Obama Administration is working as hard as we are to increase, not eliminate, green jobs.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 2

Comment: In California, BTE boilers are tuned to reduce oxides of nitrogen (NOx) emissions at the expense of some increased carbon monoxide (CO) emissions (an attainment pollutant) because of California's ozone nonattainment problem. Modifying a biomass boiler to meet the CO emissions requirements used as a surrogate for non-dioxin organic hazardous air pollutants (HAP) will result in higher emissions of NOx that may trigger New Source Review (NSR) requirements for best available control technology and offsets. ARB believes U.S. EPA needs to re-evaluate the increased NOx emissions of this proposed standard and the impacts on states, such as California, in meeting the National Ambient Air Quality Standards for ozone.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for

Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 3

Comment: Our 1996 oil-fired boiler is an auxiliary or intermittent back-up boiler used to supplement steam supply during maintenance downs or other situations when the mill needs a little extra steam. These rules would require the installation of the same amount of multiple pollution-control devices as our main hog fuel boiler to meet the proposed limits. Even if we can find a supplier to provide the pollution-control equipment, this cost is prohibitive. Shutting down our newest boiler will result in reduced stability of steam delivered throughout the mill, increased strain on the other steam units, constrained planned maintenance on other parts of the mill, and curtailed production.

Our oil-fired boiler is fueled by Reprocessed Fuel Oil (RFO) which is an on-spec product that was developed with Washington State to reduce the amount of petroleum-based products disposed of in landfills and storm drains.

Much like the Gas 1 category, EPA has ample justification to create a subcategory for intermittent boilers and/or boilers that run on clean liquid fuels that could be subject to work practices and other alternative approaches rather than stringent HAP limits.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 7

Comment: EPA correctly excluded synthetic minor sources from the determination of the MACT floor for a category of major sources.

BIA commends EPA for the apparent separation of area sources (including synthetic minor/area sources) and major sources before determination of the MACT floor for existing sources in the major source category. Based on a review of the database, EPA separated the emissions data into two distinct databases- one that includes only major sources and was used for the major source evaluation and one that contained all area sources and was used for development of the rule for area sources. The BIA asserts that this is the proper approach for setting a floor for a source category since the CAA requires that a floor determination be made based on a review of the best performing sources in a category (or subcategory) and not by all possible similar sources in the industry.

The CAA defines only two types of sources: major sources and area sources. Major sources are defined as [CAA Section 112(a)(1)]:

Any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

Area sources are defined simply to include any and all sources that do not meet the above definition of a major source [CAA Section 112(a)(2)]:

Any stationary source of hazardous air pollutants that is not a major source. Since a synthetic area/minor source no longer emits or has the potential to emit at major source levels, it does not meet the definition of a major source. Therefore, it is an area source and is rightfully excluded from the consideration of the MACT floor for this category of major sources. This approach is correct for a category of major sources regardless of whether there is a rulemaking in progress (or completed) for a category of area sources that covers similar emissions units.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 8

Comment: EPA should not require control below a level that they can determine is safe, regardless of any "co-benefits" that they can erroneously credit to this rulemaking

In the proposed rulemaking, EPA considered but basically rejected the use of a health-based standard. BIA believes that EPA has missed an opportunity here and should re-think this decision. First, a health-based standard is both allowed under the CAA and has the potential to provide the same protection to the environment at a lower cost. Second, EPA bases their position

in part on the potential for "co-benefits" of non-HAP air pollutants, which is not allowed under the CAA.

We fully support the comments submitted by the American Forest and Paper Association (AF&PA) and others in support of health-based standards. Particularly in these tough economic times, EPA should embrace standards that both provide the same HAP benefits while greatly reducing costs. Section 112(d)(4) allows EPA to establish these alternative standards and AF&PA and others have clearly demonstrated both their ability to be protective of the environment and far less costly than EPA's proposed approach. After all of the years EPA has had to develop these standards, and all of the data that have been submitted to EPA, EPA should evaluate establishing these alternative and equivalent standards.

BIA is distressed by EPA's growing and illegal dependence on non-HAP benefits to justify a HAP regulation. Congress clearly developed separate sections of the CAA to deal with different pollutants, based on the specific impacts of those pollutants. For example, only HAPs have anything like a "floor" that must be established before a cost and other impacts based final level is established. While we can commend EPA's attempts to provide overall strategy for air quality for an industry, these "good intentions" cannot be used to push through environmental limitations that violate the requirements of the CAA.

For example, EPA has repeatedly argued that it cannot consider costs in the MACT floor. However, EPA then turns around and uses monetized benefits of non-HAP emission reductions as a justification or benefit of their decisions. If costs do not belong in the floor, neither do negative costs (i.e., benefits).

In establishing the emission level that is considered MACT, the CAA clearly and in plain language instructs EPA to NOT consider other air quality benefits, only non-air quality benefits [Section 112(d)(2), emphasis added]:

Emission standards promulgated under this subsection and applicable to new or

existing sources of hazardous air pollutants shall require the maximum degree of

reduction in emissions of the hazardous air pollutants subject to this

sections...where the Administrator, taking into consideration the costs of

achieving such emission reduction, and any non air-quality health and

environmental impacts and energy requirements, determines is achievable.... This clearly demonstrates that EPA cannot consider other air quality benefits when justifying a MACT, nor can they be considered when identifying the MACT floor. Clearly, Congress recognized that there were other sections of the CAA that could, and should, be used to regulate non-HAP air contaminants. These other programs have totally separate approaches for setting the standards and for considering impacts.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 9

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

Health-based emissions limitations for certain pollutants

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 12

Comment: The State supports the proposals' roles and responsibilities associated with energy assessment requirements. Specifically, the State does not want the responsibility of reviewing, approving or ensuring adequate implementation of energy assessments, nor do we have the resources to carry out these responsibilities.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Steven A. Brink
Commenter Affiliation: California Forestry Association
Document Control Number: EPA-HQ-OAR-2003-0119-2222.1
Comment Excerpt Number: 1

Comment: CFA does not support EPA's Maximum Achievable Control Technology (MACT) standards for biomass boilers for major and area sources as proposed.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 1

Comment: While Manufacturers support EPA's decision to establish work practice standards in lieu of emission limits for certain gas-fired boilers, EPA should provide for work practice standards on all gas-fired and biomass units with this rule. EPA has properly exercised its authority by proposing to rely on work practice standards in lieu of emission limits for certain gas-fired boilers. 75 Fed. Reg. 32025. By doing so, EPA is taking one important step toward making sure that these rules do not unduly harm certain segments of the nation's critical manufacturing base. As EPA recognizes, the capital cost of emissions controls for the numerous existing gas-fired boilers would be extraordinarily high. Id. Further, EPA correctly concluded that imposing emission limitations on gas-fired boilers would create a disincentive for switching to gas from oil, coal or biomass as a control technique. Id. In fact, it could create an incentive for facilities to switch away from gas to other fuels. Both outcomes should be avoided.

EPA should, however, take the necessary next step and extend the work practice approach to all gas-fired units. Despite the exceedingly strict emissions limits that are proposed, EPA has not identified a demonstrated path to compliance for the remaining gas-fired units for which EPA has not proposed to make work practices available. Rather than imposing undue and unrealistic costs and standards on these remaining gas-fired boilers, EPA should allow work practices rather than require emissions limitations.

EPA should also establish annual tune-up work practice as the MACT standard for biomass boilers. For example, in the forest products industry alone, the estimated cost of complying with the proposed HAP emissions limitations for biomass boilers is $3.3 billion. This is an extraordinary cost that, in the context of the forest products industry, equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly severe economic impacts are expected in other industry sectors where biomass boilers are widely use, such as the furniture, sugar, and agricultural products industries. Thus, there is strong economic justification for prescribing work practice standards for biomass boilers in lieu of numeric emissions limitations.

In addition, EPA has overreached in crafting the proposed work practices and "beyond the floor" requirements. The energy assessment and management work practice requirements are too broad,

too intrusive, and exceed the scope of EPA's authority for CAA MACT rules. EPA should more narrowly tailor these requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 2

Comment: The proposal asks for comment on an approach that would allow facilities to demonstrate that emissions of certain pollutants do not pose a public health threat. We believe EPA has such flexibility under section 112(d)(4). We believe that provision reflects Congress' intent to provide for flexibility where there is not a public health threat. In such cases, it makes sense to allow that approach in the final rule for threshold substances such as hydrogen chloride and manganese.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 2

Comment: While we support EPA's decision to establish work practice standards in lieu of emission limits for certain gas-fired boilers, EPA should provide for work practice standards on all gas-fired units and biomass boilers with this rule. EPA has properly exercised its authority by proposing to rely on work practice standards in lieu of emission limits for certain gas-fired boilers. 75 Fed. Reg. 32025. By doing so, EPA is taking one important step toward making sure that these rules do not unduly harm certain segments of the nation's critical manufacturing base. As EPA recognizes, the capital cost of emissions controls for the numerous existing gas-fired

boilers would be extraordinarily high. Id. Further, EPA correctly concluded that imposing emission limitations on gas-fired boilers would create a disincentive for switching to gas from oil, coal or biomass as a control technique. Id. In fact, it could create an incentive for facilities to switch away from gas to other fuels. Both outcomes should be avoided.

EPA should, however, take the necessary next step and extend the work practice approach to all gas-fired units. Despite the exceedingly strict emissions limits that are proposed, EPA has not identified a demonstrated path to compliance for the remaining gas-fired units for which EPA has not proposed to make work practices available. Rather than imposing undue and unrealistic costs and standards on these remaining gas-fired boilers, EPA should allow work practices rather than require emissions limitations.

EPA should also establish annual tune-up work practice as the MACT standard for biomass boilers. For example, in the forest products industry alone, the estimated cost of complying with the proposed HAP emissions limitations for biomass boilers is $3.3 billion. This is an extraordinary cost that, in the context of the forest products industry, equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly severe economic impacts are expected in other industry sectors where biomass boilers are widely use, such as the furniture, sugar, and agricultural products industries. Thus, there is strong economic justification for prescribing work practice standards for biomass boilers in lieu of numeric emissions limitations.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Michael J. Burns
Commenter Affiliation: Ever-Green Energy, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2112
Comment Excerpt Number: 2

Comment: While we support the proposed CISWI rule as it defines “solid waste”, District Energy St. Paul has strong reservations about the separate but related National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (MACT Standards) due to the adverse impact that those standards are likely to have on the use of renewable fuels in the form of wood residuals. We consider the MACT Standards to be onerous in the emission levels that existing facilities are required to achieve under the proposed standards. In particular, at our facility which has received numerous accolades for the unique and efficient integrated energy system in the heart of Saint Paul, the controls required to meet the proposed MACT Standard cannot be reasonably installed in the limited space at the facility which results in a serious dilemma for this highly-regarded energy system.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 2

Comment: We concur with EPA there should be data from at least 5 source categories of less than 30 sources for floor determinations. (MACT floor minimum quantum of data, page 32022)

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 3

Comment: It appears that EPA recognizes that units do not operate at their near design capacity, but operate according to a facility's demand. However, we do not agree that EPA adequately addressed variability concerns by collecting data for only 30 days from 2 each of 3 types of units. Review of thirty days data from 2 units is not a sufficient data pool to conclude variability has been adequately addressed. It is recommended that EPA increase the number of units and the period of time that data is obtained to ensure variability is adequately addressed. (Operational variability, page 32024)

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Steven A. Brink
Commenter Affiliation: California Forestry Association
Document Control Number: EPA-HQ-OAR-2003-0119-2222.1
Comment Excerpt Number: 5

Comment: Under EPA's new annual emissions testing requirement, testing expenses would add an estimated $8,000- $15,000 per boiler system. That added cost likely surpasses the biomass fuel bill for smaller systems and is a major budget consideration for larger biomass boiler systems. Also, proposed compliance technology requirements could cost more than the biomass systems themselves.

In California's biomass power generation industry, the powerplants all have existing power purchase agreements and would not be able to pass the cost of any retrofits or testing requirements on to utility rate payers. The California Energy Commission's analysis indicates existing biomass powerplants would not be able to absorb the additional costs called for by the proposed MACT Rule and would go out of business.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 6

Comment: EPA Should Fix The Flawed Definition of "Cost-Effective" Energy Conservation Measures

For some existing major and area sources, EPA has proposed requiring an "energy assessment" to identify "a list of energy conservation measures." [Footnote: See, e.g., 75 Fed. Reg. at 32,068.

]While the proposed regulations do not require implementation of any of the energy conservation measures identified, they do define "cost-effective energy conservation measures" as any measure with "a payback (return of investment) period of two years."[Footnote: Id. at 32,063.]

That definition is fatally flawed statutorily and unjustified economically. If implementation of these measures is not required, there is arguably no need to define "cost-effective," and thus no

definition should be issued. But since implementation of these measures is cost-benefit justified and should be required, properly defining "cost-effective energy

conservation measures" becomes important. The proper definition for that term should be: any energy conservation measure whose net present benefits are greater than zero.

EPA Improperly Looked to the Energy Policy and Conservation Act to Define "Cost-Effective"

The definition of "cost-effective" chosen by EPA is improper for many reasons. There is no need for EPA to look to the Energy Policy and Conservation Act ("EPCA") to define "cost-effective" under the CAA, and there are important differences between the statutes. The definition of "achievable" under Section 112(d) (and thus the subsidiary definition of "cost-effective" if the agency is to require implementation of "cost-effective energy conservation measures") should be based on the statutory text and purposes of the Clean Air Act and not on any part of the EPCA. In addition, the definition chosen by EPA is an improper interpretation of the clause from the EPCA that the agency looked to for guidance. The general context of the EPCA indicates that the clause sets a floor for "economically justified" and is not an independently valid definition of the term. Moreover, it is clear from the EPCA that Congress intended "economically justified" to mean cost-benefit justified.

The agency maintains that its proposed definition—"a payback period of two years"—is based on section 325(o)(2)(B)(iii) of the Energy Policy and Conservation Act of 1975. [Footnote: Codified at 42 U.S.C. § 6295 (2010).]The proposed rules' preamble explains that under this section "there is a presumption that an energy conservation standard is economically justified if the increased installed cost for a measure is less than three times the value of the first-year energy savings resulting from the measure."[Footnote: 75 Fed. Reg. at 32,026.]

First, it is not clear how the agency justifies reading the phrase "three times the value of the first year energy savings" under the EPCA to indicate a two-year payback period. These calculations are distinct in obvious ways.

Second, this interpretation omits crucial parts of the EPCA's statutory scheme. The full text of the cited clause from the EPCA is as follows:

If the Secretary [of Energy] finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times

the value of the energy, and as applicable, water, savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure, there shall be a rebuttable presumption that such standard level is economically justified. A determination by the Secretary that such criterion is not met shall not be taken into consideration in the Secretary's determination of whether a standard is economically justified. [Footnote: 42 U.S.C. § 6295(o)(2)(B)(iii).]

The final sentence of this clause indicates that a finding that a standard does not meet the criterion cannot even be taken into consideration for whether the standard is "economically justified." Thus, the definition chosen by EPA for "cost-effective" is inappropriate even within the context of the clause they cite to support it.

Third, the cited clause only makes sense in the context of EPCA's Section 325(o)(2)(A):

Any new or amended energy conservation standard prescribed by the Secretary under this section for any type (or class) of covered product shall be designed to achieve the maximum

improvement in energy efficiency . . . which the Secretary determines is technologically feasible and economically justified.[Footnote: 42 U.S.C. § 6295(o)(2)(A).]

In this context, it is clear that the section cited by EPA as justification for the definition of "cost-effective" explicitly sets a floor for the Secretary of Energy's determination of "technologically feasible and economically justified," and is not a reasonable definition of "economically justified" or "cost-effective" by itself. More generally, Congress intended "economically justified" to mean cost-benefit justified, because the statute requires the Secretary of Energy to "determine whether the benefits of the standard exceed its burdens."[Footnote: 42 U.S.C. § 6295(o)(2)(B)(i).]

Ultimately, the EPCA is not an appropriate place to look for a definition under the Clean Air Act at all. First, there are no statutory terms within the relevant sections of Clean Air Act that refer to the EPCA. Second, there is no duplication of statutory terms where proper interpretation would suggest that meanings should be harmonized across the statutes. [Footnote: See, e.g., W.V. University Hospitals, Inc. v. Casey, 499 U.S. 83, 100-101 (1991) (looking to other statutes to determine the definition of "attorney's fees").]For example, the EPCA uses "technologically feasible and economically justified" and then lays out criteria to guide the Secretary of Energy for making determinations based on that phrase. [Footnote: 42 U.S.C. § 6295(o)(2)(B)(i)(I)-(VII): "(I) the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard; (II) the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered products which are likely to result from the imposition of the standard; (III) the total projected amount of energy, or as applicable, water, savings likely to result directly from the imposition of the standard; (IV) any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard; (V) the impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the imposition of the standard; (VI) the need for national energy and water conservation; and (VII) other factors the Secretary considers relevant."] None of those criteria or terms is repeated in the Clean Air Act. For purposes of an energy assessment under Section 112(d) of the Clean Air Act, EPA should apply the statutory language of the Clean Air Act and standard economic principles, not the EPCA.

"Cost-Effective" Should be Defined Using Proper Economic Principles

The proposed definition of "cost-effective energy conservation measure" is "a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of two years or less." [Footnote: 75 Fed. Reg. at 32,063.] The agency is requesting comment on "what rate of return should be used" and whether this definition is appropriate "since it refers to payback of energy saving investments without regard to the impact on HAP reduction."[Footnote: 75 Fed. Reg. at 32,027.]

By implicitly limiting the criteria to the private costs and benefits for regulated parties, this definition clearly falls short of the authority EPA has under the best interpretation of the statute (discussed above). Because EPA has authority to consider a fuller range of social costs and benefits in determining which beyond-the-floor regulations are "achievable" under Section 112(d), the definition of "cost-effective" could include social costs and benefits. However, as a practical matter, EPA is likely to exercise its statutory authority to stay focused on private costs and benefits in defining "cost-effective" for these purposes. An energy audit focused on private

costs and benefits can still be a crucial element of a broader suite of regulatory policies designed to maximize net social welfare and minimize the negative impacts of HAP emissions. As such, these comments will explore how best to define "cost-effective" considering only private costs and benefits.

Given that it makes sense to define "cost-effective" in this context as reflecting private costs and benefits, it also makes sense to evaluate these costs and benefits in the way that an economically rational firm would value them. This means that all benefits and costs from a project should be

considered, and a firm should undertake all investments where the net present value of all costs and benefits is higher than zero.

There are two important practical elements in determining the net present value of private investments: the timeframe of the analysis, and the discount rate for future costs and benefits.

The proper period of analysis for evaluating an investment is the period during which the investment affects relevant parties. The Economic Analysis Resource Document published by EPA's Office of Air Quality Planning and Standards states that:

It is common practice to calculate the costs of a regulatory option over the period of time corresponding to the expected useful lifetime of capital equipment purchased to comply with the rule. For example, if the capital equipment purchased as a result of the rule has an expected useful life of 15 years, an analyst might calculate the expected costs of the rule over a 15-year period. For consistency, benefits should be calculated over the same 15-year period.[Footnote: OFFICE OF AIR QUALITY PLANNING AND STANDARDS, EPA, OAQPS ECONOMIC ANALYSIS RESOURCE DOCUMENT at 8-1 (1999).]

This rule of thumb should be used here as well. In the case of energy conservation measures, the "useful lifetime" of the project is the period when it provides benefits to the regulated party. Because many (if not all) of the energy conservation measures being considered will have beneficial effects lasting longer than two years, EPA is unnecessarily limiting the consideration of benefits by defining the payback period as two years. Incorporating the full upfront costs of the measures but ignoring substantial future benefits would lead to under-adoption of energy conservation measures.[Footnote: Assuming that most capital costs are incurred in the early years of the project.] Given that the statutory explanation chosen by EPA for the two-year payback period is severely deficient, the agency should instead select the project's useful lifetime as the more economically rational period for analyzing energy conservation measures.

The discount rate is also important because it will determine how many measures will have a net present value above zero. In the context of an investment like an energy conservation measure, the costs of implementation will often be frontloaded and the benefits will be fairly constant from year to year (assuming fairly even amounts of energy savings and relatively stable prices). As a result, fewer energy conservation measures will look cost-effective with higher discount rates. For example, consider an investment with a cost of $100,000 in the first year but benefits of $12,000 per year for 10 years. Table 2 shows the net present value of this hypothetical investment under two different discount rates. [See submittal for Table 2 illustrating the net present value of the hypothetical investment under two different discount rates provided by commenter].

With the discount rate of 3%, the investment has positive returns. However, with the higher discount rate of 7%, the investment has negative returns.

For private investment decisions, the proper discount rate is the opportunity cost of capital, on the assumption that any dollar spent could earn the rate of return that the entity is achieving in its other projects. The correct rate will be the risk-adjusted rate of return that would be used to evaluate similar investment projects. [Footnote: The standard formulation would include the risk-free rate of return, plus an adjustment for the variance of the rate of return on the project. The risk of the particular energy conservation measure will be driven by volatility in energy prices or uncertainty in the actual quantity of energy savings.]

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 6

Comment: It is believed that many manufacturing and process facilities operate with numerous processes or systems in addition to boilers and boiler systems. It is recommended the EPA restrict the energy assessment requirement to the boiler system as defined in proposed 40 CFR 63.7570. (Energy assessment, page 32068)

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 7

Comment: EPA Should Mandate Periodic Audits and Implementation of Cost-Effective Measures

EPA is currently proposing a one-time energy assessment for certain existing boilers. Mandatory energy assessments can be justifiable to correct market failures, and that justification can extend beyond a one-time energy audit for existing boilers only. Audits should be periodically repeated and should also apply, at appropriate times, to new boilers. More importantly, regulated entities should be required to implement any cost-effective energy conservation measures identified.

Energy Efficiency Mandates are Necessary to Correct Market Failures

Ample evidence shows that businesses do not always take advantage of all cost-effective investments at their facilities. For example, a McKinsey & Company report from 2007 discovered many un-adopted greenhouse gas reduction measures that would have a negative marginal cost for private actors. [Footnote: MCKINSEY & COMPANY, REDUCING U.S. GREENHOUSE GAS EMISSIONS: HOW MUCH AT WHAT COST? (2007), available at http://www.mckinsey.com/clientservice/sustainability/pdf/US_ghg_final_report.pdf.] Many of the measures identified in that report were available to the same the industrial and commercial sectors covered by EPA's Major Source and Area Source Proposals. EPA notes that the Department of Energy has done energy assessments and discovered that some facilities can reduce energy use by 10 to 15 percent.[Footnote: 75 Fed. Reg. at 32,026.]

The requirement of an energy assessment partially solves this problem. While somewhat controversial, Professor Michael Porter and others have argued that certain types of regulations can have negative costs, by forcing firms to rethink their production processes. [Footnote: See David Popp, Richard G. Newell & Adam B. Jaffe, Energy, the Environment, and Technological Change (NBER Working Paper No. 14832, Apr. 2009); Michael E. Porter & Claas van der Linde, Towards a New Conception of the Environment-Competitiveness Relationship, 4 J. ECON. PERSPECTIVES 97, 99 (1995).] In this case, the energy assessment requirement will provide each regulated entity with information it did not have before. New and better information can help overcome organizational inertia by giving evidence of cost-savings. A mandatory energy assessment, rather than a voluntary program, can be justified due to persistent barriers to the voluntary pursuit of energy efficiency—lack of information, lack of attention and salience, prioritization, and so forth.

The energy assessment requirement is a cost-benefit justified regulation even if implementation of identified conservation measures is not mandatory. Armed with better information and focused attention thanks to an energy audit, regulated sources will be better able to take advantage of opportunities with significant private financial benefits, not to mention the environmental and health benefits from cutting energy use and associated pollution. While it is possible that some assessments may not lead to identifying of efficient energy efficient projects at some sources, there is sufficient evidence of general under-adoption of energy efficient technologies in the relevant sectors that substantial cost-savings can be achieved through the assessment requirement.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 7

Comment: Finally, many facilities have already recognized the benefits of conducting energy assessments and may have completed an in-depth assessment or evaluation of cost effective opportunities to save energy. As the preamble does not provide any information on how a facility would determine if another certification program is "equivalent" to the DOE or AEE programs identified, the EPA should allow facilities to utilize energy assessments performed prior to the fmalization of this regulation to be utilized to meet the energy assessment requirement. Since this is a beyond-the-floor standard there should be no issue with considering previously completed energy assessments, even if they were not completed by what EPA defines as a "qualified personnel." It is recommended that EPA evaluate additional energy assessment programs and opportunities for effective energy management. (Energy assessment for existing units, page 32026)

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 8

Comment: Implementation of Cost-Effective Measures Should Be Mandatory

The requirement of an energy assessment should provide net benefits to regulated entities as a whole, as well as substantial environmental and health benefits to the entire country. But in order to ensure that maximum net benefits are reaped, EPA should go further and require implementation of all “cost-effective energy conservation measures.” Mandatory implementation is

justified regardless of whether EPA continues to use its flawed definition of “cost-effective,” or adopts the more economically rational definition discussed above.

The agency has requested comment on whether “requiring implementation of cost-effective measures [is] economically feasible.”[Footnote: 75 Fed. Reg. at 32,026.] First, it should be noted that the statutory touchstone for whether EPA should issue this requirement is whether it is

"achievable" under Section 112(d). For a range of definitions of "cost-effective," EPA can determine that requiring implementation of "cost-effective energy conservation measures" is, in fact, both achievable and economically feasible. [Footnote: Under CAA §112(h), EPA may exempt sources from requirements under Section 112(d) if the requirement is not feasible. However, given a proper definition of "cost-effective," this should not be an issue.]

As explained above, EPA has currently proposed a definition of "cost-effective" that only includes private costs and benefits. This makes the case for requiring implementation very simple. Given a suitable discount rate and time period for the analysis (discussed above), there will be zero net costs to regulated entities from implementing cost-effective measures. Since there will be zero net costs, the requirement should not pose any burden on regulated entities.

Of course, standard economic theory would suggest that regulated entities (as rational actors) would implement all energy conservation measures that have net private benefits on their own, without any requirement. But as discussed above, firms often fail to take advantage of all opportunities to decrease costs (or increase profits). If EPA issues this requirement, it can be assured that the regulated entities will not let this opportunity pass them by. EPA should take the step to ensure that regulated entities will not blindly comply with the bare minimum of the regulation by filing an energy assessment and then promptly forgetting about it.

Energy Audits Should Be Periodic

The final regulation should also require an energy assessment for new sources several years after they come into existence. The preamble justifies the current lack of this requirement because:

[W]e believe it would not be cost effective because most projected new boilers or process

heaters will be installed at existing major source facility which would have already conducted an energy assessment as required by this proposed rule. We also believe that any new greenfield major source facility having boilers or process heaters will be designed to operate with energy efficiency. [Footnote: 75 Fed. Reg. at 32,030.]

While this may or may not be accurate, the distinction between "new" sources and existing sources will diminish over time. After the passage of several years, conditions will change compared to when a new facility was originally designed. Markets and technologies evolve. If interest rates drop (and thus the related discount rates), more projects may become cost-effective. If expected fuel prices increase, the financial return from a given quantity of energy savings will be higher. Existing technologies may become cheaper. New technologies will increase the number of projects to consider. All of these changes mean that new sources may no longer be optimized after several years of operation.

The energy assessments of existing sources will become out of date on a similar timeframe. A new set of cost-effective energy conservation measures could be discovered every few years as a result. Thus, for both new and existing sources, audits should be periodic. This should be achievable at relatively low cost because much of the initial work would be done on the first assessment and would not need to be repeated.

Repeated energy assessments will also provide an easy mechanism for verification and enforcement of the required implementation of previously identified cost-effective conservation measures. If the regulated entity has not implemented their required energy conservation measures, this failure will turn up in subsequent energy assessments.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 10

Comment: Fuel Switching May Be an Appropriate Technology, and More Analysis Is Required

EPA considered requiring fuel switching as a method of controlling HAP but decided against including such a requirement in the proposed rule. [Footnote: While, within the current statutory scheme, this type of analysis is necessary, one major advantage of market-based schemes is that EPA would no longer need to do this. Instead, each source would be able to analyze their options for fuel switching. One of the major successes of the Title IV sulfur dioxide marketable pollution permit program was the increased use of low-sulfur coal. This unforeseen development was one of the chief reasons that compliance costs for this program were significantly lower than initially projected. See RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 136-37 (2008).]EPA identified three concerns that cut against the imposition of fuel switching requirements: failure to achieve lower HAP emissions, lack of availability of certain sources of fuel, and difficulty in achieving fuel switching given current boilers and process heaters.[Footnote: 75 Fed. Reg. at 32,019.] There are flaws in all three rationales.

First, the agency determined that virtually all types of switching would increase some HAP, even if it would decrease others. [Footnote: Id.] This rationale is incomplete because it fails to recognize that not all HAPs are created equal. This rationale suggests that a complete elimination of an extremely dangerous HAP would not be permissible if it caused even a slight increase in a less dangerous HAP. While this goes against common sense, other parts of Section 112 take this into account. Section 112(g) stipulates that a change in operation is not deemed a "modification" if "such increase in the quantity of actual emissions of any hazardous air pollutant from such source will be offset by an equal or greater decrease in the quantity of emissions of another hazardous air pollutant (or pollutants) from such source which is deemed more hazardous. . . ." [Footnote: CAA § 112(g)(1)(A).] EPA should try to take a similar approach in determining whether fuel switching would be beneficial overall.

Second, EPA argues that biomass and natural gas supply may be limited in some areas. In particular, the agency notes that natural gas supplies are constrained in some places and that, in some cities in the winter, natural gas is prioritized for residential usage. These are the sorts of analyses that should be done by regulated entities on a case-by-case basis. Every fuel source has

its own risks (both in terms of price and availability), and it is not obvious that the theoretical possibility of supply shortages in some parts of the country should prevent an otherwise sound policy from going forward.

Finally, EPA argues that it would be costly and technically difficult for many sources to switch fuels. In fact, it would not be "technically difficult" to purchase a natural gas boiler to replace boilers which combust other fuels. The agency implicitly acknowledges this because it analyzed requiring all sources to switch to natural gas. This analysis determined that such a requirement would be just as effective as the proposed rule but more costly:

The annualized cost of fuel switching was estimated to be $13.5 billion compared with $3.5 billion under the floor approach. . . .The cost for fuel switching is over double the cost of the floor approach while the emission reductions associated with fuel switching are approximately the same.[Footnote: 75 Fed. Reg. at 32,026.]

This is a mischaracterization of the emissions benefits from fuel switching. Appendix A-7 of the memorandum "Development (2010) of Fuel Switching Costs and Emissions Reductions for Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants" compares the emissions reductions from fuel switching to the emission reductions from the proposed rule. Table 3 shows the emissions reductions from a

hypothetical requirement for all boilers covered by the rule to switch to natural gas, along with the emission reductions from the proposed rule.[Footnote: Development of Fuel Switching Costs and Emissions Reductions for Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants at 24-25 (2010). The "Total" emissions reductions for PM from the proposed option shown at the bottom of the table does not equal the sum of each category. As a result, the sum of each category in Appendix A-7 is used in Table 3 instead of the given totals.] [See submittal for Table 3: Comparison of Emission Reductions from Fuel Switching and Proposed Rule provided by commenter.]

Although the EPA characterizes this as "approximately the same," there are substantial additional emissions reductions for seven of the ten pollutants examined. Reductions are 24% higher for particulate matter and 7% for sulfur dioxide. Reductions in total hydrocarbons, volatile organic compounds, and hydrogen fluoride are all well over 100% higher. There is little or no difference for two pollutants (mercury and HCl). Only reductions in dioxins and furans may be significantly lower.

While these incremental reductions may not be cost-justified, EPA has not yet shown this to be the case. The benefits of emission reductions from fuel switching have not been quantified in either the Regulatory Impact Analysis or the document which develops the costs. EPA has not properly considered the option of fuel switching until these additional benefits have been quantified.

Even if requiring all sources to switch to natural gas is not justified by the incremental costs, such a requirement may still be cost-benefit justified for particular types of boilers. EPA should compare the incremental costs and benefits of fuel switching for each class of boilers.

In conclusion, EPA should improve its explanation for not requiring any fuel switching. In particular, EPA has failed to properly describe and quantify the benefits of this option.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 19

Comment: EPA is authorized to set GACT standards for POM and Hg

Section 112(c)(6) of the CAA identifies seven specific HAPs and requires EPA to "list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4)." In 1998, EPA published a notice identifying the source categories

that would need to be regulated to satisfy § 112(c)(6). 63 Fed. Reg. 17838 (Apr. 10, 1998). EPA did not distinguish between area sources and major sources in the notice. With regard to

area sources, the Agency explained that it "will determine whether specific regulation of the area source component of a source category is appropriate, or necessary to meet the 90 percent goal, based on more source category-specific data collected as part of the regulatory process." Id. at 17842.

In the Industrial Boiler GACT proposal, EPA explains that, "The CAA section 112(c)(6) list of source categories currently includes industrial coal combustion, industrial oil combustion, industrial wood combustion, commercial coal combustion, commercial oil combustion, and commercial wood combustion." 75 Fed. Reg. 31898. Based on further analysis performed in conjunction with the proposal, however, EPA concludes that it only "must regulate POM from coal-fired, biomass-fired, and oil-fired area source boilers" and that it "only need[s] coal-fired area source boilers to meet the 90 percent requirement set forth in section 112(c)(6) for mercury." Id. at 31904. EPA believes that it must develop MACT standards for these pollutants and subcategories because § 112(c)(6) requires standards "under section 112(d)(2) or 112(d)(4)." Id. at 31917.

EPA's proposal to impose MACT standards on Hg emissions from coal-fired area source boilers and POM emissions from coal-fired, biomass-fired, and oil-fired area source boilers is legally unfounded, because EPA has discretion to impose GACT standards for these pollutants and subcategories. The Agency's failure to acknowledge this discretion renders its legal justification per se arbitrary and capricious and not in accord with the law. Pri!! v. NLRB, 755 F.2d 941, 948 (D.C. Cir. 1985) ("[A]n agency regulation must be declared invalid, even though the agency might be able to adopt the regulation in the exercise of its discretion, if it "was not based on the [agency's] own judgment but rather on the unjustified assumption that it was Congress'

judgment that such [a regulation is] desirable." FCC v. RCA Communications, Inc., 346 U.S. 86, 96, 73 S.Ct. 998, 1005, 97 L.Ed. 1470 (1953).").

As noted above, § 112(c)(6) specifies that "standards under subsection (d)(2) or (d)(4)" must be established for the HAP emissions that EPA determines must be regulated to satisfy the aggregate control requirement. Section 112(d)(2) sets out the basic standard setting methodology for § 112 HAP emissions standards, requiring "the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section" – i.e., "MACT." Section 112(d)(3) generally requires "MACT" to be no less stringent than the emissions limitation achieved by the better performing sources in the given source category (for existing sources) or the best controlled similar source (for new sources). With regard to "threshold pollutants,"

§ 112(d)(4) authorizes EPA to forego that formulaic MACT approach and, instead, consider the "threshold level, with an ample margin of safety, when establishing standards" under § 112(d).

Section 112(d)(5) establishes a special rule for area source standards. It provides, "With respect to categories and subcategories of area sources listed pursuant to [§ 112(c)], the Administrator may, in lieu of the authorities provided in [§ 112(d)] ... elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of generally available control technologies or management practices by such sources." In other words, EPA may establish "GACT" standards for area sources rather than "MACT" standards under § 112(d). The statute does not define a method for establishing GACT standards. EPA construes this authority as providing more flexibility than the MACT standard setting process – perhaps most importantly, EPA has concluded that it "can consider costs and economic impacts in determining GACT."

When setting area source standards for § 112(c)(6) pollutants, EPA has interpreted the requirement to set "standards under subsection (d)(2) or (d)(4)" as requiring MACT (or an alternative health-based standard) to be set for the pollutants. EPA has asserted that the specific reference to §§ 112(d)(2) and (d)(4) prevents the Agency from using the GACT authority that is otherwise available under § 112(d)(5). See, e.g., 72 Fed. Reg. 53814, 53815- 53816 (Sept. 20, 2007). And, because cost cannot be considered in the first instance in determining MACT, this interpretation stands to cause certain the area source standards for § 112(c)(6) pollutants to be more stringent than they otherwise might be if GACT could be applied.

EPA's position that it cannot use GACT to regulate HAP emissions from area source categories that are subject to § 112(c)(6) suffers from two fundamental flaws. The first problem is that it ignores the language in § 112(d)(5) that defines the scope of the Agency's authority to use GACT. Section 112(d)(5) expressly states that EPA is authorized to use GACT "[w]ith respect to categories and subcategories of area sources listed pursuant to [§ 112(c)]." The CAA provides only two ways for EPA to list an area source category for purposes of regulating HAP emissions from the category under § 112. First, § 112(c)(3) – which is aptly entitled "Area Sources" – provides that EPA "shall list" area source categories "which the Administrator finds presents a threat of adverse effects to human health or the environment ... warranting regulation under this section." Second, as explained in detail above, § 112(c)(6) authorizes EPA to "list categories and subcategories of sources" – including area sources – as necessary to meet the specified aggregate control requirement for the seven listed HAPs. Since all area source categories – including those listed under § 112(c)(6) – are listed "pursuant to § 112(c)," EPA has authority under the express

terms of § 112(d)(5) to use GACT in regulating area source categories listed and regulated under to § 112(c)(6).

The second problem with EPA's position is that it ignores the language in § 112(d)(5) authorizing EPA to use the GACT method "in lieu of" the § 112(d)(2) MACT procedure. EPA itself has observed that the term "in lieu of" is commonly understood to mean "in place the of" and, thus, has correctly concluded that, "CAA section 112(d)(5) authorizes EPA to promulgate standards under CAA section 112(d)(5) that provide for the use of generally available control technologies or management practices (GACT), instead of issuing MACT standards pursuant to CAA section 112(d)(2) and (d)(3)." 73 Fed. Reg. at 1920-1921. In short, the statute plainly says that the requirement to set a standard under § 112(d)(2) can be satisfied by using the alternative GACT procedure specified in § 112(d)(5). As a result, setting GACT under § 112(d)(5) meets the §112(c)(6) requirement to regulate under § 112(d)(2).

Lastly, although EPA has not provided a full explanation of its reasoning in the Industrial Boiler GACT proposal or in any of the prior § 112(c)(6) area source standards, it seems apparent that the Agency is concerned that the express reference in § 112(c)(6) to standards under §§ 112(d)(2) and (d)(4) would not have meaning unless it were construed as an unavoidable obligation to set MACT (or a health based standard) for the § 112(c)(6) pollutants. In other words, the reference to §§ 112(d)(2) and (d)(4) might be "mere surplusage" if it were construed as simply reiterating the standard-setting obligation that otherwise already exists for listed area source categories under § 112.

However, there are other rational explanations for this language that avoid the problems with EPA's interpretation that are described above. In particular, the requirement to regulate under § 112(d)(2) or § 112(d)(4) could be interpreted as an obligation for EPA to establish pollutant specific standards for each of the seven HAPs listed in § 112(d)(6). Congress itself provided that EPA must regulate close to 200 individual HAPs. It is reasonable to assume that Congress recognized that, of practical necessity, EPA likely would resort to the use of pollutant

categories or surrogate indicators when setting § 112 standards. In this context, it would have been wholly appropriate for Congress to emphasize the need for pollutant-specific standards to assure that specific and appropriate standards were developed for seven of the most problematic HAPs. Support for this interpretation is found in § 129(a)(4), where Congress insisted that EPA "specify numerical emissions limitations" for a specific list of pollutants emitted by waste incinerators. This is a clear signal that Congress assigned a certain greater benefit to pollutant-specific emissions standards.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eric Trauner
Commenter Affiliation: none

Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 1

Comment: It is indeed a sound policy to limit compliance demonstration for natural gas boilers to implementation of work practices/ maintenance. There should be a distinction made on expectations for decidedly small boilers (such as 20 MMBTU per hour and less) vs larger, and thus avoid a one-size-fits-all philosophy. For instance, small natural gas boilers (as defined in the previous sentence) should face lesser tune-up standards that the current proposal. And also re: tune-up expectations, more clarification is needed on methods to be used when assessing exhaust gases for CO content, and more clarity is needed on expectations for such a periodic report.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Eric Trauner
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 3

Comment: We agree with those who comment that work-practice standards would be adequate for smaller liquid/ solid fuel boilers, both existing and new. With this in mind, the applicability for emission limits for this MACT should be set at 20 MMBTU per hour, for both new and existing sources and for all fuels. And to be clear, that level of applicability should be based not on nameplate rating but on fuel throughput x BTU per unit measure, with the final applicability set at 175,000 MMBTUs combusted per year (20 MMBTU per hour x 8760 hours per calendar year). Coal/ oil/ biomass (etc) units that are committed to burning <175,000 MMBTUs per year would implement work practice standards.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

1.4 Out of Scope: Boiler Major Source

Commenter Name: Kristine Krause
Commenter Affiliation: We Energies
Document Control Number: EPA-HQ-OAR-2003-0119-0274.1
Comment Excerpt Number: 3

Comment: Additional Time is Necessary to Evaluate the Impact of Proposed Rules on Small Coal-Fired Electric Utility Boilers

We Energies has several coal-fired electric utility boilers that will be directly affected under the proposed major source MACT rule. These boilers were constructed prior to EPA's New Source Performance Standards and it will likely be difficult to meet any proposed MACT emission standards without substantial capital investment, which may not be feasible given the age of the equipment. We will need to consider the impact of unit retirement, or repowering with a fuel that results in lower emissions of HAPs. This level of extensive review necessitates an extension of the current 60-day comment period.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 8

Comment: ACC supports the Agency's decision to propose a work practice standard for Gas 1-fired boilers and process heaters due to technological and economic feasibility. ACC strongly recommends that EPA also promulgate a similar work practice standard for petrochemical gas and chemical plant off-gas sources in the Gas 2 category since these gases have similar composition and their emission profiles are similar at the limits of detection. Gaseous fuels are an efficient energy source, are one of the cleanest-burning conventional fuels and have very low emissions.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 9

Comment: EPA proposes a beyond-the-floor standard requiring major source facilities to perform an energy assessment and that cost effective energy conservation measures be identified. ACC believes that these requirements are unnecessary and burdensome since comprehensive program are already in place such as Save Energy Now, Responsible Care, and various corporate energy programs. ACC also believes the proposed energy assessment scope is extremely broad and well beyond its authority.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 10

Comment: EPA has chosen not to establish a health-based emission standard for threshold pollutants in lieu of a MACT standard. Based on our preliminary review and bolstered by the work performed by EPA in support of the health threshold option included in the 2004 rule, ACC strongly recommends that the Agency consider the fact that the proposed standards for HCl are far more stringent than needed to assure protection of public health with an ample margin of safety.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 11

Comment: EPA's RIA estimates that the cost of the Boiler MACT proposal to the chemical industry of about 1.8 billion, which is less than half the ACC estimate of 3.8 billion. EPA also projects that about a quarter of the cost increase will be passed through to consumers.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial,

Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 13

Comment: The pollutant-by-pollutant method of standard setting, along with the other approaches being used by EPA, have led EPA to conclude in its RIA that no new coal or biomass boilers will be built, which is contrary to the need for energy diversity in our country.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 19

Comment: I'm Vice-President Government and Regulatory Affairs for the American Home Furnishings Alliance.

The AHFA is the world's largest and most influential trade organization serving the home furnishings industry.

Member companies operate several domestic wood furniture manufacturing facilities and comprise an extensive global supply chain that provides a wide variety of home furnishings to the U.S. consumer. Member companies provide approximately 360,000 manufacturing jobs throughout the U.S. and represent a $35 billion segment of the nation's economy.

The AHFA is deeply troubled by the potential effects of the domestic furniture manufacturing industry and the proposed emission standards for major source industrial, commercial, and institutional boilers and process heaters –- the Boiler Rule -– and the identification of non-hazardous materials that are solid waste – the Waste Rule.

As proposed, these two rules threaten to eliminate the longstanding environmentally beneficial practice whereby furniture companies generate heat and process steam at their plants by combusting wood fuel generated from the furniture manufacturing process.

The proposed rules are of great concern to those of us who represent furniture manufacturers and the employees of those companies. Unless altered, the rules could actually have the perverse environmental affect of forcing the transition of furniture manufacturing facilities from the use of wood as a fuel to the combustion of fossil fuels while simultaneously forcing the disposal in the

landfills of a clean, high BTU renewable fuel in the form of wood generated from the furniture manufacturing process.

At one facility located in North Carolina we currently estimate that in order to do fuel switching away from the combustion of wood fuel, we estimate an annual cost of $200,000 to dispose of this wood biomass. We also estimate that for that one facility an additional 12,000 tons of wood biomass fuel would be diverted to the landfill.

We also estimate that in order to do fuel switching and move away from wood biomass and switch to natural gas at that one facility with a small Fire 2 boiler would cost $1.1 million to fuel switch and continue its operation today.

One of our major concerns with the proposal is the affect of the rules on wood-fired boilers commonly used in the furniture industry.

Under current practices boilers in the furniture industry are typically small and combust a kiln-dried wood fuel which is generated during the furniture manufacturing process.

The wood fuel is very dry, burns cleanly, has a neutral CO_2 emissions scoring and has a high BTU value. However, as we understand it, the Boiler Rule EPA has proposed would combine these smaller dry-wood fuel boilers used in the furniture industry into a broader biomass subcategory that includes boilers fired by wet fuel used in other industry sectors thereby creating a single subcategory of emission sources for evaluation.

By establishing a single large group of boilers that use both dry wood fuel and wet wood fuel, EPA effectively ignores the benefits and unique characteristics of dry wood boilers by imposing a single set of emissions standards on the entire category.

Large boilers burning wet biomass fuels have historically required costly controls as a result of their inherently higher emissions. The cost for small dry fuel boilers to meet standards that have historically applied to wet biomass boilers is prohibitive.

Currently, for that same boiler in North Carolina we estimate a cost of about $1.5 million to retrofit that boiler with a scrubber add-on control end of pipe to continue operation of that boiler in North Carolina. And the incremental air quality benefit that would come from lumping dry fuel boilers into such a category is neglible. In fact, rather than make costly investments in new controls -- control facilities, a more likely outcome is that furniture manufacturers will retire their wood-fire boilers, replace them with natural gas or fuel oil combustion boilers and simply dispose of the dry wood fuel generated by the furniture manufacturing processes in landfills.

As greenhouse gas neutral fuels would be replaced by a fuel that emits substantial amounts of greenhouse gases, we estimate that at this same typical facility in North Carolina an increase in CO_2 to switch to natural gas of 10,500 tons annually.

This predictable outcome would not be consistent with the intent of the rule. To prevent this likely outcome from occurring, we request that EPA revisit the proposal and establish a distinct low moisture biomass subcategory for dry wood fuel.

Having this subcategory which considers the unique characteristics of these boilers and the heat content of dry wood fuel would enable a far more desirable economic environmental outcome.

We're also concerned with the exclusion of the health-based compliance alternative of the HCPA from the proposed rule. Section 112(d)(4) of the Clean Air Act establishes a mechanism for EPA

to exclude facilities from certain pollution control regulations and circumstances when these facilities can demonstrate that emissions do not pose a health risk.

Using the discretionary authority under Section 112(d)(4), EPA may allow a facility to demonstrate the potential proposed risk of emissions for certain pollutants such as manganese and hydrogen chloride from the facility. If a facility can show that its emissions are below the established thresholds for levels posing a risk of human health, EPA can use these data to exclude from requirement sources from which emissions do not pose a risk.

Using HBCA at the outset would allow facilities to comply based on health-based data rather than taking the interim step of installing emission control technology.

We believe the use of the HBCA as a logical tool and that when a facility can meet a more stringent health-based standard without the necessity of expensive emission control equipment, the HBC should be allowed.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 21

Comment: PANALIST:

You asked us to consider a -– I think I've got this small dry fuel boiler subcategory to distinguish it from the larger biomass category.

In your opinion do we have the data currently to make such a distinction, or would that be something you might be submitting additional data on?

COMMENTER: No, we will submit additional data, but we do believe, Mr. Wayland, that you do have within your AP-42 factor a very distinct emission factor for dry fuel that the AHFA at the time the AFMA participated with EPA in developing. So, that data set should be there.

And like I said, there is a very distinct already subcategory for dry wood fuel.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 22

Comment: The wood that we typically combust in our boilers is clean, dry kiln wood fuel with a moisture content of less than 8 percent with an 8,500 BTU fuel rating.

Now, in the course of the manufacturing process there may be a very small amount of wood in finished parts that may find themselves into a silo; but it is less than one percent of what we combust in our boilers.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 38

Comment: The total benefits far outweigh the costs of cleaning up. EPA estimates that the cleaner air from cutting emissions from major sources will save nearly 18 billion to over 43 billion each year beginning in 2013. Total capital costs for installing equipment on all of these boilers is estimated to range from 10.5 billion to 12 billion with total amounts for operations, maintenance, and other requirements of 3.9 billion.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 48

Comment: I'm a member of the United Steel Workers Local 925. I'm a PPRC Regional Special Projects Director, and I work at AbitibiBowater's pulp and paper mill in Catawba, South Carolina.

AbitibiBowater produces a wide range of newsprint, commercial printing papers, market pulp, and wood products. It is the eighth largest publicly traded pulp and paper manufacturer in the world. AbitibiBowater owns or operates 21 pulp and paper facilities and 24 wood products facilities located in the United States, Canada, and South Korea.

The Catawba mill is one of the most efficient and environmentally friendly mills in the world. We produce coated paper and market pulp. In addition, the mill provides a livable wage for 850 employees.

The continued cumulative impact of EPA regulations is enormous and is putting our industry and many others at a cost disadvantage compared to our worldwide competitors.

The Boiler MACT as issued for my mill alone will require capital expenditures of at least $20 to $40 million and an annual operating cost will range from 4 million to in excess of $7 million.

The Boiler MACT rules needs to be fixed. The rule, as proposed, will actually discourage industry from using biomass over more traditional fossil fuels or natural gas.

The database used to develop the rule contained some errors. If EPA used its discretion to set reasonable limits from good data, EPA would continue to protect public health without driving industry out of business with unrealistic control requirements.

It is critical that the EPA create more flexibility in the rule. We need this flexibility in order to choose more efficient alternatives.

Biomass boilers should be given special consideration. Biomass boilers are carbon neutral and beneficial to the environment. My mill has two biomass boilers. EPA should encourage the continued operation of biomass boilers. By setting unreasonable limits on these biomass boilers, EPA will drive industry toward fossil fuel when EPA should be favoring biomass use.

The top performer boilers were selected by individual parameters rather than considering the total performance of the boiler.

During the worst economic crisis since the Great Depression, this rule will impose an unsustainable regulatory burden.

This rule is more expensive than it needs to be and will ultimately result in more mill closures and job losses.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 54

Comment: Let me start with the major source boiler rule.

We want to thank and congratulate EPA for doing a good job on this proposal. This rule is going to take an important step to cleaning up the toxic emissions from refineries and chemical plants that is making our air unsafe and unpleasant to breathe. And this is a long time in coming. These rules are 10 years overdue. No previous administration, no previous administrator would take this step. This one did, and we appreciate it very much.

Especially important to us is EPA's decision to eliminate the outrageous malfunction exemption that has caused so much distress in so many communities around the community.

Let me go into some detail on this. At refineries and chemical plants it is well established from state emissions data that there have been decades of routine violations of emission standards during so-called malfunction events.

When these events happen, the neighboring communities are blanketed in toxic emissions. People are made sick immediately. They lose work days. They have to visit doctors and seek medical care that many can't afford. Their children miss school. And because the emissions are so toxic it also increases their chances of catastrophic health effects like cancer and birth defects.

Now, this exemption has been ruled unlawful by a Federal Court of Appeals. We hope that EPA will be taking it out of other rules but taking it out of this rule which governs thousands of major sources of hazardous air pollutants, including many of the worst abusers of the exemption, will go a long way by making them run their sources cleanly or be held accountable; and we think this is very important.

Now, we know that industry lobbies are lining up against this rule. They want exemptions. They want delay, and they want the rules weakened. So let me just focus on something that EPA itself concluded. The major source boiler rule will save 4,800 lives every year -– 4,800 lives that would be lost prematurely if this rule were weakened or as industry seeks, there were a health-based exemption thrown in. And that's just the tip of the iceberg because when EPA counted the number of lives that would be saved, it only looked at the emission reductions of fine particulate matter.

It didn't look at the 7 tons of mercury that would be reduced or the literally thousands of tons of lead and arsenic and chromium that we reduced, or the dioxins, or the formaldehyde, or the benzene. Yet all of these things have very serious health effects. These metals can cause cancer. So can benzene and formaldehyde and dioxins. Mercury can cause birth defects and developmental damage in children. So, if the real health effects were taken into account, we'd be looking at a lot more than 5,000 lives saved. We don't know how many it is because EPA doesn't quantify or monetize it.

But let me get back to the monetization also because those 4,800 lives are worth billions more than the cost to industry will be. In fact, by EPA's calculations even with just 4,800 lives the ratio is about 5 to 1 or 10 to 1 in terms of benefits to costs. It would be far more overwhelming if the full benefits were calculated.

So, if we have one thing to say on this issue, it is to Administrator Jackson. Thank you for the good work, but this is nothing more than the law requires. We're glad you're doing it. Hold the line. Do not cave in to industry pressure and get this rule out at least as strong as it is, stronger in some cases, and without delay.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 66

Comment: The work practice approach proposed by EPA for Gas 1 sources is appropriate and CIBO strongly supports its use; however, it should be expanded to encompass most, if not all, of the Gas 2 sources and distillate fuel oils.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 67

Comment: EPA has the Clean Air Act authority through the 112(d)(4) to formulate MACT rules using a health threshold approach that would provide flexibility for sources while also ensuring the protection of public health. There is precedent for using that approach, and CIBO urges EPA to include that approach as a means to provide acid gas control in a cost-effective manner.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 88

Comment: I am the National Environmental Justice and Community Partnership Director for the Sierra Club here in Washington, D.C. And I appreciate this opportunity to comment on EPA-HQ-OAR-2002-0058, the major source boiler rule.

The Sierra Club's Environmental Justice and Community Partnership Program, EJCP, has provided support to more than dozens of low income and communities of color in their environmental justice struggles. We work to –- we work with low-income and communities of color to overcome environmental assaults on their lives and communities. The Sierra Club's work is national in scope. We were founded in 1892, and we have about a million members, yet it has a grassroots presence everywhere in the county. It is volunteer based and operated and includes professionals willing to devote their volunteer time to build local communities as well.

We have successfully built such bridges in our EJCP partnerships program in El Paso, Detroit, Flagstaff, Memphis, Minneapolis, New Orleans, Washington, D.C., and the Appalachia region and in Puerto Rico, bringing together Sierra Club volunteers, staff, affected community members to strengthen the fight against environmental injustices.

We want to thank EPA Administrator regarding the Major Source Boilers Rule. We want to thank EPA Administrator Lisa Jackson for taking this step to control the toxic air pollution from chemical plants, refineries, paper mills and other industrial sources that are making our air unsafe to breathe. EPA's new rule will finally make the largest of these facilities control the emissions from their boilers and process heaters. It is really about time. These standards are 10 years overdue. Across the country families and communities need protection these rules will provide.

In addition, once again we appreciate Administrator Jackson's emphasizing environmental justice as one of the main priorities during her tenure. Many environmental justice communities, such as the 48217 Detroit community in which the Sierra Club EJCP program works will greatly benefit from this new rule.

Especially important to us is EPA's decision to eliminate the outrageous malfunction exemption. State's emissions data have made it clear that chemical plants, refineries, and other polluters violate their emissions standards routinely during so-called malfunction events. During these events they blanket neighboring communities in toxic pollution, making people sick and forcing them to miss work, miss school, and seek medical help. These events also increase the likelihood that the people in these communities will suffer from cancer, birth defects, and other catastrophic adverse health effects. The malfunction loophole has already been held unlawful by a Federal Appeals Court. Closing it will bring an end to the abuse by ensuring that polluters can be held accountable when they violate emission standards.

One great example of that is in Corpus Christi, Texas, where it has been documented that some of the major releases –- you can actually document by the major releases the next day the number of children in emergency rooms. And you can also document the time lost by their parents from work by the number of children who are in emergency rooms and the fugitive releases and other releases in the communities in the evenings.

We know that powerful industry lobbies are lining up to oppose these rules. They want the loopholes and exemptions. We want the rules -– they want the rules weakened and delayed.

These rules will prevent about 4,800 unnecessary deaths each -– every year and will save billions of dollars in costs -– medical costs, time costs, costs to communities in terms of lost time and lost -– and lost ability to externalities to be able to work, live, and play in a safe environment.

The benefits overwhelm the costs by a ratio of between 5 and 10 to 1. And that's only the tip of the iceberg. It only reflects the health benefits by reducing major source boilers' emissions of fine particulate matter. It doesn't count the benefits of eliminating more than seven tons of mercury emissions every year that cause birth defects in babies and developmental damage in young children, or thousands of tons of lead, cadmium, and other metals that are known as suspected carcinogens, or the dioxins and other organic pollutants that cause cancer.

Thus our message to Administrator Lisa Jackson is don't cave in to industry pressure. Make this rule stronger, not weaker, and issue it without delay.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 2

Comment: We applaud the significant cuts to mercury and other hazardous air pollutants that will result if you implement the Major Source Boilers Rule, and we strongly encourage you to do so without succumbing to industry pressure for weakened or delayed standards. The health benefits outweigh the costs to industry by a tremendous margin, and those benefits are derived only from anticipated reductions in fine particulate matter. Reductions of mercury, lead, chromium, and other metals, and dioxins will have a significant impact on public health, and we ask Lisa Jackson and the EPA to act on these reductions without delay.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 22

Comment: At the Hueneme mill we recycle paper, manufacture new paper products and we burn primarily natural gas. And we're the first in the United States to install a functioning working NOx catalyst. However, efficiency efforts in recent years has prompted us to transport rejected process material and water treatment system residues, mostly biomass, for burning as fuel at a boiler at another site here in California, also likely to be affected by the Boiler MACT rule. It is likely that the rules might make it so expensive to use these alternative fuels that its use will cease and we will have to find landfill space to dispose of an otherwise fuel. We believe that the EPA has significant discretion within the MACT program to make prudent and appropriate regulatory judgments -- judgments that do not unnecessarily burden American industry. We ask that EPA use this discretion, and we have identified three broad areas for improvement in the MACT rule. First, EPA should set more reasonable limits that reflect the variability of real-world, best performing boilers. We believe the proposed Boiler MACT CO limit for boilers burning biomass in conjunction with coal will not be achievable as a practical matter. International Paper has seven boilers that burn biomass in coal amounts at the rate of 10 percent. They classify them as coal boilers under the proposal that would be subjected to unachievable CO limits. The CO limits for these combination boilers should be the same as the ones for the

biomass boilers. Second, EPA should base the Boiler MACT limits on more realistic data. The data used in setting emission limits is heavily biased given the way it was collected and sorted. EPA required the best performing boilers to test and then took the best of that small data set to the point where they represent the best-of-the best performers; that top 1 percent, not the 12 percent as instructed in the law. EPA should utilize its authority in Section 112(d)(4) of the Clean Air Act to set health-based emission limits to protect the environment and the public health. Health-based limits would avoid unnecessary over-regulation of emissions that are already within acceptable limits. We can ill-afford not to include such a health-based emission limitation given the economic implications of the rule. In addition to Boiler MACT, EPA has proposed three other related rules that will affect the forest products industry and International Paper. Boiler generally accepted control technology, GACT; non-hazardous secondary material definitions; and the commercial and industrial solid waste incinerator rule.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 33

Comment: In regards to the Boiler MACT, SierraPine supports the work practice approach for existing natural gas-fired boilers. However, SierraPine does not agree with the procedure used for setting the Boiler MACT floor by selecting the limits on a pollutant-by-pollutant basis rather than looking at the overall best performing units. Over the range of pollutants, the EPA has set limits that are inconsistent with, essentially, the Clean Air Act. That is, the emission limits should be achievable in practice for the best performing sources. In some subcategories, the emission limits as proposed will require even some of the best performers to install additional add-on equipment. In any case, as should be the case with Boiler MACT facilities should have the option to comply with an emission limit for the HAP of concern rather than the surrogate; e.g., as an example, POM in lieu of CO.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 40

Comment: Your definition of a major source is not acceptable. Environmental justice communities want the same air quality standard for all facility boiler air pollution sources.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 61

Comment: We definitely appreciate the EPA's efforts to control polluting boilers and process heaters at large facilities. In particular, we support the exclusion of exemptions for malfunctions, finally ending a loophole which allows emission sources to smother communities with pollution in blatant disregard of standards. We urge the EPA to reject calls to reopen this and other exemptions that undermine the health standards of this new regulation.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 4

Comment: In our area in Alabama where it's 16.4 percent unemployment, and in Mississippi, we're at 12.3 percent unemployment. We survived, Scotch Plywood did, and we have rehired and we're back in full production. We contributed to the safe -- we think -- environmental responses in a responsible manner. We have complied with the plywood MACT and now we're faced with the Boiler MACT . Our estimate of costs is going to be somewhere in excess of $2 million to comply as the Boiler MACT is presented today. Waynesboro, Mississippi will have to spend around a half a million dollars and increase our costs -- our guess, best guess -- is two and a half percent. That doesn't seem like much. That's a small number, two and a half percent, but our margins are small, and nonexistent the last year and a half, the other way . So we're forced to look at other decisions. The decisions for us is pretty simple. We'll make this investment, which will exceed $2 million at the two facilities in the current -- or our best estimate of the future economic environment, and we make partial investments and run economically at a reduced rate at both facilities or close our facilities . So as we look at that, B and C cause us to lay off personnel significantly impacting our local communities. Unemployment nationally is 9 and a half percent; we're in excess of 12 to 16 percent. We will get back to the housing starts,

economically, we will, but we'll -- or we're going to regulate ourselves out of being competitive. That's the question that we -- are we going to continue to have our production capacity to our neighbors to the south, South America? Most importantly, what Scotch Plywood would like to be consider is the public health option that was considered in the plywood MACT, also available for the Boiler MACT.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 16

Comment: I thank you for your time, assistance, and helping save American jobs, communities, and keeping green jobs in America by examining the raising limits on Boiler MACT.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 17

Comment: Coastal appreciates having the opportunity to speak today. Coastal is a small, privately owned forest products company that manufactures softwood, plywood, lumber, and pressured-treated products. We have 700 employees, eight plants, and 250,000 acres of timberlands in 11 states on the East Coast. Two-thirds of our employees are minorities, and we are the largest employer in two of the most economically disadvantaged counties in Alabama and Florida. Coastal directly supports over 200 truckers, 200 loggers, 1,000 landowners from whom we buy timber each year, and hundreds more suppliers. Coastal indirectly supports thousands more . The proposed Boiler MACT rule would hit the Coastal community very hard economically. Coastal's cost to comply might approach $40 million of capital costs, which would be a tough pill to swallow for a company that is in a super-competitive, low-margin industry, and whose annual sales is only $200 million. Additional annual operating and maintenance costs could approach $2 million a year. Fortunately, Coastal is one of the best performers in the industry and would probably figure out a way to stay in business. However, I can assure you that many companies in our industry, most of whom have lost millions of dollars over the past three or four years, would choose to simply stop the bleeding and shut down .

Coastal wishes to make six points regarding the proposed rule: One, not enough data. Coastal generally agrees with EPA's subcategorization of units, but the resulting large number of subcategories fractured the database into pieces that are too small to be used to confidently establish appropriate limits. Coastal believes that Congress's intent was that EPA be confident that the limits it sets are appropriate. EPA cannot be confident that a limit based on only one or two stack tests is appropriate . Second, the data is skewed. When EPA recognized that it lacked sufficient data, it required selected units to generate more data. Those units were generally better performing units so the proposed limits reflect performance of the best 12 percent of the best rather than performance of the best 12 percent of the entire population as Congress intended . Third, too much non-detect data. Non-detect data heavily influenced the proposed limits. For example, for D/F, for biomass stokers, all six test runs are non-detect, and four of six are non-detect for TEQ D/F. Coastal doubts that EPA is confident that the proposed limit is appreciated as intended by Congress. Low emissions that are on the same order of magnitude as the test detection limit should be deemed insignificant and have no limits . Fourth, the pollutant-by-pollutant approach is wrong. Coastal believes that Congress intended the best performing 12 percent units be determined based on all pollutants combined, not pollutant-by-pollutant as proposed. Coastal requests that pollutants be weighed based on -- weighted based on relative toxicity, that weighted emission totals be calculated for each unit, and the best performing 12 percent be determined based on those totals. Few, if any, boilers can comply today with the proposed rule principally because of the proposed pollutant-by-pollutant approach; certainly not half of the 12 percent or 6 percent. By definition, at least 6 percent would be able to comply today as Congress intended if limits were based on the total emissions of the best 12 percent units . Fifth, conversion to natural gas. The proposed rule would cause many biomass boilers to convert to natural gas because that would be the only option they could afford. If Coastal switched, its annual natural gas cost would be $10 million a year and 150,000 tons of wood fuel would pile up somewhere. If all U.S. softwood panel and lumber producers switched, the annual cost would be $1- to $2 billion, we would consume 1- to 2 percent of total U.S. natural gas withdraws, which would significantly disrupt the natural gas market, and 20 million tons of wood fuel would be piled up somewhere to rot, which definitely wouldn't be green . Number six, the final rule should include an option for health-based standards. The proposed rule would force many harmless rural facilities that pose absolutely no risk to human health or the environment to either install unnecessary and costly controls or shut down. Coastal encourages EPA to establish health-based emission limits to be applied on a facility-by-facility basis in order to avoid control where it can be demonstrated that emissions are safe.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 22

Comment: The forest products industry is a very significant business in Texas, particularly in the eastern quarter of the state, and in 44 counties of deep East Texas we have three -- the three remaining paper mills are located in deep East Texas. They employ 3,500 workers directly, and the industry is as a whole employs about 54,000 workers across the state, and I think we heard from one of those this morning from a box plant in the valley . The industry is distributed throughout the state. It is dependant upon the East Texas forest for its raw materials and is a rural industry and an industry that is not concentrated largely in industrial areas of the state. And so I wanted to point out, that as the rules stand, they could have significant impact on rural economies, because it's not -- not a ship-channel issue for the forest projects industry . The second point I wanted to make is just to reiterate the biomass issue. The boilers that are in use in the pulp and paper mills, in this state, have gone predominantly to biomass rather than natural gas or other fossil fuels. We are trying to push for carbon neutrality. We have a great deal of biomass available in Texas for use in our boilers and we are adapting that as much as we can . We would like the EPA and the other -- both state and federal governments that are responsible for energy policy to pull together and to see if -- if -- make sure that what we do in one area doesn't impair the incentives that are in place for biomass use. And we would just urge EPA to look at that issue and to make sure that all of these policies are running consistently with each other . And the third issue I would like to -- to also just reiterate that AF & PA will be helping to provide the data that you -- you seek with regard to the health -- health-based emission issue, and we pledge to work with you on that and see if we can help you focus on that issue with some good data, and we will be helping to provide that.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 25

Comment: The Pulp and Paperworkers Resource Council's motto is seek a balance, because we feel if regulations like the Boiler MACT rule is enforced on other countries, we could compete with the entire world and jobs would not be moved overseas and the environment will be a lot cleaner . Thank you for allowing me to speak and consider my concerns about keeping our green jobs within the U.S. and helping us rebuild the economy.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 26

Comment: [PANALIST]:You said provide more flexible approaches. I was just wanting an example of one or two that you might think of or might add as flexible rule.[COMMENTER]: Well, just like the cluster rule. The cluster rule was, what, ten years ago? Just something simple like that. It wasn't simple for us, but still it cleaned the air up. I don't see where -- in my mill alone, we can tell the air around us has improved just from the smell.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 40

Comment: I'm an employee of MeadWestvaco, an hourly employee of MeadWestvaco. We're a forest paper company in East Texas. I'd like to begin by thanking you for the opportunity to speak here on behalf of these hearings on the Boiler MACT . Our industry is like any other industry struggling to recover. Our forest products industry has been struggling to recover from the recession. Our unemployment rate is still lingering around 10 percent. The Clean Air Act rule was recently announced -- specifically, Boiler MACT -- could be unsustainable for much of the U.S. manufacturing processes, and also, the very high paying jobs that it provides, unless there can be some greater flexibility allowed in meeting these targets . Let me also say, the forest products industry, in general, in my 20-year tenure, definitely supports any -- and tries to address any serious health threats from the air emissions and supports regulations that sustain both the environment and nearly a million jobs that our men and women enjoy . Unfortunately, a proposed rule was proposed on June 4th, does not accomplish these objectives. The Boiler MACT, as published on June 4th, would strike a severe blow to our manufacturing economy is far more stricter than needed to protect the environment. EPA has the opportunity, and in my view, the responsibility, to meet -- to modify the requirements and still be faithful to its legal obligations under the Clean Air Act . The Boiler MACT would require installation of up to four different air pollution control devices, and those would serve -- conflict, in some cases, with some of our existing controls. The cost to individual plants, such as the one that I work at, would be -- could be as much as tens of millions of dollars in additional capital, which may not be sustainable, given the economic downturn and the fierce international competition. And let me just say that. The fierce international competition . No other country in the world is imposing requirements like these, which puts -- which makes a very unlevel playing field for us. It puts us at a huge competitive disadvantage. Across the forest products industry, these rules could cost anywhere from $6- to $7 billion over the next two to four years when the industry itself only made a fraction of that over the last two years . This would result in the severe hardships, and

something that I'm very passionate about, could cost tens of thousands of job losses in the forest products sector alone. And given the cost of other likely environmental programs, the compound effects of the -- the compound effects in job losses would be much larger in a sector that's lost 350,000 jobs since the downturn began in 2006. It's much greater than that when you go back to 2001 and 2002 . We've identified several of the broad areas for improvement in Boiler MACT. First of all, we encourage that the EPA has invited comment and gives Section 112, which allows facilities to avoid controls where risks of structural pollutants like gases and manganese are shown to be safe. We believe this approach should be adopted and a final rule for use on a facility-by-facility basis . That's a surefire way to target investment to only where problems exist, and it's absolutely imperative that we take a health-based approach, given the economic implications of this rule . Secondly, the limits that EPA has set are unnecessarily stringent because they do not reflect -- the variability occurs in real world best-performing boilers. These boilers go through warm-ups, shutdowns, load swings, fuel mix, and fuel-quality changes. When the EPA relies on the -- on the test data from a short period of time, it's missing the inherent variability that occurs in the real world even at -- even on some of the best operating boilers . Third, the data used in setting emission limits is heavier by the top-performing units given the way it was collected and sorted. This was borne out by the fact only a handful of the existing units, indeed all the limits, can you expect 12 percent of the thousands of boilers in this country to achieve limits -- to achieve those limits according to the law. EPA needs to look at other available data to paint a more realistic picture of boiler performance for each of the hazardous particulates in this subcategory . Finally, federal limits for biomass are set extremely low because the baseline and emissions are very low compared to other fuels. Emissions and hydrogen chloride and dioxin and mercury are present in very small amounts in wood and are inconsequential sources of the pollutants, yet the costs to achieve these very low levels become exponentially more expensive and can't be consistently achieved . The limits are unduly influenced by HAPs that could not detect that the HAP-suggested emission limits should be dropped or at least be replaced by realistic work practices. So we believe that first the EPA should use a reasonable method to set the max limits based on what real best performing units can actually achieve. EPA must factor into the MACT of variability and operations, fuel, designs, as I previously stated, and the performance across the main different types of boilers . Second, the EPA should revise its approach from biomass boilers to ensure that these boilers are not penalized until they start with a cleaner fuel. And third, the EPA should include a health-structural standard in the final Boiler MACT rule to target environmental investments where there is a real need based on rigorous demonstration of pollutants like hydrogen chloride, manganese, and not pose an adverse risk.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 49

Comment: EPA's proposed rules will create serious disincentives for the use of biomass and alternative fuels and thereby increased use of fossil fuels, which we believe is counterproductive and contrary to the country's energy interests. The rule will have undeniable economic consequences. The forest products industry has projected new equipment required under the proposed rules will cost more than $6 billion over a three-year compliance window plus billions more in subsequent years for operating maintenance expense. Those capital costs alone exceeds industry profit of recent years . At the Texarkana mill, in particular, we make coated bleached paperboard with process steam from biomass fired recovery furnaces that are not affected by these rules and two power boilers, which are affected by Boiler MACT. Biomass and natural possess and natural gas are our primary fuels, but we can also fire oil or alternative fuels that make sense from a cost, efficiency and environmental standpoint. If finalized without significant changes, the proposed Boiler MACT rule will pose significant costs on our mill and result in negative, unintended environmental and economic consequences.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 53

Comment: EPA should utilize its authority in section 112(d)(4) of the Clean Air Act to set health-based emission limits. Health-based limits would avoid unnecessary overregulation of emissions that are already well within acceptable levels. We can ill-afford not to include such a based health-based emissions limitation given the economic implications of this rule.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 57

Comment: The PPRC believes the rules proposed by the EPA on boilers -- on Boiler Maximum Achievable Control Technology will greatly affect our country, our companies, and our American jobs. The PPRC was founded on the principle of seeking a balance between protecting the environment and maintaining good jobs in all sectors of the forest products industry. The forest products industry has been through some really tough times recently and we have lost

many jobs. The PPRC logged over 255 curtailments with mill closures in 2009, on our Web site, pprc.info. On the May 2010 unemployment report just released, the rate of 9.7 percent unemployment is facing our nation. Our manufacturing facilities do not need this new financial burden placed on them by these new proposed EPA rule changes. There are 23 forest products boilers and 115 more boilers across the great State of Texas. With the proposed changes, the protected cost to change these boilers to meet the new proposed rules are estimated at $1.89 billion just for Texas alone . Boiler MACT will set emissions limits for hazardous air pollutants from gas, liquid, or solid-fuel fired boilers and process heaters located at universities, in small municipalities, food product processors, furniture makers, federal facilities and a wide range of manufacturers, not just the forest products industry. The EPA's proposed Boiler MACT is so stringent that it will result in significant and unnecessary job losses if finalized in its current form. It would impose extremely costly controls even where there is no significant environmental or health benefits, which is contrary to the direction Congress provided in the Clean Air Act . The paper and forest products industry currently employs nearly 900,000 workers. The forest products industry has lost some 350,000 additional -- or 350,000 additional jobs since the beginning of the downturn in 2006, 100,000 jobs lost last year alone. Approximately 75 mills have closed in the last five years. These mill closures were not due to Boiler MACT but the economy and foreign competitors. China is one of the major players and they are not held to the same rigorous environmental standards these American companies are. We need a level playing filed. The entire U.S. paper industry only made $1 billion in the last two years . This imposed -- this imposed cost will cut more American jobs. The PPRC believes that the forest products industry will be greatly affected. Most of the paper companies across our nation are in rural areas of the states where the backbone of our nation has an agricultural base. We do not need to see these forest products jobs go away. We need to keep America working because we are American workers trying to survive. With these new costs coming so close on the heels of the recent economic downturn, the would be unavoidable and severe financial distress and economic disruption for the workers, families, and communities for whom paper and wood products companies are the primary, or the only economic engine. My mill boasts a payroll of $70 million and more than $4 million is paid annually in property taxes, which mainly benefit the local school districts. There are sales taxes in excess of $909,000 and approximately $350 million spent in vendor supplier-wood relationships . Mill employees take seriously their role as good neighbors and actively volunteer, counsel and coach in a variety of different forums. The mill's employees have made United Way contributions totaling more than $3 million since the mid-1980s to help strengthen our communities, improve literacy and provide for basic health and human services . The forest and paper products industry were green even before there was a label for being green. We have had green jobs for over a century, but only until recent years has there been a "buzzword" for being environmentally responsible. The forest products industry will always be the best environmental stewards of our forest and land. We are sustainable, renewable, and the greenest. We do not want our jobs, livelihood, and communities destroyed by your legislated rules that bring about unintended consequences of jobs lost. Your unintended consequences of stringent rules will put more mills on our map. There are American workers' names that go with the numbers on our map. The hourly workers are almost always the first to go . The PPRC urges you to "Seek a Balance" between the environment and industry. I urge you to make a correct legislated decision to keep the forest products industry strong, healthy, and profitable.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 69

Comment: When the court vacated the earlier ICI Boiler MACT rule and state and local permit authorities were faced with developing case-by-case MACT permits, NACAA collected existing test data from over 40 state and local permitting agencies, including hundreds of data points that NACAA used to calculate MACT floors, which were substantially lower than those adopted by EPA in its earlier rule. The NACAA database was provided to EPA in June of 2009 . Many units combust mixtures of fuels. When switching fuels, emissions of one HAP may increase while those of another HAP may decrease without clear correlation. In its model permit guidance, NACAA considered only those results where a source was burning 100 percent of one category of fuel during the test. Under NACAA's recommended approach, sources would be separately tested for compliance with each applicable limit. NACAA also noted that during compliance testing, sources may be able to establish unit-specific correlations for operation of different fuels . EPA apparently did not use any of the testing in the NACAA database to establish the MACT floors. The EPA data includes numerous entries where a source was combusting different, which NACAA believes will be difficult to translate into enforceable MACT limitations. While the NACAA and EPA data sets often produce generally consistent results, EPA cannot exclude from the calculation of the top performing 12 percent the testing conducted for other compliance purposes as required by state and local permit officials . EPA's approach is to categorize sources according to fuels that they are "designed to combust," and allow sources to comply with what EPA apparently considers the "least stringent" standard for any of the fuels that it may combust. NACAA believes that this approach is likely to be unworkable for many sources and may not be legal . Several options have been proposed for which EPA offered little or no justification and analysis. Some are also of doubtful legality; in particular, the clearly erroneous suggestion that EPA could establish risk-based exemptions at levels less stringent than the MACT floor. NACAA recommends that EPA avoid options that carry a substantial risk of a lawsuit that delays implementation of these important public health protections . The proposal not to set a MACT floor or MACT emission limit for large gas-fired boilers is another example. EPA's principal argument for it is that imposing MACT limits on gas-fired boilers doubles the anticipated cost of the rule. However, there is no cost test for the MACT floor. Also, EPA has not included information in its proposal for the public to evaluate about whether excluding natural gas units from numeric MACT limits is in the public interest. Further, EPA's cost discussion fails to analyze or calculate the full benefits of these rules to the public . With respect to variability, without any justification EPA applies a statistical test that requires 99 percent confidence that a standard has been exceeded before a violation is established. EPA also appears to calculate this factor on the basis of variability of individual test runs. This is in contrast with a 90-percent confidence factor applied to the average of three runs to calculate variability, as used by EPA in

other rules, and as required by the applicable standard. The general result of requiring a higher confidence level is that the standard is higher than it otherwise would have been.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 70

Comment: My remarks will focus on six issues concerning the rule in question. The first is the proposed the emission limits. Norbord supports the reasonable emission standards that would protect public health and are environmentally responsible. While Norbord shares the same EPA with commitment to clean air, several of the proposed limits approach unachievable levels of -- to the point of being absurd . For instance, some of the proposed emission limits approach levels which can barely be detected, with industry-standard testing devices. Fossil versus biofuels. The forest industry has been, and continues to be, the largest consumer of biofuels. The rule as proposed ironically would impede environmental progress that many companies are achieving through greater and more efficient use of carbon-neutral biomass and would force the use of fossil fuels, which is face far less stringent requirements under the proposed rule . Norbord suggests that the EPA requires this approach to recognize the carbon-neutral contribution of the biomass boilers in existence and ensure that these boilers are not penalized because they used an inherently cleaner fuel from the start. Boiler diversity. The December final rule fails to recognize the extent of the boiler diversity in the industry. The rule as written will entail extremely expensive fixes; in some cases, may not be achievable. If the EPA were to provide a more flexible approach in Boiler MACT, its goals could be achieved without unnecessary regulatory costs and potential for loss of jobs. Realistic standards. Norbord feels that a reasonable approach would be to set emission standards based on the best-performing units -- that the best-performing can currently achieve. For example, the rule fails to target areas where improvements can be made, and instead requires installation, in some cases, of up to four different air and pollution control devices, which will conflict with other existing pollution control requirements . Willingness to work together. Norbord proposes greater effort be made to involve industry experts in establishing technically sound and cost-effective options and emission limits. Facilities should have the option to avoid installing controls where risk analysis determines emissions are within safe limits. EPA's goals can be achieved without excessive regulatory compliance costs which could cripple industries to compete internationally. We can do the reasonable thing now rather than resort to court challenges later . And finally, costs. The rule will substantially increase compliance costs. The proposed changes come at a time when mill closures/curtailments have reduced OSB board production by nearly 50 percent. Regulations that do little to improve the environment eventually threaten jobs and can lead to permanent rather than temporary closures . And I close on a personal note. Norbord has two OSB mills in Texas; one located in Nacogdoches, the other at Jefferson. Within the past three years, Norbord has invested over $10

million at each location on PCWP MACT improvements. Unfortunately, the Jefferson mill was closed indefinitely January 2009 due to economic conditions (our products are used directly in the housing industry). One hundred employees lost their jobs. The decision to re-opening this mill will be measured against several factors, not the least of which would be additional capital investment to meet more stringent environment standards.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 77

Comment: At NewPage, we have 27 boilers impacted by the proposed Boiler MACT rule; 12 solid fuel, three liquid fuel, and 12 natural gas. Even though many of our solid fuel boilers currently have state-of-the-art controls, they still will not consistently meet the proposed Boiler MACT standards . We are in the process of reviewing and conducting detail site-specific engineering review to determine the Boiler MACT compliance costs for NewPage. However, preliminary cost estimates for NewPage indicate capital expenditure of greater than $100 million, and potentially several million dollars in additional annual operating costs for these facilities. These costs are significant and will put NewPage at a distinct disadvantage as we compete in a global marketplace with other paper producers located in jurisdictions that do not have to comply with these requirements. EPA needs to be including flexibility options that allow for alternate compliance approaches. To address areas of concern while minimizing regulatory compliance costs, we recommend following flexibility improvements . EPA needs to include the use of Clean Air Act Section 112(d)(4) to establish health-based emission limitations on a facility-by-facility basis using a reasonable demonstration method without unnecessarily complicated procedures. This will target environmental investments where there is a real need . EPA needs to include a total select metals unit as an alternative compliance approach for the proposed PM standard. EPA needs to provide alternative organic HAP limits for units that coke-fire coal and biomass. These units are being penalized under the proposed subcategories. Our units that fire more than 10 percent coal and biomass are placed in a coal subcategory, but will have trouble meeting the organic HAP limits. As a compliance strategy, units may have to switch away from biomass and burn more coal. This unintended consequence of replacing biomass and fossil fuel is contrary to national policy and encourages the use of more renewable biomass fuel . EPA needs to include further subcategorization to address small or limited-use units. EPA needs to maintain the work practice standard for natural gas. For determining the MACT floor, EPA needs to use emission information that is representative of the subcategory, and takes into account unit operating variability and how best-performing a units perform across the HAPs being regulated. EPA has used a "best of the best" data set and has "cherry picked" the best data to establish the proposed limits on a pollutant-by-pollutant basis. This approach has resulted in very stringent limits that are not reflective of the actual performance of one or more units.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 80

Comment: I'm the mill manager at the Luke mill. The Luke mill is located in Luke, Maryland as part of NewPage Corporation. At the Luke mill, we manufacture about 530,000 tons per year of coated-free sheet papers for use in the commercial and publication printing as well as one-sided coated papers for label applications. Our products enhance society's well-being while providing good jobs for American men and women in a very rural area . The Luke mill has been an active and significant presence in the surrounding region since 1888. The mill encompasses about 228 acres and is located in three counties in two states; Alleganey and Garrett counties in Maryland and Mineral County in West Virginia. We employ about 970 individuals with high-quality green jobs with annual employee wages and benefits totaling more than $82 million. These are very good paying jobs and are important for the survival of surrounding small and rural communities. Most of our employees are also our neighbors living within 25 miles of the mill, yet some of them live right across the street from us. At the Luke mill, we take our corporate responsibility to protect and sustain the environment and our natural resources very seriously. Clean air and clean water are very important for the health and availability of the basic raw materials that we use to manufacture paper. Throughout the history of the Luke mill, we've invested in state-of-the-art equipment to include in the quality of our products and the efficiency of our operations. We have made significant investments in high-grade materials and technologies was to ensure the Luke mill is safe, cost competitive, and environmentally sound . On June 4th, the EPA proposed that Boiler Maximum Achievable Control Technology rule and three other related rules. My comments today will address the proposed Boiler MACT rule . At the Luke mill, we have three boilers impacted by the proposed Boiler MACT rule, two solid fuel boilers, and one natural gas boiler. We are concerned that the proposed Boiler MACT rule is far more restrictive than needed to protect the environment. We believe EPA has significant discretion with the MACT program to use various approaches to allow flexibility for the regulated community while still protecting public health and the environment and avoiding the unnecessary burdens and associated costs the proposed rule could pose. At Luke, we invested over $32 million to install a baghouse for our boilers to ensure compliance with the previous Boiler MACT rule. We find it very disturbing that our new state-of-the-art baghouse does not comply with the proposed particulate matter emission limit. We are still in the process of conducting an engineering review to determine what enhancements are needed to improve the performance of the baghouse so it can meet the proposed particulate matter limits . We are also evaluating costs for compliance with the other Boiler MACT proposed limits. In addition to the $32 million we already spent, our preliminary information indicates that Luke will need to invest another $14 and a half million to ensure compliance with proposed Boiler MACT limits. These costs are very significant for my mill and will put us at a disadvantage not have to comply with these requirements. I am concerned that

these additional costs will impact our ability to compete successfully in a global marketplace . If EPA provides more flexible approaches for compliance alternatives in the rule, public health and the environment will still be protected without unnecessary costs. I would like to suggest for EPA's consideration the following options to address areas of concern while minimizing regulatory compliance costs . EPA should utilize Clean Air Act Section 112(d)(4) to establish health-based emission limitations to protect the environment and public health. This will avoid the use of unnecessary controls when emissions of pollutants are low enough to be safe. The use of health-based emission limitations will be no more stringent or less stringent than needed and will also target environmental investments where there is a real need . EPA should include total select metals limit as an alternative compliance approached for the proposed particulate matter standard. EPA should include further subcategorization to address small or limited use units. The EPA should maintain the work practice standard for natural gas units.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 82

Comment: Request more information to fill data gaps and then come back to the reasonable Boiler MACT proposal. Please also ask the courts for as much time is needed to finalize a rule that is reasonable, meets the intended objectives and is well thought through.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 87

Comment: Especially important to us is EPA's decision to eliminate the outrageous malfunction exemption. In other words, the exemptions of our chemical plants, refineries, and other major polluters to violate the emission standards and blanket our communities in toxic pollution over and over again without any accountability . Closing that loophole means that these facilities will have to run their boilers and process heaters responsibly. We know that powerful industry lobbyists are lining up to oppose this rule. They want loopholes and exemptions. They want the rules weakened and delayed, but these rules will prevent 4,800 unnecessary deaths every year

and will save billions of dollars in costs. Lisa Jackson, do not cave in to industrial pressure. Make these rules stronger, not weaker, and we issue them without delay -- please issue them without delay.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 96

Comment: Especially important to us is EPA's decision to eliminate the malfunction exemption. We believe that closing the loophole means that facilities will have to run their boilers and process heaters responsibly.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: John M. Cullen
Commenter Affiliation: Masco Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1464.1
Comment Excerpt Number: 1

Comment: As proposed, the Major Source Boiler MACT will impact both the natural gas and biomass fueled boilers at Masco operations. As proposed, the natural gas fired units must comply with work practice standards that include tune-ups and energy assessments while the biomass-fueled units will be subject to pollutant emission limitations and work practice standards. Some facilities already have particulate (PM) and carbon monoxide (CO) limits for their boilers, while the mercury, hydrochloric acid and dioxin/furan limitations will be new to most, if not all, facilities. We consider the limit levels being proposed as stringent and they may be difficult to comply with using existing required control technology.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: John M. Cullen
Commenter Affiliation: Masco Corporation

Document Control Number: EPA-HQ-OAR-2003-0119-1464.1
Comment Excerpt Number: 3

Comment: It is appropriate that work practices be instituted for natural gas boilers and process heaters in lieu of emission limitations, and will help encourage the use of this low-HAP containing fuel.

Emission averaging is an important compliance tool and EPA should continue to include this opportunity in the rule. It should not, however, contain a 10% discount factor, which causes it to lose its intended flexibility.

The proposed work practice requirement for natural gas-fired boilers and process heaters in §63. 7540(a)(10)(vi)(C) would require a source to include in the on-site annual report the "type and amount of fuel used over the 12 months to the annual adjustment". In order to comply with this requirement, the facility would have to install individual gas meters on the unit. Most facilities do not presently have such meters on individual units, and installing them would be unnecessarily burdensome.

A boiler or process heater that has not operated in the previous year should be allowed to skip the annual tune-up requirements.

EPA should allow existing energy management plans and assessments at affected companies to act as a substitute for the energy assessment requirements proposed.

Initial notification requirements in 63.7545(b) for existing boilers and process heaters is not appropriate for natural gas-fired boilers and should be clarified to exclude boilers that do not have emission limits.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 16

Comment: The definition of “coal” in the section 112 major source rule includes “coal refuse.” Coal refuse is defined as coal wastes that have ash content higher than 50 percent and heat value of less than 6000 BTU. The rule then sets out that it applies to units that combust “coal.” However, units that combust coal refuse with those properties may well be subject to section 129 limits. EPA should correct the definition to avoid any confusion on this issue.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Matthew Todd
Commenter Affiliation: The American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2003-0119-2258.1
Comment Excerpt Number: 1

Comment: On June 4, 2010 at 75 FR 32006, EPA proposed the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The American Petroleum Institute (API) and the National Petrochemical and Refiners Association (NPRA) submit these comments on that proposal [see submittal for a copy of comments submitted to Docket ID: EPA-HQ-OAR-2002-0058, August 23, 2010.]

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Joe Muehlbach
Commenter Affiliation: Quad Graphics, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2125.1
Comment Excerpt Number: 1

Comment: We appreciate the opportunity to comment on the proposed National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial Commercial, and Institutional Boilers and Process Heaters (75 Fed. Reg. 32006, June 4, 2010) ("Boiler MACT"). While environmental protection has long been part of the culture at Quad/Graphics we are especially concerned about air quality due to the fact that we are located in a designated non-attainment zone for ozone in Southeast Wisconsin. The economic vitality of our business depends on clean air and a strong and healthy paper products industry. As proposed these rules put both our air and our paper industry in jeopardy.

The proposed Boiler MACT rule will pose economic hardships to Wisconsin's core manufacturing industries, especially forest products. The Wisconsin Paper Council has estimated that the total costs for Wisconsin manufacturing could top $680 million with the forest products industry bearing $470 million of that total. That hits a company such as Quad/Graphics twice as we will bear the costs of compliance at our facilities as well as those of one of our major suppliers — the paper mills.

EPA has selectively reviewed the data concerning the best performing individual source in each segment of the economy and has rolled it all into one standard without considering the variability of top performing boilers in use across the many segments of the economy. Differences in design, function, load, fuel mix and pollution control efficiencies must be considered by setting standards for individual sources. Setting performance standards based on a hypothetical boiler raises serious questions about the ability of any one specific boiler's ability to meet the standards

as proposed. This broad, "hypothetical boiler" approach that EPA is proposing will also have another unintended consequence: it will provide a significant disincentive for conversion of existing coal-fired boilers to renewable energy fuels such as biomass. The anticipated cost for compliance for biomass boilers under the proposed approach to a MACT standard will likely be prohibitive for anyone considering such a renewable energy conversion project.

As a company running several manufacturing plants in an ozone non-attainment zone as well as impacted by PM2.5 non-attainment we are particularly interested in any action that has the potential to increase NOx emissions. Concerns have been raised by the Wisconsin Department of Natural Resources that the pollution control approaches required for other pollutants in the rule may have the unintended consequence of increasing NOx emissions. Tremendous efforts have been made in Southeastern Wisconsin resulting in measurable improvements to the air quality and the state is now on track to comply with both the federal ozone and PM2.5 standards and anything that may set back those efforts are cause for concern.

Finally, in previous MACT standards EPA provided companies with the flexibility to employ alternative compliance approaches that were shown to be protective of public health and approved by the U.S. EPA as well as flexibility during start-up and shut down of the boilers when there can be compliance issues that are due simply to the action of turning on or shutting off the boiler. Removing this flexibility will only serve to catch an otherwise compliant boiler with relatively small exceedences that are only present due to the nature of the start-up or shut-down and not indicative

of how that boiler performs during hours of normal operation. The proposed rules do not provide this compliance flexibility which may needlessly increase the costs of compliance without achieving any measurable environmental protections.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Matthew Todd
Commenter Affiliation: The American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2003-0119-2258.1
Comment Excerpt Number: 3

Comment: Major Concerns

We have the following major concerns with the proposal:

The lack of health benefits from for the requirements proposed for gas-fired equipment have been hidden by only discussing health benefits on a total proposal basis. There is negligible health benefit associated with the proposal for gas-fired boilers and process heaters because there are negligible HAP and criteria pollutant reductions associated with those units. Additionally, EPA did not appropriately consider the disbenefits resulting from increased NOx, CO_2 and HAP emissions from meeting the proposed extremely low CO limits on units where add-on controls

are not installed. Nor have the health impacts been evaluated of increased dioxin/furan and PM emissions due to the add-on controls necessary to attempt to comply with this proposal.

The proposed numeric emissions limits for Gas 2-fired boilers and process heaters, and those included as an alternate for Gas 1-fired boilers and process heaters, are technically and practically infeasible. Attempting to meet those standards will result in operations that are non-optimum from an energy efficiency and emissions standpoint.

Minimizing CO, which is the goal of the proposed tune-up procedure and the proposed emission limits, reduces energy efficiency, increases emissions and violates State rules that require maximizing combustion efficiency.

Many Gas 2 streams (e.g., petrochemical fuel gas and hydrogen plant byproduct fuel gas) are often integrated in refinery fuel systems and have comparable compositions and emission profiles to natural gas and refinery gas. We are very concerned by the proposal not to treat these streams as Gas 1 sources (i.e., to impose numerical emission limits rather than work practice standards) just because they happen to be generated outside a refinery.

The proposal would impose standards with no demonstrated path to compliance, imposing high, and understated, control costs with negligible emission reductions for gas-fired units. Such standards would not meet the legal requirements to be rational and achievable or the practical requirement to be implementable without significantly impacting the viability of the operation.

For the gas and possibly liquid subcategories, the controls required to meet the proposed HAP emission limitations (or the alternative emission limitations for Gas 1 units) are likely to result in increased emissions, negating any supposed health benefits of this proposal for those source categories.

Most of the emission limitations proposed for gas and liquid subcategories are irrational

and unachievable, thereby violating the legal doctrine of rationality and the Clean Air

Act requirements for being demonstrated in practice and being achievable.

Critical Recommendations

In order for the final rule to meet all its statutory requirements, avoid a large, negative impact on jobs and the economy and to be achievable for all operations and equipment to which it applies, we make the following recommendations relative to the gas and liquid subcategories, in particular, and the proposal in general.

1. Finalize the work practice standards (i.e., tune-ups) for natural gas and refinery gas, since they are appropriate and are supported in the record. In fact, tune-ups are the only ?floor? technology discernible in the emissions data as being in actual usage within the Gas 1 subcategory and, as EPA emphasized in its proposal, no ?beyond-the-floor? technology is justifiable.

2. Merge the Gas 1 and Gas 2 subcategories and apply the Gas 1 work practice requirements to the merged subcategory. Treating gas fuels with similar combustion characteristics and emission profiles differently, based on where they are generated, has no scientific basis and puts some facilities at a competitive disadvantage to other facilities.

3. Subcategorize the proposed liquids subcategory into light liquids and heavy liquids and apply work practice requirements to the clean-burning light liquids subcategory. Setting an emission limit based on distillate fuel oil emissions is not justifiable for the entire subcategory.

4. If the Agency must set numeric limits instead of work practices for any subcategory of boilers and process heaters, select the best performing units in a subcategory holistically, based on:

The overall HAP emissions of each source while they are meeting all other applicable requirements and operating efficiently. By establishing separate lists of best performing units on a pollutant by pollutant basis, EPA has developed emission limits that are biased, unachievable, and are arbitrary and contrary to the intent of the Clean Air Act. For refinery process heaters and boilers, the best performers are those with the lowest overall HAP emissions where, for safety and operability reasons, excess air levels are set somewhat above the excess air level that provides optimized energy efficiency.

Adequate, random data to fully characterize the subcategory under consideration and all operations to be regulated. By using only very limited performance test data and data that are not representative of the source category to develop this proposal and proposing to apply those limits to all operations, including turndown, startup and shutdown, EPA has created a set of proposed emission limits that do not represent the top performers as defined in the Clean Air Act and that have not been achieved in practice for the operations to which they are proposed to apply.

A complete and full adjustment of the data to reflect seasonal, operational and fuel variability. The current approach of only adjusting for statistical variability in the data does not reflect the real variability of the sources for which there is data, much less the variability of the subcategory.5. Use all available data for a particular boiler or process heater when evaluating its performance. Where more than one set of emissions data is available for a unit, use all the data to establish the unit‘s emissions and emission variability, rather than using each data set independently as was done for this proposal. Ignoring all the data available to the Administrator biases the MACT floor calculation and violates the Clean Air Act.

6. Only apply emission limits to the operational conditions for which emissions data was used to establish the limits. Using data from 3 hour, high load performance tests to establish daily and 30 day emission limits that apply at all times, is arbitrary and invalid and fails to reflect the variability of the individual unit, much less the variability of the source category.

7. Use subcategorization and work practice requirements to address operations that are not adequately represented in the database (i.e., turndown, startup and shutdown operations, particularly for combustion HAPs) and for which combustion knowledge indicates that emission limits developed for normal operation cannot be met. EPA has ample authority to set such work practice standards. First, section 112(d)(1) authorizes – indeed requires – EPA to set ?emission standards? for each category or subcategory, and section 302(k) defines ?emission standard? to include work practice standards. Second, section 112(h) independently authorizes EPA to use a work practice standard in two situations - where the emissions are not susceptible to control after the underlying source generates them and where the application of a system for measuring the effect of the control measure for enforcement purposes is not practicable.

8. Fully evaluate, reflect and consider the increases in Greenhouse Gas (GHG), NOx, SO2, VOC and PM emissions and the potential loss in site, boiler and process heater energy efficiencies that result from imposing excessively low emission limits and goals on gas and light liquid fuels.

Realistically consider the negative impacts of the proposed emission limits on jobs and the economy and on national energy policy.

9. Revise the proposed regulatory text to reflect EPA's intent, expressed in the preamble, that CEMS are only required for units subject to emission limits and are not required for equipment subject to work practice standards. Similarly, remove the requirement to performance test units to which no emission limits apply.

10. Include additional liquid burning flexibility in the final rule for refineries that primarily burn Gas 1. In refinery operations, the ten-percent liquids allowance for assignment to a gas subcategory needs to be made on the collection of heaters and boilers subject to the standards instead of the individual pieces of equipment.

11. Do not finalize the proposed energy assessment work practice. EPA cannot legally expand the source category beyond heaters and boilers to require facility-wide energy audits and there is no significant energy or emissions savings potential for imposing this requirement on facilities, in light of the tune-up work practice proposal and major source historical energy management practices.

12. Update the cost and benefit estimates and economic and regulatory analyses to reflect the underestimates of costs and overestimates of benefits in the current proposal and the

actual impact the proposal will have on jobs and the economy. Among the major corrections needed are the following.

a. Retrofit control costs are underestimated and control retrofits are not technically or economically feasible in many refinery locations due to a lack of plot space that meets required safety standards. Many units will require total replacement, if that proves economically viable.

b. Controls included in the EPA analysis have not been demonstrated to be effective at the low emission limits proposed for clean burning fuels (e.g., gases and light liquids). Some sources will be technically unable to meet the proposed requirements and thus will have to shutdown.

c. EPA has underestimated the number of boilers and process heaters affected by the proposed control requirements. There are many more Gas-2 and liquid-fired units than EPA estimates.

d. The proposed energy assessment and energy management program requirements will cost many times EPA estimates.

13. Develop cost and benefit analyses on a source subcategory basis. EPA has evaluated this proposal on a total source category basis, primarily by taking credit for presumably large PM reductions from certain solid fuel categories. This approach hides the fact that there are essentially no HAP, PM or other emission reductions associated with the gas subcategories to justify the proposal or even the imposition of a technology standard.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Petroleum Company LLC

Document Control Number: EPA-HQ-OAR-2003-0119-2225.1
Comment Excerpt Number: 1

Comment: Marathon has operations that are potentially subject to provisions of these proposed standards. Marathon owns and operates seven refineries located throughout the Midwest and Gulf Coast, 65 light oil product terminals, 22 heavy oil terminals and upstream oil production operations. Marathon has interest in this regulation because of the potential for direct impact on operations at our facilities.

Marathon's values include a commitment to minimizing environmental impacts by reducing wastes, emissions and other releases. Marathon also has a commitment to energy efficiency. Marathon's refineries are among the most efficient in the U.S. Marathon is a partner in ENERGY STAR®, a

voluntary program managed by EPA. Our Canton, Detroit and Garyville refineries received the ENERGY STAR® in 2009. To attain this status, a refinery must perform in the top quartile for energy efficiency and must have no unresolved environmental notices or actions from either state or federal regulators.

Marathon supports comments submitted by the American Chemistry Council, the API and by the National Petrochemical and Refiner's Association. Marathon is a member of these trade organizations and assisted in the development of these organizations' comments. Marathon supports science based clean air levels and standards. While Marathon supports reasonable regulation, there are concerns with provisions in this proposal from the lack of benefits attributable to HAP reduction, the possible adverse impacts on the economy and its negative impact on energy efficiency.

In addition to supporting trade association concerns and comments, Marathon has the following comments:

Marathon agrees that work practice standards for natural gas and refinery fuel gas fired equipment are more appropriate than specific numerical limitations. The Clean Air Act allows for work practice standards in MACT standards.

It is recommended that EPA add clarifying language to the CO CEMS requirement to make clearer that CO CEMS are not required for equipment subject to work practice standards.

Because EPA's current proposed approach has the unintended consequence of requiring inefficient operation of fired equipment (resulting in more fuel consumed than is optimal) Marathon recommends that the CO standards be adjusted so that equipment can be operated for optimal energy efficiency during all period of normal operation, including turndown. While optimal CO levels are generally no more than 400 ppmv, excess oxygen is added to assure safe operation of fired equipment to account for changes in process heat needs, fuel composition and other variables. HAP emissions are negligible with little change between these low CO levels and EPA's proposed standard. Finalizing more appropriate CO standards and work practices will result in less fuel consumption and fewer emissions.

Marathon recommends increasing flexibility in areas where minimal oil firing is needed. It is requested that the affected source be the collection of process heaters and boilers that burn at least 90% natural gas or refinery fuel gas. Changing the affected source to the collection of

sources would not increase emissions. It would provide for greater flexibility to allow the affected source to be the collection of heaters and boilers at a facility that burns at least 90 percent natural gas and /or refinery gas in combination with liquid fuels on a heat input basis on an annual average.

It is recommended that deviations resulting from EPA's proposed 30-day rolling averages be determined from the daily number of events causing a deviation instead of each value above a standard on the 30-day rolling average. While these rolling averages make it more likely that a given standard be feasible, just one event (with a large peak concentration) can cause a series of rolling daily deviations. This is a misleading metric. It is more appropriate to report one deviation for the event that resulted in possibly several days of rolling average emissions to be over the standard.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: David P. Tenny
Commenter Affiliation: National Alliance of Forest Owners (NAFO)
Document Control Number: EPA-HQ-OAR-2003-0119-1945.1
Comment Excerpt Number: 2

Comment: The proposed rule should be revised to eliminate disincentives to using

biomass as a fuel sources.

The proposed rule is arbitrary and capricious because its sets emissions limitations for biomass boilers that are so low they would require adoption of expensive, novel control technology at very little benefit to human health or the environment. In these comments, we highlight a few of the concerns with the treatment of biomass in the proposed rules. We refer EPA to the comments filed by the affected industries, such as those filed by the American Forest & Paper Association ("AF&PA") and by the American Wood Council, for a more in-depth analysis of the technical and policy issues raised by EPA's regulatory approach.

The limits for biomass boilers are set extremely low because their baseline for emissions is very low compared to other fuels. Biomass contains very small amounts of hydrogen chloride ("HCl"), dioxin/furan, and mercury. Despite the fact that biomass is an inconsequential source of these HAPs, the proposed rule establishes extremely low limits for these HAPs in emissions from biomass combustion. For example, EPA's faulty MACT floor approach, discussed in Section III below, resulted in extremely low limits for HCl (as a surrogate for acid gases) for biomass boilers. As a result, under the proposed rule, biomass boilers would be required to make major technological adjustments to control for HCl with extremely little benefit to public health or the environment. In addition, there are no EPA-approved methods that are appropriate in measuring the proposed HCI limits. [See submittal for Attachment 1, Letter from Kerry R. Flick,

Metso Power, to Donna Harman, America Forest & Paper Association at 4 (Aug. 13, 2010).] For mercury, the available methods are not adequate because their reliable detection limits are well

above the proposed emission limits. Id. The control technology for dioxin/furan is also not well understood and may not be available to meet the limits set forth in the proposed rule. The emission limits for particulate matter ("PM") (as a surrogate for non-mercury metals, and for CO (as a surrogate for non-dioxin organic air toxics), are also far too stringent. The proposed limits for biomass boilers could require facilities to adopt costly new control equipment and result in higher operating costs, which may discourage facilities from using biomass in favor of fossil fuels.

The limitations for dioxin/furan are also arbitrary and capricious because these pollutants are not reliably detectable at the proposed regulatory level. As a result, the available methods of demonstrating compliance can not readily distinguish compliant boilers from noncompliant boilers. For example, the ability of tests to detect dioxin/furan at such low levels are so variable, that even boilers that are below the detection levels

may still exceed the proposed emissions limitations. In addition, with levels set so low, the risk of sample contamination is extremely high; for example, "one person smoking a cigarette in the vicinity of a test program could contaminate the sample with enough dioxin to put the facility out of compliance." Attachment 1 at 5. Imposing emissions limitations in this situation would be unreasonable.

The combined effect of these arbitrary and unnecessary controls would substantially increase the cost of using biomass as a fuel source. As such, the proposed rule would negate the several government programs providing incentives to use biomass and to develop technologies reliant on biomass. With devalued incentives and increased costs, the nation would risk losing biomass as an integral part of renewable energy policy. The effect of the proposed rule would ultimately land at the foot of the forest landowner as biomass markets fail to grow or even disappear as heat and power facilities turn to other fuel sources. Most forest landowners calculate a return on their investment on a variety of markets for forest products. The elimination or dramatic reduction of a significant market such as biomass could affect the attractiveness of forestland ownership to the degree that owners look to use of the land for purposes other than forests in order to obtain an economic return.

As reported by an AF&PA analysis, the forest products industry estimates the cost of compliance with the emissions limitations for biomass boilers would be $3.3 billion in that sector alone. In the preamble to the proposed rule, EPA recognizes that economic burden may justify an alternative compliance method. Because the costs to industry to achieve the proposed rule's very low emissions limitations would be incredibly high and could not be consistently achieved in practice, EPA should revise its approach for biomass boilers to ensure that these boilers are not penalized because they start with a cleaner fuel. As discussed below, NAFO recommends that for dioxin/furan and mercury, a work practice standard be adopted for biomass boilers in lieu of emission limitations. For HCl and manganese, the use of health-based compliance alternative should be provided as an option. For the remaining HAPs, EPA should adopt more reasonable limitations that can be achieved in practice and will satisfy the legal requirements, without prohibitive costs to industry.

In addition to an economic justification for adopting alternative compliance methods or reduced emission limitations for biomass boilers, there is an environmental justification. Biomass is a "clean" fuel and, as described in Section I above, the combustion of biomass is carbon neutral.

As such, by encouraging the use of biomass boilers, this rulemaking could have a positive impact on the nation's carbon footprint. In

addition, as an abundant, renewable, domestic energy source, the use of biomass for energy has a positive contribution toward the nation's energy security. NAFO is concerned that because the proposed rule's stringent, numeric emissions limitations for biomass units are largely unachievable, it would create a disincentive to the continued and expanded use of biomass fuels and, in turn, could encourage the use of higher-carbon fossil fuels. As described by Metso Power, the proposed rule would discourage, if not eliminate, new development of renewable biomass power. See Attachment 1 at 2. Notably, EPA's own Regulatory Impact Analysis, at page 3-2, estimates zero new biomass units. Discouraging current or new enterprises from using biomass would be inconsistent with the CAA's emissions reduction goals.

NAFO recommends that, in the final rule, EPA eliminate the emission limits requirements for dioxin/furan and mercury, and replace them with work practice requirements. Section 112(h)(2)(B) of the CAA authorizes EPA to establish work practice standards when "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." The proposed standards are not practicable due to technological limitations. For example, as explained above, for dioxin/furan, current technology is unable to accurately measure at the level of the proposed standard for dioxin/furan. Moreover, to reach the extremely low proposed standards, industry would be required to spend billions of dollars, while providing minimal environmental benefit. As such, the limitations are also not practicable due to economic limitations.

The proposed rule already adopts work practice standards for other fuel sources. For natural gas-fired units, the proposed rule would establish a work practice standard instead of emission limits. As such, operators would be required to conduct annual or biennial tune-ups for each unit instead of adopting add-on controls. NAFO believes that for dioxin/furan and mercury, EPA's rationale that supports establishing work practice standards for natural gas-fired units applies equally well to biomass units. EPA explained in the preamble that for gas-fired units larger than 100 mm Btu/hour, "the capital costs estimated for installing controls on these boilers and process heaters to comply with MACT limits for the five HAP groups is over $14 billion." 75 Fed. Reg. at 32025. EPA further explains that "emission limits on gas-fired boilers and process heaters may have the negative benefit of providing an incentive for a facility to switch from gas (considered a 'clean' fuel) to a 'dirtier' but cheaper fuel (i.e., coal)." Id. NAFO believes that for certain HAPs a work practice standard (instead of numeric emissions limitations) is similarly warranted for biomass units. Like gas-fired units, the cost of compliance with the dioxin/furan and mercury limitations for biomass units would be

extraordinary. In addition, as described above, prescribing work practice standards would avoid creating an incentive for facilities to switch from biomass, a "clean" fuel, to a higher-carbon fossil fuel. Accordingly, for dioxin/furan and mercury, EPA should establish work practices rather than emissions limitations for biomass boilers.

NAFO further believes that EPA should exercise its authority under CAA §112(d)(4) to establish a health-based emissions limitation for HCl and manganese. This approach would ensure that public health is protected while eliminating the extreme cost to industry that could result from the proposed MACT emissions limitations.

Finally, for the remaining HAPs—PM and CO—EPA should adopt more reasonable emissions limitations that are less stringent and less costly, but achieve the statutory requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: David P. Tenny
Commenter Affiliation: National Alliance of Forest Owners (NAFO)
Document Control Number: EPA-HQ-OAR-2003-0119-1945.1
Comment Excerpt Number: 4

Comment: EPA's MACT determinations are also flawed because they are based on incomplete data. For example, even though the subcategory of biomass boilers is estimated to include 420 sources, EPA only has emissions testing data for a small subset of these sources (e.g. 192 units for PM, 91 units for mercury, and 92 units for HCl). EPA's lack of data makes its findings about the "best performing 12 percent of the existing sources," see CAA § 112(d)(3)(A), highly suspect and, in turn, makes the resulting emissions limits arbitrary and capricious.

Again, this arbitrary approach to the regulation of biomass boilers would add substantial costs to the use of biomass, causing markets to shrink which in turn would reduce the forest landowner's return on investment as described above.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Steven A. Brink
Commenter Affiliation: California Forestry Association
Document Control Number: EPA-HQ-OAR-2003-0119-2222.1
Comment Excerpt Number: 4

Comment: The proposed Particulate Matter (PM) standard of 0.008 lb/MMBtu does not account for the variability of performance of electrostatic precipitators on biomass fired boilers.

The proposed Hg standards for existing and new Major Sources do not account for expected variability of Hg contained in biomass wastes. Compliance could require the add-on control of activated carbon injection or carbon beds, neither of which has been demonstrated with biomass combustors and both are likely to be cost prohibitive.

The proposed HCl standards for both existing and new Major Sources of 0.006 and 0.004 lb/MMBtu do not account for the variation in biomass waste chlorine content. California, Placer County Air Pollution District, test data has shown emissions ranging from 0.005 to 0.013 lb/MMBtu for existing sources using forest and urban woody waste.

CFA does not believe the dioxin proposed standard is warranted. According to the California, Placer County Air Pollution District Officer, data from biomass boilers has not shown a correlation between dioxin and CO emissions.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 4

Comment: Manufacturers support EPA's decision to require work practice standards in lieu

of emission limits for certain gas-fired boilers: EPA should extend this decision to all gas boilers subject to MACT

Manufacturers strongly support EPA's proposal to establish annual tune-ups as the MACT standard for existing and new boilers and heaters that combust natural gas or refinery gas (i.e., the so-called "Gas 1" subcategory). See 75 Fed. Reg. at 32025, 32029. In adopting annual tune-ups as MACT, EPA should recognize expressly that they constitute the floor for existing and new Gas 1 boilers and heaters and that no beyond-the-floor requirement would be appropriate.

A. EPA correctly concluded that the exorbitant costs of control equipment and the

perverse results that numeric emission limits would create justify a work practice MACT standard

EPA offers two proper and correct justifications for its selection of tune-ups as the MACT standard for the Gas 1 subcategory. Manufacturers agree with EPA's conclusion that the following two reasons justify the proposed work practice MACT standard:

* First, EPA estimated that the cost of compliance with emission limits would be exorbitant – $14 billion – because compliance would require the widespread installation of a system of combined fabric filter and wet scrubber technology. 75 Fed. Reg. 32025. Indeed, the database shows that no Gas 1 unit anywhere employs such technology.

* Second, the exorbitant costs would create perverse results which could create more HAP emissions than would otherwise occur under the work practice standards or even under the status quo. For example, a company with a solid fuel-fired boiler might be deterred from switching to a natural gas-fired boiler; and a company with a natural gas-fired boiler might be encouraged to switch to a solid fuel-fired boiler in order to reduce compliance costs associated with numeric limits for Gas 1 boilers.

In addition, as discussed below, there are other compelling reasons why EPA's conclusion that annual tune-ups should be established as the MACT standard for existing and new boilers in the Gas 1 subcategory.

B. Numeric limits for Gas 1 boilers would violate the Clean Air Act as there is no available emission control technology to meet the potential numeric limits

As discussed in more detail in Section II.B, in establishing a numeric MACT standard, EPA must be able to show that there is an emissions control device that is technologically available to all of the units in the subcategory and sufficient generally for them to achieve the identified emissions rate. If EPA cannot identify such a control measure, it may not translate the emissions rate into a standard, as that would then be interfering with fundamental choices about basic design of production equipment, which is beyond EPA's authority under the Clean Air Act.

For Gas 1 boilers, tune-ups are the only identifiable technologically feasible form of control, and hence constitute the de facto "floor." There are no control measures in the Gas 1 database that would allow the units in the subcategory to reach the emissions level of the lowest-emitter(s). To the contrary, the database shows that the primary explanation for the differences in emissions rates is the differentials in basic design characteristics of the Gas 1 units. In these circumstances, as discussed infra (Section II.B), EPA is not authorized to set the MACT standard in line with the emissions of the lowest emitters, as it cannot point to an in-use and effective emissions control technology across the subcategory. Thus, EPA must turn to section 112(d)(2), which calls for a search through the database for any effective form of control in significant actual usage. The only such control measure that can be discerned in the database is tune-ups. Thus, tune-ups constitute the de facto "floor" for existing and new units [Footnote: Manufacturers agree with EPA's conclusion that the potential "beyond the floor" systems combining fabric filter and wet scrubber technology are not "achievable" because of the exorbitant cost and perverse incentives which EPA outlined in its proposal. Further, establishment of a single numerical standard is not technically feasible. The design characteristics of the units, and hence the emissions-reduction potentials of annual tune-ups, vary widely. Consequently, there is no single emission rate or even percentage of emission reduction that could be translated into a numerical limit.]

C. EPA has clear authority to set a work practice standard for Gas 1 units

Further, EPA has ample legal authority to set the standard for Gas 1 units in terms of a work practice. First, section 112(d)(1) authorizes – if not requires – EPA to set "emission standards" for each category or subcategory, and section 302(k) defines "emission standard" to include work practice standards. Thus, if EPA determines that the best performing sources achieved their emissions performance through work practices rather than control equipment, those work practices should be identified as the "floor."

Second, section 112(h)(2)(b) independently authorizes EPA to use a work practice standard where, as here, the application of a system for measuring the effect of the control measure for enforcement purposes is not practicable. For gaseous fuel boilers, it is not practicable to measure emissions at the levels of EPA's proposed limits, as stack emissions of, for example, 1 ppm CO may be difficult to differentiate from environmental background levels.

EPA has independent authority to promulgate work practices as emission standards under CAA §302(k) as long as the work practices provide a continuous limit on emissions or are part of a set of regulations that provide a continuous limit on emissions. As required by CAA § 112(d), EPA must promulgate "emission standards" for the control of hazardous air pollutants at major sources. Originally, these "emission standards" were found to be limited to only numeric emission limits. See, e.g., Adamo Wrecking Co. v. U.S., 434 U.S. 275 (1978). However, in the

1990 Amendments, Congress the expanded the definition of "emission standards" in §302(k) to expressly include work practices:

The terms "emission limitation" and "emission standard" mean a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.

(emphasis added).

As a result, the plain language of the Clean Air Act now authorizes the promulgation of work practices: (1) as direct emission standards under §302(k), and (2) in lieu of emission standards under CAA §112(h). While both of these sections authorize the implementation of "work practices," they are distinct provisions that serve different roles. As noted in the legislative history of the 1977 amendments to the Clean Air Act, the key to an emission standard under CAA § 302(k) is that it applies continuously:

By defining the terms "emission limitation," "emission standard," and "standard of performance," the committee has made clear that constant or continuous means of reducing emissions must be used to meet these requirements. By the same token, intermittent or supplemental controls or other temporary, periodic, or limited systems of control would not be permitted as a final means of compliance.

H.R. Rep. 95-294, at 92 (1977), as reprinted in 1977 U.S.C.C.A.N. 1077, 1170. As interpreted by the D.C. Circuit in Sierra Club v. EPA, 551 F.3d 1019, 1027 (D.C. Cir. 2008), "[w]hen sections 112 and 302(k) are read together . . . Congress has required that there must be continuous section 112-compliant standards." CAA § 112(h), on the other hand, includes no requirement for continuous regulation, allowing that "a standard may be relaxed 'if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a [HAP].'" Id. at 1028 (quoting 42 U.S.C. § 7412(h)(1)).

EPA can therefore comply with CAA § 112(d) by either: (1) promulgating CAA § 112(d) emission standards that comply with the CAA requirement that "some section 112 standard apply continuously," under which Congress "did not authorize the Administrator to relax emission standards on a temporal basis," or (2) find that it is not feasible to prescribe or enforce a continuous emission standard under §112(d) and promulgate "work practice or operational standards instead" under §112(h). Sierra Club, 441 F.3d at 1028 (internal quotations omitted).

Moreover, this reading is consistent with CAA § 112(h)(4). That provision states, "[a]ny standard promulgated under paragraph (1) shall be promulgated in terms of an emission standard whenever it is feasible to promulgate and enforce a standard in such terms." (Emphasis added). In light of the D.C. Circuit's reasoning for distinguishing emission standards from 112(h) work practices, this provision is best read to require that, where EPA finds a continuously applicable work practice is not feasible under CAA § 112(h), it must promulgate "temporary, periodic, or limited systems of control" that resemble a continuous emission standard to the maximum extent possible. H.R. Rep. 95-294, at 92 (1977) [Footnote: The D.C. Circuit's decision in Sierra Club v. EPA, 479 F.3d 875 (D.C. Cir. 2007) does not impact EPA's separate authority to issue direct work practice emissions standards as described in §302(k). Rather, that case focused on the breadth of EPA's authority under CAA §112(h), and only held that section authorizes the

establishment of work practices in lieu of an emission standard where "measuring emission levels is technologically or economically impracticable." Id. at 884. That holding says nothing about EPA's independent authority to establish work practices as direct emissions standards under CAA §112(d) and §302(k).]

That statutory authority greatly simplifies the development of work practice standards for natural gas fired units. Instead of turning to the alternate stop-gap provisions in §112(h) that apply when continuous emissions standards are not feasible, EPA can focus on the direct establishment of work practices that existing sources use to ensure continuous compliance under §§112(d) and 302(k). For example, if the top 12% of existing natural gas-fired boilers are using tune-ups to achieve their "best performing" status, then EPA has the authority to establish

that protocol as a work practice-based emission standard. Tune-ups are an appropriate emission standard for these units because, if conducted with adequate frequency, they provide continuous reduction of the quantity and rate of HAP emissions from boilers by ensuring that they operate properly.

D. EPA should similarly establish an annual tune-up work practice standard as the MACT standard for all other gas boilers

For the reasons discussed above, EPA should establish annual tune-up work practice as the MACT standard for all other gas boilers. Other gas boilers have the same characteristics as natural gas and refinery gas. Indeed, EPA has not identified and cannot identify any technologically feasible means of achieving the stringent proposed standards that apply to all of the units in the subcategories. As discussed infra (Section II.B), EPA is therefore required to turn to other methods of control, with tune-ups as the choice justified by EPA's data. Further, many of the other gases are very similar in composition and combustion properties to the Gas 1 subcategory gasses, making a decision to have such dramatically different emission control regimes arbitrary and capricious. Finally, gaseous fuels are clean burning fuels with emissions that are lower than from other types of fuels. Just as EPA recognized that it should not be creating perverse incentives that force operators to turn away from clean Gas 1 fuels, 75 Fed. Reg. 32025, EPA should not create regulatory incentives for operators to turn away from other clean gaseous fuels. EPA should encourage the use of clean burning fuels by allowing work practices that give operating flexibility to maximize combustion efficiency and, thereby, minimize emissions.

E. EPA should also establish annual tune-up work practice as the MACT standard for biomass boilers

The rationale that supports the proposed approach for the Gas 1 subcategory applies equally well to biomass boilers and, therefore, provides ample support for adopting work practices instead of numeric emissions limitation for biomass boilers. For example, in the forest products industry alone, the estimated cost of complying with the proposed HAP emissions limitations for biomass boilers is $3.3 billion. This is an extraordinary cost that, in the context of the forest products industry, equals or exceeds the magnitude of the economic burden that EPA predicts for the Gas 1 subcategory. Similarly severe economic impacts are expected in other industry sectors where biomass boilers are widely use, such as the furniture, sugar, and agricultural products industries. Thus, there is strong economic justification for prescribing work practice standards for biomass boilers in lieu of numeric emissions limitations.

In addition, biomass is a "clean" fuel in many of the same respects as the Gas 1 fuels. Biomass-fired boilers produce no net GHG emissions, which makes the combustion of biomass an important tool in managing and reducing the Nation's carbon footprint. Similarly, biomass is an abundant, renewable domestically-produced fuel that can help reduce reliance on foreign sources of fossil fuel and, thus, improve the Nation's energy security. Prescribing stringent HAP emissions limitations on biomass boilers will create a significant barrier to the continued use and expansion of biomass fuels and incentivize the use of less desirable fossil fuel alternatives.

In light of the inordinate costs of complying with the proposed HAP emissions limits for biomass boilers and the strong policy reasons for promoting the combustion of biomass, EPA has ample justification to prescribe work practices rather than HAP emissions limitations for biomass boilers.

F. EPA should require only a one time tune-up for smaller boilers and process

heaters

Manufacturers recommends that EPA require only a one time tune-up for smaller boilers and process heaters with rated heat input less than 2 million British Thermal Units (BTUs). Currently, both the South Coast Air Quality Management District and Antelope Valley Air Quality Management District exempt boilers and process heaters with a rated heat input less than or equal to 2 million BTUs per hour from having their burners tuned. Because of the small size of these units, the cost burden of regular tune-ups far outweighs any environmental benefit that may be achieved. Further, the one-time tune-up requirement would constitute an appropriate work practice, as discussed above.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 4

Comment: Modeling for many major facilities is already an expensive and complicated task. It would be very challenging for facilities not operated by the same company to provide modeling to support permit revisions, etc. for other facilities simply because they are considered to be neighboring. The funding of the necessary modeling would not be available to support a modification being made by another company at another facility. It is recommended that EPA not consider HAP emissions from neighboring facilities when setting section 112(d)(4) emissions standards. (HAP emissions from neighboring facilities, page 32032)

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 6

Comment: The proposed MACT standards for industrial boilers and process heaters are based on pollutant-by-pollutant analyses that rely on a different set of best performing sources for each separate HAP standard. See, e.g., 75 Fed. Reg. at 32019 ("For each pollutant, we calculated the MACT floor for a subcategory of sources by ranking all the available emissions data from units within the subcategory from lowest emissions to highest emissions, and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources."). In other words, EPA "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. This approach violates the language of § 112, which is focused on the performance of "sources," and produces arbitrary and capricious standards.

The statute unambiguously directs EPA to set standards based on the overall performance of "sources." [Footnote: In the proposed CISWI rule, EPA similarly failed to follow the statutory mandate under Section 129 to examine the performance of "units." For the reasons discussed above, the CISWI standards must be based on actual sources ("units"), and cannot be the product of pollutant-by-pollutant parsing.] Sections 112(d)(1), (2), and (3) specify that emissions standards must be established based on the performance of "sources" "in practice" for the category or subcategory and that EPA's discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of sources. In particular, Section 112(d)(3) emphasizes that EPA must focus on what emissions reductions are achievable "in practice" for a "source."

5

New and existing sources.- The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated under this subsection for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than -

(A) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information) ... in the category or subcategory for categories and subcategories with 30 or more sources , or

(B) the average emission limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources .

These provisions make clear that standards must be based on actual sources, and cannot be the product of pollutant-by-pollutant parsing that results in a set of composite standards that do not necessarily reflect the overall performance of any actual source. Congress provided express limits on EPA's authority to parse units and sources for purposes of setting standards under §

112 and that express authority does not allow EPA to "distinguish" units and sources by individual pollutant as is proposed in this rule. Sierra Club v. EPA, 551 F.3d 1019, 1028 (D.C. Cir. 2008) (noting statutory limitations on EPA's authority to distinguish sources).

By focusing on a HAP-by-HAP approach and ignoring the performance of "sources" in crafting the proposed rule, EPA has gone beyond a proper exercise of discretion in this proposal and violated the Clean Air Act. EPA has failed to provide any assessment of how many existing boilers and process heaters will be able to meet the proposed standards without taking any further control measures. The arbitrary and capricious nature of EPA's approach is best demonstrated by comparing the standards that EPA ultimately established against the actual performance of existing sources. There is not a single gas-fired boiler or process heater that has been demonstrated in EPA's record to meet all 5 of the numerical emission limits in this proposal at all times.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 7

Comment: EPA violated the Clean Air Act by failing to set floors that can be achieved by use

of existing emissions controls that are actually in use within subcategories

EPA inappropriately set its floors based purely on a review of emissions

data, without examining whether there is existing control technology in use and available to meet those floors

EPA calculated its proposed floors solely on the basis of emission data, without making any effort to evaluate whether technically feasible means of achieving those levels are in actual use and hence generally available to (and thus achievable by) the units within the subcategory. For example, with respect to existing units, EPA stated in the preamble:

EPA must consider available emissions information to determine the MACT floors. For each pollutant, we calculated the MACT floor for a subcategory of sources by ranking all the available emissions data from units within the subcategory from lowest emissions to highest emissions, and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources.

75 Fed. Reg. at 32019. With respect to new units, EPA stated: "Similar to the MACT floor process used for existing units, the approach for determining the MACT floor must be based on available emissions test data." Id. at 32027. More to the point, the relevant technical support document confirms that, as the preamble implies, EPA in fact based its floor determinations for existing and new units solely on the basis of available emissions data, without any examination

of whether units have some feasible and proven way of achieving the floors [Footnote See ERG, Mact Floor Analysis (2010) for the Industrial, Commercial, and Institutional Boiler and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source, at 3, 10 (April 2010) (Docket ID No. [INSERT]).] Indeed, the technical support document is explicit:

In response to concern over MACT floor analyses based on

control technologies, the new approach ranks the performance of each pollutant according to the lowest emitting (based on stack test data), regardless of control technologies installed on the boiler/process heater [Footnote: Id. at 3]

Thus, EPA ignored the methodology Congress intended EPA to use in determining the floors for existing and new units, as described in the following subsections.

2. The Clean Air Act requires the Agency to set standards that can be

achieved by existing emissions controls in use within the subcategory

The Clean Air Act requires EPA to set standards that can be achieved by existing controls in use within the subcategory. The evidence of congressional intent strongly and unequivocally shows that Congress intended the regulatory machinery of sections 112(d)(1)-(3) to operate so as to: (1) identify those forms of emission control in actual use which produce maximum reductions in HAP emissions when applied to particular units; (2) pursue all existing and new units of the same type, characterized by basic production design to apply those controls or otherwise achieve at least the same reduced level of emissions, either through innovation or some other way; and (3) preserve, protect and enhance the economic vitality of the national economy. Thus, in line with other key provisions of the Clean Air Act, sections 112(d)(1)-(3) are technology-forcing. They are designed to propagate the general use of best HAP emissions control, not to produce dictates achievable only though widespread shutdowns and installation of newly designed production equipment.

Clearly, to implement that Congressional purpose, EPA must base the floors not only on available emissions test data, but also on a determination that some technically feasible means of achieving the floor is generally available to the units within the subcategory, as demonstrated by actual use within the subcategory. Otherwise, if EPA were to base the floors for a particular subcategory only on available test data, without examining technical feasibility and actual

usage, it could produce a MACT standard which most – if not all – of units in the subcategory would have no hope of achieving. That would be a vast distortion of the congressional vision – which is to identify and spread the use of best controls, while preserving economic vitality, not to force widespread shutdowns and re-capitalization within industry segments.

Section 112 is replete with textual evidence that Congress authorized EPA to set a floor only at a level which units within a subcategory generally had some means of achieving as a technical matter, as demonstrated by actual usage within the subcategory. In implementing section 112, EPA must give full effect to that textual evidence. See Whitman v. American Trucking Association, Inc., 531 U.S. 457, 485 (2001) ("The EPA may not construe the statute in a way that completely nullifies textually applicable provisions meant to limit its discretion.").

Key pieces of such evidence are as follows:

* Section 112(d)(2), the overarching directive to EPA for establishing a MACT standard for any given subcategory, requires EPA to set the standard at a level that corresponds to the maximum

degree of reduction of HAP emissions that is "achievable" for the subcategory through the "application of measures, processes, methods, systems, or techniques." (Emphasis added.) Sections 112(d)(2)(A)-(E) then define those various forms of emissions control as including a wide range of "measures". Specifically listed are process changes, materials substitution, enclosures, add-on control technology, work practices, and operational standards. Not listed, or even suggested, were changes to the basic design of the units in question, the HAP-emitting production equipment. Section 112(d)(2) thus reflects and reveals a fundamental conceptual orientation on the part of Congress which is universal to all of the technology-based standard-setting processes dictated by the CAA. In crafting the MACT standard setting process, Congress took production equipment, such as boilers and process heaters, as a given and envisioned that the standards EPA generated would stimulate the "application" of control "measures" to the production equipment, without change to the basic design of the equipment.

* Section 112(d)(3)(A) calls on EPA to set the floor for existing units within a subcategory at the average level actually "achieved" by the best "performing" 12 percent. The use of the terms "achieved" and "performing" imply that Congress had in mind a cause-and-effect relationship between the actual in-use application of one or more of the control measures listed in section 112(d)(2)(A)-(E) to a piece of HAP-emitting equipment and a resulting actual level of reduced emissions from the equipment. The terms indicate that Congress wanted to identify those measures by which EPA could reliably establish norms of behavior for pieces of equipment of like design. In other words, Congress sought to spread the use of those controls proven to be best by actual practice, but not force changes in the fundamental design of production equipment within an industry segment, e.g., through widespread shutdowns and re-capitalization.

* The first sentence of section 112(d)(3) provides: "The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source ...." The phrases "reduction in emissions," "achieved in practice," and "best controlled" all focus on the application of control measures to HAP-emitting production equipment, especially in juxtaposition with section 112(d)(2). The first sentence of section 112(d)(3) thus confirms that

Congress sought to identify the forms of control that experience showed to be the most effective and that companies could apply in a replicable way without altering the basic design of the production equipment.

• Other provisions of the CAA similarly focus on the application of available and "demonstrated" control technology, namely: section 111 (New Source Performance Standards (NSPS)), section 129 (incinerators), section 165 (Best Available Control Technology (BACT) for certain new construction projects), section 172(c)(1) (Reasonably Available Control Technology (RACT) for existing sources as control by State Implementation Plans), and section 173 (Lowest Achievable Emission Rate (LAER) for certain new construction projects). In each case, the common theme is to establish a behavioral norm based on existing control technologies.

The legislative history of section 112 further confirms that Congress sought to identify and facilitate the spread of best, in-use-proven controls of HAP emissions within the appropriate categories and subcategories of HAP-emitting equipment, without fundamentally constraining the ability of companies to choose the basic design of that equipment. During the Senate debates on the conference bill that became the CAA Amendments of 1990, Senator Durenberger, the

primary author of section 112, stated: "For each category of sources, EPA will promulgate a standard which requires the installation of maximum achievable control technology (MACT) by the sources in the category." [Footnote: Committee on Environment and Public Works, U.S. Senate, Legislative History of the Clean Air Act Amendments of 1990, S. Prt. 103-38, at 863 (Nov. 1993).] Plainly, in Congress's mind, section 112(d)(1)-(3) would cause companies to take action only to apply controls to an established equipment design, as opposed to cause changes in such design.

Indeed, EPA has already recognized that the Clean Air Act requires the

Agency to set standards that can be achieved by existing emissions controls in use within the specific subcategory

EPA has previously recognized that the Clean Air Act requires that the Agency set emissions standards that can be achieved by existing controls in use within the subcategory. EPA accepted that it cannot look solely at emissions test data, without regard to whether there is a technically feasible means of emissions control in actual usage within the subcategory which is sufficient to achieve the floor. In its 2004 Boiler MACT rulemaking, EPA made clear that:

[S]etting emission standards on the basis of actual emission data alone where facilities have no way of controlling their HAP emissions would contravene the plain statutory language as well

as Congressional intent that affected sources not be forced to shut down.

69 Fed. Reg. 55218, 55233 (Sep. 13, 2004). EPA explained: "This is because the statute requires EPA to set standards that are duplicable by others." Id.

Thus, in 2004, EPA interpreted the CAA as requiring it to determine when it sets the floors whether there are technically feasible means of compliance in actual usage within the subcategory. However, in their challenge to the 2004 Boiler MACT standard before the D.C. Circuit, NRDC and the other citizens groups disputed EPA's interpretation, contending that EPA

in its responsive brief [Footnote: Environmental Petitioners' Initial Opening Brief, at 31 (June 12, 2006) (NRDC v. EPA, Case No.

04-1385).], saying:

Congress intended EPA to base its standards on the amount of emission reduction sources can achieve by the application of

some form of control, and not on the levels some source may emit simply because of characteristics of the source or its operation that cannot be replicated by others." [Footnote: Final Brief for Respondent United States Environmental Protection Agency, at 49 (Dec. 4, 2006).]

Moreover, in EPA's view, it has a duty to examine the technical feasibility of a floor:

Congress did not intend that EPA consider just the level of emissions, but rather that the Agency consider how those

emission levels are achieved and base the standard on the lowest level that can be achieved through the implementation of some sort of emission control."

Id. (emphasis added). The court, however, never decided this issue because it vacated the standard on a different ground. See NRDC v. EPA, 489 F.3d 1250, 1261 (June 8, 2007).

Manufacturers respectfully urge EPA to uphold its 2004 position. It would be arbitrary and capricious for EPA to change its 2004 approach without adequate justifiation. Further, as shown above, Congress did not authorize EPA to set a floor on the basis of emissions test data, without also determining that there are technologically feasible (as opposed to affordable) means of achieving that floor which actual usage within the subcategory has shown are available to all of the units in the subcategory given their particular basic design. If EPA were to determine that there are no such means of control across the subcategory, it would have to subcategorize further in order to group units of like design or, if that were not practicable, base the ultimate standard on a universally applicable a work practice, such as annual tune-ups, as EPA has proposed here in the case of Gas 1 units.

EPA's failure to use all available "emissions information" violates § 112(d)(3)(a)

Section 112 instructs EPA to set the MACT "floor" for existing sources in categories or subcategories with 30 or more sources at the "average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information) ...." CAA § 112(d)(3)(A) (emphasis added). In the proposal, EPA interprets this provision as requiring the MACT floor to be calculated using data from the top 12% of sources for which actual emissions testing data are available. This is an overly narrow and impermissible approach because it violates the unambiguous statutory obligation to calculate the floor using data from the top 12% of sources for which any "emissions information" is available. Specifically, there are plenty of industrial boilers and process heaters for which EPA does not have emissions testing data. However, the Agency has at least some "emissions information" from virtually all sources in the category. For example, EPA knows or can reasonably ascertain the types of fuels and emissions controls used by the vast majority of industrial boilers and process heaters in use today. This is "emissions information" that the Agency has impermissibly disregarded in selecting the group of sources that represent the top

12% of performers. In other words, the term "emissions information" unambiguously encompasses any information related to emissions – not just emissions rate information from performance testing or emissions monitoring devices.

Because at least some "emissions information" is available for virtually all sources in the category, EPA must calculate the MACT floor based on data from the best performing 12% of all sources in the category. For example, the preamble explains that EPA has identified 578 sources in the coal-fired boiler subcategory, that PM emissions testing data are available for 366 of these sources, and therefore that the MACT floor for PM for this subcategory must be based on the testing data from the top 44 sources (12% of 366). This approach is contrary to what the statute requires. Because 12% of 578 is roughly 70, and EPA has (or could reasonably obtain) some emissions information from all sources in the category, each MACT floor should be based on the average emissions limitation achieved by the best performing 70 sources.

The lowest-emitting sources are not representative of the actual performance of

the best performing boilers, and EPA should use the relative performance of air

pollution control technology to select the best performing sources

EPA has established the proposed Boiler MACT floors by equating sources with the lowest emissions for particular HAPS with best performing sources and ignoring other measures of performance that might more accurately demonstrate the best performing sources.

Section 112(d) requires the MACT floor be no less stringent than "the emissions control achieved in practice by the best controlled similar source" for new sources, and the "average emission limitation achieved by the best performing 12 percent of the existing sources," for existing sources. Section 112(d)(3). Simply put, if Congress intended the MACT floor to be no less stringent than "the lowest emission levels" achieved by sources, it could have said so. "Best controlled" and "best performing" are not with the same as "lowest emission level."

The D.C. Circuit has never required that EPA equate the "lowest emitting" sources to the "best performing" sources. See Sierra Club v. EPA, 167 F.3d 658, 661 (D.C. Cir. 1998) (section 112(d) "on its own says nothing about how the performance of the best units is to be calculated"). In its review of the 1999 portland cement MACT standards, the court endorsed a "technology approach" to setting the MACT standard, whereby EPA would use the relative performance of air pollution control technology to select the best performing sources. In rejecting the view that emissions are the only factor EPA must consider, the D.C. Circuit stated:

According to the Sierra Club, section 7412(d)(3) requires EPA to set new source floors at the lowest recorded emission level for which it has data and existing source floors at the average of the lowest twelve percent of recorded emission levels for which it has data. Nothing in the statute, Sierra Club argues, permits the Agency to set floors based on the performance of technology as opposed to the recorded performance of plants.

In resolving this issue, we do not write on a clean slate. EPA's technology-based approach to setting new source emission standards has already faced and survived a Chevron one challenge. In Sierra, 334 U.S. App. D.C. 421, 167 F.3d 658, we reviewed a new source emission standard for solid waste combustion that EPA promulgated pursuant to section 7429, which establishes emission requirements virtually identical to section 7412's. There, as here, the Sierra Club

argued that EPA's MACT technology approach to setting emission standards is unambiguously forbidden by the Clean Air Act. Sierra rejected that argument, holding that EPA may estimate the performance of the best performing units and that it was not "impossible" that EPA's methodology constituted a reasonable estimation technique. See 167 F.3d at 665.

Nat. Lime Ass'n v. EPA, 233 F.3d 625, 631 (D.C. Cir. 2000). Thus, the D.C. Circuit endorsed EPA's use of a technology-based approach that uses the relative performance of pollution control technology rather than simply looking to the sources with the lowest emissions test report to set the MACT floor.

Indeed, this was the approach adopted by EPA in the previously promulgated Boiler MACT. There, EPA recognized that while it may be appropriate in certain circumstances to consider primarily available emissions test data, such an approach was ill-suited to setting the Boiler MACT floor:

[A]fter review of the available HAP emission test data, we determined that it was inappropriate to use this MACT floor approach to establish emission limits for boilers and process heaters. The main problem with using only the HAP emissions data is that, based on the test data alone, uncontrolled units (or units with low efficiency add-on controls) were frequently identified as being among the best performing 12 percent of sources in a subcategory, while many units with high efficiency controls were not. However, these uncontrolled or poorly controlled units are not truly among the best controlled units in the category. Rather, the emissions from these units are relatively low because of the

particular characteristics of the fuel that they burn, that cannot reasonably be replicated by other units in the category or subcategory. A review of the fuel analyses indicate that the concentration of HAP (metals, HCl, mercury) vary greatly, not only between fuel types, but also within each fuel type. Therefore, a unit without any add-on controls, but burning a fuel containing lower amounts of HAP, can have emission levels that are lower than the emissions from a unit with the beset available add-on controls. If only the available HAP emissions data are used, the resulting MACT floor levels would, in most cases, be unachievable for many, if not most, existing units, even those that employ the most effective available emission control technology.

69 Fed. Reg. at 55,233 (emphasis added).

It appears that EPA's decision in the proposed rule to equate best performance with lowest emissions, rather than with any other means of measuring performance, is based on a parenthetical phrase found in the Brick MACT decision, which refers to the "best performing" sources as "those with the lowest emission levels." This isolated statement is dictum; it is not a necessary underpinning of the Brick MACT decision, nor is it supported by any other D.C. Circuit decision.

In Brick MACT, the D.C. Circuit affirmed its decision in Cement Kiln that EPA cannot redefine "best performing" to mean those sources with emission levels achievable by all sources:

But EPA cannot circumvent Cement Kiln's holding that Section 7412(d)(3) requires floors based on the emission level actually achieved by the best

performers (those with the lowest emission levels), not the emission level achievable by all sources.

Brick MACT, 479 F.3d at 880-81 (citing Cement Kiln, 255 F.3d at 861). EPA interprets this dictum (it was unnecessary to resolution of the issue before the court) to prohibit the adoption of any measure of "best performing" other than lowest emission levels. 75 Fed. Reg. 32010. This is an unnecessarily narrow view of the language in Brick MACT. For one, the Brick MACT decision did not overrule either of the Nat'l Lime or Sierra decisions, in which the D.C. Circuit approved approaches that did not simply equate "best performing" sources with "those with the lowest emission levels." Faced with demonstrably contradictory yet binding precedent, EPA has without explanation elected to follow non-binding language that would appear to place great restraint on EPA's discretion. It is arbitrary for EPA to attempt to apply its discretion in this manner when on other occasions it has repeatedly asserted its discretion to characterize "best performing" sources by criteria other than simply the lowest emission level.

Indeed, EPA has not explained why it views the parenthetical dicta in Brick MACT as legally-binding interpretation of the statutory language rather than simply an explanatory description of the yardstick for measuring "best performers" in Cement Kiln. If the D.C. Circuit has been addressing the National Lime or Sierra cases, perhaps it would have used a different description of the "best performer" that comported with EPA's approach in those rulemakings. There is simply no reason to read the Brick MACT language as globally and definitively the way EPA does here when there is an alternative interpretation that harmonizes Brick MACT with prior and still binding case law.

Furthermore, EPA's interpretation of Brick MACT collides with Section 112(d)(3) and other D.C. Circuit decisions requiring EPA to take nontechnological and nonintentional factors into consideration if they impact emissions levels achieved in practice by sources, particularly as

EPA is also advocating a "pollutant-by-pollutant" approach to setting the MACT floor. For example, if a source utilizes a technology that dramatically lowers its emissions of a particular HAP but at the same time increases its emissions of other HAPs or other air pollutants, EPA takes those factors into account when setting the MACT floor and must devise a reasonable way to address such factors in its methodology. But under EPA's current interpretation of Brick MACT, EPA would be constrained to identify the lowest emitters of that particular HAP as the best performing sources regardless of any collateral negative impacts. The CAA clearly provides EPA with much more discretion than that.

EPA itself has, since Brick MACT, acknowledged its discretion to define "best performing" sources in a manner that accounts for all the relevant factors. Though EPA modified its approach in the final rule, in its notice of the proposed Hazardous Waste combustor ("HWC") Reconsideration Rule, EPA justified using control efficiency, rather than the simplistic emissions levels, in defining "best controlled" and "best performing" hydrochloric acid production furnaces:

First, the statutory language requiring floors to be based on "best controlled" (new)/"best performing" (existing) does not specify whether "best" is to be measured on grounds of control efficiency or emission level. See Sierra Club v. EPA, 167 F.3d 658, 661 ("average emissions limitation achieved by the best performing 12 percent of units...on its own says nothing about how the performance of the best units is to be calculated"). The requirement that the new source floor reflect "emission control" achieved in practice reinforces that the standard can be determined and expressed in terms of control efficiency.

Existing floors determined and expressed in terms of control efficiency are likewise consistent with the requirement that the floor for existing sources reflect "average emission limitation achieved," since "emission limitation" includes standards which limit the "rate" of emissions on a continuous basis—exactly what the standards do here. CAA section 302(k). Moreover, where Congress wanted to express performance solely in terms of numerical limits, rather than performance efficiency, it said so explicitly. See CAA section 129(a)(4).

Solicitation of Comments on Legal Analysis, 72 Fed. Reg. 54,875, 54,884 (Sept. 27, 2007). While the HWC Final Rule hews to the unduly narrow view of the Brick MACT decision embraced by EPA here, in it EPA nonetheless observed that "Standards requiring HAP reduction of a given percent limit the emission quantity, rate, and (in any realistic scenario) concentration of the HAP and so falls squarely within the statutory definition [of emission standard]." See Reconsideration Final Rule, 73 Fed. Reg. 64,068, 64,087 (Oct. 8, 2008).

EPA takes an unnecessarily narrow view of Brick MACT, compelled neither by section 112 nor by the D.C. Circuit's opinion itself, robbing itself of the discretion to engage in an analysis that reflects reality. EPA has historically demonstrated persuasively why the Agency might in its discretion choose some other or more complex measure of what a "best performing" source is. The data here indicates that such an approach—which accounts for operational and other variability that undermines any straightforward connection between the "lowest emitters" and the "best performing" sources—would be justified.

EPA's proposal to use emissions data from fewer than five sources to determine

the existing source MACT floor for some subcategories is inconsistent with the Clean Air Act

The Clean Air Act does not allow EPA to rely on only on 1-2 data points to set limits for certain subcategories with more than 30 units in the subcategory. In order to follow Congress's intent, EPA needs to use at least the 5 lowest values to set the limits, as the Agency would be required to do if the subcategory had fewer than 30 units.

EPA explains in the proposal that "the proposed new and existing source MACT floors are almost identical [in three instances] because the best performing 12 percent of existing units (for which we have emissions information) is only one or two sources." 75 Fed. Reg. 32022. EPA further explains that, "[t]he reason we look to the best performing 12 percent of sources, even though we have data on fewer than 5 sources, is that these subcategories consist of 30 or more units." Id. The Agency believes that a "plain reading" of § 112(d)(3)(A) requires it to use the top 12% of sources for which it has emissions data for source categories with 30 or more sources, even in cases where the available emissions data are limited, such that the top 12% is represented by only one or two sources.

As a possible alternative to this approach, EPA asks for comment on whether "we should consider reading the intent of Congress to allow us to consider five sources rather than just one or two." Id. EPA suggests that, by requiring data from 5 sources to be used for source categories with fewer than 30 sources, Congress was concerned that the floor should be determined using " a minimum quantum of data." EPA posits that, if 5 is the "minimum quantum" for source categories with fewer than 30 sources, then it is natural to conclude that the "minimum quantum" should be no less than 5 source for categories with 30 or more sources." Id.

Manufacturers support EPA's proposed alternative approach of using no fewer than 5 sources in setting the MACT floor for any source category – regardless of the number of sources in the category or subcategory. Congress clearly anticipated enough emissions information to be available for larger source categories to generally cause more than 5 sources to constitute the top 12%. It makes no sense for Congress to specify a minimum number of sources for source categories with few sources, but then to create a rule that would allow for standards to be set using data from fewer than 5 sources in larger source categories. Using no less than 5 sources would give effect to the clear intention of Congress.

We also note that the word "sources" as used in the last clause of §§ 112(d)(3)(A) and (B) is ambiguous and, therefore, susceptible to reasonable interpretation by the Agency. As EPA explains in the preamble, the word "sources" might be construed to refer to all sources in the given category or subcategory. Id. However, the word "sources" in the first clause of

§§ 112(d)(3)(A) and (B) clearly refers to the sources for which EPA has "emissions information." Notably, the second use of the word "sources" in § 112(d)(3)(A) also clearly is a reference to sources for which EPA has "emissions information." So, it is reasonable to conclude that Congress intended the word "sources" to have a consistent meaning for all purposes under these specific provisions of § 112(d). In other words, the reference "30 or more sources" at the end of § 112(d)(3)(A) and "fewer than 30 sources" at the end of § 112(d)(3)(B) reasonably should be construed as a reference to sources for which EPA has emissions information. This interpretation avoids the "absurd results" described above and allows for EPA to naturally reconcile the application of §§ 112(d)(2)(A) and (B) such that the number of sources for which EPA has emissions information in a given category or subcategory dictates whether § 112(d)(2)(A) or (B) should apply.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 8

Comment: EPA violated the CAA by promulgating a standard that is neither "achievable" nor

"achieved in practice" by existing "sources"

The Clean Air Act requires EPA to examine whether emissions standards are

"achievable" and "achieved in practice" by existing sources. As Judge Williams explained:

Section 112(d)(2) calls for emissions standards that are the most stringent that the EPA finds to be "achievable," taking into account a variety of factors including cost. 42 U.S.C. § 7412(d)(2)... Section 112(d)(3) provides that the standards "shall not be less stringent" than the emission controls that have been "achieved in practice." 42 U.S.C. § 7412(d)(3) ... The "achievable" standards have come to be known as the "beyond-the-floor" standards, ... meaning, obviously, ones more stringent than the "floors" established under § 112(d)(3). The language thus embodies an assumption that standards based on achievability will be more stringent than ones based merely on past achievement.

Sierra Club v. EPA, 479 F.3d 875, 884 (D.C. Cir. 2006).

A. EPA has established emissions limits that existing sources, and even new

sources, do not and cannot achieve

As a result of the problems inherent in EPA's floor setting approach (e.g., HAP by HAP approach discussed supra) and data collection/analysis, the limits that EPA has established for many subcategories are not ones that are being achieved by any existing sources. Even more indicative of the inherent problems in the proposed rule is the fact that the record does not

establish that even new sources can be expected to be able to achieve the limits that EPA has proposed.

B. EPA cannot identify technology or techniques that exist to meet the emissions limits

EPA made no effort to determine whether there is emissions control technology that is in use in each of the various subcategories that can achieve the emissions limits that the Agency has proposed. Had EPA undertaken that required investigation, it would have found that no such emission control technology exists. There is not a single boiler in EPA's emissions database that meets each of the emissions limits that EPA is proposing in the Boiler MACT rule.

C. EPA has, thus, violated the admonition that what is "achieved in practice" and what is "achievable" must be "in accord with common sense and the reasonable meaning of the statute"

EPA has exceeded its authority under § 112 by paradoxically setting standards that are not "achievable" on the basis of emissions levels that have been "achieved" in practice by the better performing sources in the given subcategories. This outcome is an actual manifestation of what Judge Williams only hypothesized might occur in his concurrence in the "Brick MACT" decision. See Sierra Club v. EPA, 479 F.3d 875 (D.C. Cir. 2006) ("Brick MACT decision").

Judge Williams observed in his concurrence this potential problem with the § 112 standard setting procedures. He noted that § 112(d)(3) requires MACT "floors" to be based on emission controls that have been achieved in practice, while the "above the floor" analysis required by § 112(d)(2) is based on what is achievable. Taken together, he concluded that, "[t]he language thus embodies an assumption that standards based on achievability will be more stringent than ones based merely on past achievement." Id. at 884.

In his view, this creates the possibility that what has been "achieved" under § 112(d)(3) would not be "achievable" under § 112(d)(2) – i.e., "as applied to some sources, the floor compelled by the statutory language appears to be more stringent than "beyond-the-floor." Id. at 884-885. This creates the possibility that "we might be talking of a statute whose literal words produc[e] a result so demonstrably at odds with the intentions of its drafters as to justify judicial surgery." Id. at 885 (internal punctuation and citations omitted).

Judge Williams concludes, however, that "happily" we do not face such a situation because the authority to subcategorize generally should allow the Agency to make sure "the relation between 'achieved' and 'achievable' is in accord with common sense and the reasonable meaning of the statute." Id.

Unfortunately, the Agency's rationale for subcategorization in the Industrial Boiler MACT proposal does not reflect any analysis of how the proposed subcategories will help assure that what has been "achieved" by the better performers in a proposed subcategory results in a standard that is "achievable" by the other sources in that subcategory. Consequently, as illustrated above, the resulting proposed standards are not reasonably achievable by a preponderance of affected sources. This result violates EPA's obligation to determine subcategories and to otherwise structure the rule should that the requirement to set standards based performance that has been "achieved" does not overtake what is generally "achievable" by affected sources.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 9

Comment: The proposed standards are arbitrary and capricious in light of extensive data quality problems

The Clean Air Act § 112(d) requires EPA to set a MACT floor for existing sources that is not less stringent than "the average emission limitation achieved by the best-performing 12 percent of the existing sources (for which the Administrator has emissions information)." See 42 U.S.C. § 7412(d); Nat. Res. Def. Council v. EPA, 489 F.3d 1250, 1254 (D.C. Cir. 2007). The top 12% "best performing" sources are known as "MACT floor units" or "units comprising the MACT floor." Given the extensive problems discussed below with the data regarding those MACT floor units, EPA's acted arbitrarily and capriciously in proposing emissions standards.

A. EPA has not used data that is adequate to represent the actual performance of

the top 12% best performing sources. Instead, EPA improperly "cherry picked" emission test data for the top 12% to set the MACT floor

1. EPA arbitrarily and capriciously failed to collect adequate data upon

which to promulgate this rule

EPA has been working on the Industrial Boiler MACT standards in one fashion or another for better than 15 years and has been abundantly aware of the need to set these standards since the 1990 Clean Air Act Amendments were enacted almost 20 years ago. Despite this long run-up to the proposed rule, the Agency has a paucity of data available to set the existing source standards.

EPA's Tables 2 and 3 in the preamble make clear just how sparse are the data underpinning the proposed rule. Using biomass-fired boilers as an example, Table 2 shows that the subcategory includes 420 sources, yet EPA has emissions testing data on 192 units for PM, 91 units for mercury, and 92 units for HCl – 46%, 22%, and 22% data availability, respectively. The numbers are much lower for many other pollutants and subcategories. 75 Fed. Reg. 32022 – 23. The relative lack of data is a fundamental problem, because EPA construes the statute as requiring it to set existing source MACT floors based on the top performing 12% of sources for which it has data for the larger source categories and subcategories. Less data means the pool from which the top 12% is drawn is smaller and, therefore, the actual number of sources used to determine the MACT floor is smaller.

Without apparently knowing whether the limited available data is statistically representative of the entire subcategory (such that calculating the MACT floor with fewer sources would result in approximately the same value as the MACT floor using data from the entire subcategory), then it must be presumed that the lack of data likely significantly skews the true results. However, the proposed rule and supporting documentation provide no assurance that the limited available data are representative of the entire source category. As a result, we have no way to know if the available data are producing a MACT floor that is reflective of the subcategory as a whole. In fact, as discussed below, there is every indication that the data are severely and inappropriately skewed. Thus, the lack of data call into question the validity of the MACT floor determinations and resulting MACT standards.

While it is true that the statute allows EPA to determine the MACT floor based on

sources "for which the Administrator has emissions information," this provision does not excuse

EPA from using its resources and legal authority to obtain a reasonable and reliable sample and

as much information as it reasonably can prior to setting MACT standards. In this case, EPA

has had 15 to 20 years to gather the requisite information. The fact that, at this point, data on

only a small subset of sources in each subcategory is available represents an abdication of EPA's responsibility and renders the resulting standards arbitrary and capricious.

2. EPA arbitrarily and capriciously "cherry picked" the data, biasing the data toward top performers in Phase II sampling

EPA's process and approach to data collection resulted in the Agency "cherry picking" the data, with the dataset arbitrarily and capriciously biased towards top performers. During the Phase I Boiler MACT data collection effort, EPA requested and received emissions data from most of the potentially affected sources across all of the subcategories for PM, CO, NOx and many HAPs. After sifting the Phase I data, EPA developed a Phase II plan for collecting additional data, which identified the specific tests that would be required for the different HAPS. The Phase II plan consisted of two rounds of testing. The first round consisted of an outlet stack test (three runs) for PM (filterable, condensable, and PM2.5), dioxin/furans , HCl/hydrogen fluoride, mercury, metals, CO, THC, formaldehyde, NOx and SO2. In addition, six facilities (two coal-fired, two biomass-fired and two gas-fired boilers) were required to collect CO, THC and NOx CEM data over 30 operating days, and each selected unit was also required to collect and analyze the materials fed to the combustion unit during each stack test. 75 Fed. Reg. 32,010.

In selecting units for this Phase II testing, EPA targeted coal and biomass-fired boilers and any boiler that indicated that it burned waste. During this second round, however, EPA targeted only those sources whose data EPA determined it would need to set the MACT floor. Id.

In this way, EPA artificially limited the pool of data from which it drew its top 12% best performing sources. This is patently at odds with section 112(d) and with the intent of Congress in establishing this framework, which is intended to maximize the data considered by EPA. The result is completely arbitrary because EPA's sampling approach for Phase II created a dataset that is not shown to be representative of sources for which the data is being used to infer emissions for purposes of establish the MACT standards..

3. EPA arbitrarily and capriciously relied on data that does not meet the agency's own requirements for representativeness to set the MACT floors

Representativeness is the measure of the degree to which data accurately and precisely represent a characteristic of a population. Guidance on Choosing a Sampling Design for Environmental Data Collection, EPA QA/G-5S, p. 1 (U.S. EPA 2002). In Phase II of the data collection, the ICR, EPA did not randomly select sampling units, a hallmark of probability-based sampling. Rather, EPA selected sampling units based on its understanding of which sources it would likely include in the MACT floor. EPA's approach is a form of "judgmental sampling," which EPA defines at the "selection of sampling units on the basis of expert knowledge or professional judgment." Id. at p. 10. According to EPA, probabilistic sampling is preferable where EPA wishes to draw quantitative conclusions about the sampled population through statistical inferences. Id., p. 10-11. When using judgmental sampling, however, EPA states that "statistical analysis cannot be used to draw conclusions about the target population," and "quantitative statements about the level of confidence in an estimate (such as confidence intervals) cannot be made." Id. at p. 11. Yet this is precisely what EPA has done in the proposed Boiler MACT. EPA's Phase II data collection is being used incorrectly to make statistical inferences about emissions of boilers in any given subcategory overall.

This approach does not meet EPA's own standards for data quality:

Judgmental sampling has some advantages and is appropriate in some cases, but the reviewer should be aware of its limitations and drawbacks. This type of sampling should be considered only when the objectives of the investigation are not of a statistical nature (for example, when the objective of the study is to identify specific locations of leaks, or when the study is focused solely on the sampling locations themselves). Generally, conclusions drawn from judgmental samples apply only to those individual samples; aggregation may result in severe bias due to lack of representativeness and lead to highly erroneous conclusions...Using a probabilistic statement with a judgmental sample is incorrect and should be avoided as it gives an illusion of correctness where there is none.

Data Quality Assessment: A Reviewer's Guide, EPA QA/G-9R, p. 11 (U.S. EPA 2006) (emphasis added). This severe bias is evident in the MACT floors set by EPA, which were set, not by examining data from randomly-selected sources representative of the sources as a whole and then averaging the 12% best-performing sources, but rather by examining data reflecting only EPA's best guess as to the best-performing sources, and then averaging the 12% best-performing of those. This fundamentally skewed the universe of data that EPA had to consider, and it led to the arbitrary outcome of floors that are more stringent than would have resulted from a fair and random sampling of the regulated sources.

B. EPA's use of emissions data at or below the analytical detection limit introduces

an improper bias to setting the MACT floor

EPA acknowledges that data used to support this rule were often reported near or below a test method's pollutant detection capability. Thus, the Agency observes that "the inherent imprecision in the pollutant measurement method has a large influence on the reliability of the data underlying the regulatory floor or beyond-the –floor emissions limit." 75 Fed. Reg. at 32,020. EPA recognizes that when setting a floor emissions limit, "including values at or near the method detection level may not adequately account for data measurement variability." Id. Remarkably, despite recognizing this fact, EPA did not adjust the calculated floor for the data used. Id. Rather, EPA proposed a three-step process for defining a "method detection level that is representative of the data used in establishing the floor emissions limits and also minimizes the influence of an outlier test-specific method detection value." 75 Fed. Reg. at 32,201. EPA requested comment on this approach. We believe this approach is unworkable because EPA's fundamental approach to defining the detection level itself is in error.

EPA specified that in-stack detection limits (ISDL) be calculated from laboratory detection limits (as 'floor' values) and actual test run data. This approach misrepresents reality in two significant ways. First, EPA defines detection limit as the lowest value differentiable from zero, a departure from the conventional definition of a detection limit as the lowest value differentiable from a blank. Second, EPA's calculation of ISDL ignores the variability in method performance introduced by sampling and related activities, including sample train preparation and recovery. The result of using these unrealistic assumptions to calculate ISDLs are unrealistically and indefensibly low emissions estimates, drawn, as noted above from a series of tests wherein 'ND' is the most common analytical result.

In order to establish emission limits at the already low detection levels that EPA proposes, simply correcting unrealistically low lab detection limits will not produce realistic ISDLs; it is also necessary to include sampling method variability.

The entire Boiler MACT ICR project represented an enormous departure from the way source emissions testers usually work. The process lacked the usual site-specific protocol / agency approval process, agency guidance on data quality, and clear project objectives other than completing some kind of testing prior to the deadline. The result is a great many indeterminate test results, and a very small number of results useful for emissions limits determinations, making the limits determined thereby statistically suspect. As a result, EPA's entire approach, relying as it does on comparing the proposed floor to the detection limit, must be reconsidered.

C. EPA's data is rife with errors

As our members and other organizations review the data underlying EPA's proposed rule, we continue to identify notable errors that renders the data utterly unreliable and thus in violation of Clean Air Act standards. This include errors in fuel and boiler categorizations, errors in calculation of detection limits, errors in measurement techniques that render test results invalid, and others. Fundamentally, failure to correct such data errors will result in arbitrary and capricious rulemaking.

Errors have been found in data from sources that EPA has identified as "top performers." Errors in "top performer" data is particularly problematic, because that data are the foundation for EPA's calculation of MACT floors that will apply to all sources in the same subcategory emitting that pollutant. Specific examples of such data errors are specifically detailed in comments by others, but include: a top performer in the Gas 2 subcategory actually burns petroleum coke and not coke oven gas; the CO limit for biomass stoker boilers was based on top performer data from a suspension burner that was misclassified as a stoker; the dioxins/furans limit for biomass stoker boilers and coal fluidized boilers was based on data that had been reported on a Toxic Equivalency Quantity (TEQ) basis and was mistakenly corrected to its TEQ value a second time, resulting in values an order of magnitude lower; the Hg limit for biomass boilers was based on data that did not follow the required Method 29 procedures, where the source has recently asked EPA to remove data from the database.

To resolve this problem, EPA must conduct a thorough review of the database, correct or eliminate the flawed data, recalculate the MACT floors and associated proposed standards, and provide a new opportunity for public comments (including sufficient time for commenters to conduct their own comprehensive review of the data). Finalizing the proposed standards with these underlying errors would render the standards immediately indefensible. See e.g., Columbia Falls Aluminum Co. v. EPA, 139 F.3d 914, 923 (D.C. Cir. 1998) ("An agency's use of a model is arbitrary if that model "bears no rational relationship to the reality it purports to represent.")

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 10

Comment: EPA did not make MACT floor memo Excel files available in the docket for the Boiler rule until 3 weeks into the original 60-day comment period.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 10

Comment: EPA arbitrarily and capriciously failed to properly consider variability

As a general matter, Manufacturers fully support EPA's proposal to account for variability in emissions from the better performers when determining floor levels of control. Accounting for variability has been upheld as appropriate and lawful by the D.C. Circuit and, in any event, is necessary to fully characterize the performance of the sources used to set standards under § 112. However, as discussed below, EPA failed to properly address variability when it set the MACT floors.

In evaluating the emission limits achieved by existing sources, EPA is required to estimate the variability associated with all factors that impact a source's emissions, including

process, operational and non-technological variables. See Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 443 (D.C. Cir. 1980). Any method used to estimate emissions rather than actually measure them "must 'allow a reasonable inference as to the performance of the top 12 percent of units,'" and EPA must show "why its methodology yields the required estimate." Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 862 (D.C. Cir. 2001) (emphasis in original) (citing Sierra Club v. EPA, 167 F.3d 658, 663 (D.C. Cir. 1999).

EPA has acknowledged this responsibility in general and identified a number of factors that contribute to variability in emissions test data, including (1) the emission test method; (2) the emission analytical method; (3) the design of the unit and the control device(s); (4) operating conditions of the facility and the control device(s); and (5) the composition and relative amounts of fuel constituents in the fuel or flue gases. See Prop. Nat'l Emissions Std. for Haz. Air Pollutants for Electric Utility Steam Generating Units, 69 Fed. Reg. 4,652, 4,670 (Jan. 30, 2004).

A. EPA arbitrarily and capriciously failed to properly consider the full range of

variables potentially impacting emissions

EPA is correct to incorporate variability analysis into the MACT floor analysis in this rulemaking, but EPA's analysis does not appear to reflect the full range of variables potentially impacting emissions. Variability in boilers depends on price fluctuations and changing availability of various fuel types (both between fuel categories and between types of the same fuel, e.g., No. 2 oil and No. 6 oil), as well as a host of other operating and load conditions. While EPA evaluated some of these variables, it did not evaluate a sufficient number to provide "an

accurate picture of the relevant sources' actual performance." Cement Kiln Recycling Coalition, 255 F.3d at 862 (emphasis in original). For example, EPA does not have fuel quality data for all top performers, nor is it clear that has EPA made available all of the fuel quality data that it received for top performers. As a result, commenters cannot review the data to discern the relationship between the fuel quality variability for each top performer and the emissions data.

While EPA did consider a wider range of units for variability in coal, variability in coal quality occurs within individual seams and within one unit's supply, which may come from different sources, and EPA's testing did not account for this difference in fuel quality. If considering variability in fuel quality across different types of fuel within a single subcategory is too difficult, that may be an indication that EPA should subcategorize based on fuel types down to specific fuels and materials. Additional subcategorizing within fuel groups may be particularly warranted here, given that EPA has (rightfully) ruled out fuel switching, which would in any event be impossible for many regulated sources. Section 112(d)(1) authorizes the Administrator to "distinguish among classes, types and sizes of sources within a category or subcategory," and the Agency's discretion in identifying these subcategories quite broad, perhaps simply "limited by the usual ideas of reasonableness." See Brick MACT, 479 F.3d at 885 (Williams, J., concurring).

The overall lack of data magnifies another problem in EPA's approach to setting the MACT floors: EPA's analysis identifies a number of higher emissions data points that the Agency has exclude as "outliers" without providing sufficient explanation. In addition, EPA appears to have discounted "outliers" for fuel quality but not for emissions data. Without some explanation from the Agency, it is impossible for the public to determine whether this discrepancy in treatment of data is justified. For example, EPA excluded 25% of the analyzed sources in the biomass fuel category in its mercury fuel analysis variability factor outlier analysis without explaining how fully one-quarter of the sources can be statistical outliers. See ERG

MACT Floor Analysis, Appendix A-1a. Even the best performing sources occasionally have spikes. Mossville Environmental Action Now v. EPA, 370 F.3d 1232, 1242 (D.C. Cir. 2004). The D.C. Circuit has held that an accurate picture of the lowest emission limitation that has been "achieved in practice" refers to the performance of the source "under the worst foreseeable circumstances." Sierra Club v. EPA, 167 F.3d 658, 664 (D.C. Cir. 1999). In Sierra Club, the D.C. Circuit said that where a statute requires that a standard be "achievable," it must be achievable "under most adverse circumstances which can reasonably be expected to recur." Id. (citing National Lime Ass'n, 627 F.2d at 431 n. 46). "The same principle should apply when a standard is to be derived from the operating characteristics of a particular unit." Id. Again, without some explanation for why EPA has elected to exclude outliers for fuel variability, regulated sources have no way to determine whether the emissions limits proposed by EPA are achievable considering the variability in fuel quality.

As a result, EPA has calculated a multiplier factor that has an extremely low variability impact versus the 99% UPL that simply fails to account for all variables and fuel quality variability present in the top 12% best-performing units across all the subcategories, and certainly across all regulated units.

B. EPA's reliance on performance testing data arbitrarily and capriciously fails to

capture the true variability expected under actual operating conditions

EPA primarily relies on emissions testing data in determining the proposed MACT floors and corresponding MACT standards. Variability is generally accommodated by performing statistical analyses of the data to predict the upper confidence limit and, therefore, the emissions level above the straight numeric average at which the better performers might be expected to operate. For standards for "fuel related HAP," EPA additionally investigated variability associated with differences in fuel quality over time. For standards for "combustion-related HAP," EPA additionally investigated variability that might be associated with different firing rates or operating loads.

We are concerned about the particular method of accounting for variability employed by the Agency in the proposal. EPA proposes to account for both "within test" and "between test" variability by calculating the 99.9% upper confidence level of the available and relevant emissions testing data, which is calculated as the mean value of the data plus an amount equal to 3.09 times the standard deviation. In concept, such an approach may initially appear rational because setting the floor at the 99.9% confidence interval ostensibly would cause the floor to encompass virtually the entire range of emissions reasonably expected by the better performing sources from which the data were derived. In practice, however, this approach is flawed because the underlying data are not, in fact, representative of the range of expected operations and true variability that reasonably should be expected from the better performers. The reason is that the emissions data relied upon in the proposal were produced during reference method performance testing rather than during day-to-day operations.

Performance testing is required to be conducted under "representative operating conditions." See 40 C.F.R. § 60.55c(b)(1). The rules do not define the term "representative operating conditions." However, EPA's National Stack Testing Guidance suggests that such conditions: (1) represent the range of conditions under which the facility expects to operate (regardless of the frequency of the conditions); and (2) are likely to most challenge the emissions control measures of the facility (but without creating an unsafe condition). Clean Air Act National Stack Testing Guidance at 14. This guidance further defines "representative" as "normal" as it states that "The MACT program further defines representative performance as

normal operating conditions" and again when describing the performances test conditions as described above to be "under...those representative (normal) conditions...." Id.

Properly conducted, performance tests are, indeed, a reliable measure of compliance at a given point in time with the relevant standard. However, such tests typically should not be expected to reveal the true range of variability in operating conditions because sources strive to maintain rigorous, yet consistent, operating conditions during tests, between testing runs within a given testing session, and between testing sessions. As indicated by the Stack Testing Guidance, the goal of performance testing is to challenge the applicable control device or control measure to assure that compliance will be maintained under rigorous conditions. Variable operations during testing are inconsistent with the purpose and intent of such testing.

Moreover, while owners and operators may seek to conduct testing at reasonable worst case conditions to assure compliance during less rigorous conditions, it is entirely possible that operations during less rigorous conditions could nevertheless accommodate variation that would not threaten compliance with the standard, but nevertheless could be relevant when the data are used to set standards on a pollutant-specific basis rather than a unit-specific basis. As a hypothetical example, the most rigorous testing condition for HCl emissions from a given boiler

might be a feed with high halide content. Thus, it would be logical for testing to be performed under these conditions. However, other HAP constituents in the feed – such as metals – would not necessarily be at "worst case" levels during testing focused on halides. In this scenario, the testing might show extremely low levels of metals emissions, which would not necessarily reflect the higher levels of such emissions that might occur during normal operations.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 11

Comment: EPA should establish additional subcategories

A. The Clean Air Act provides EPA with discretion to subcategorize based on size,

type and class of source

CAA §112(c)(1) instructs EPA to establish "categories and subcategories" of sources for regulation under Section 112. CAA §112(d)(1) then further provides that EPA "may distinguish among classes, types and sizes of sources within a category or subcategory" when establishing MACT standards. These provisions vest EPA with the clear authority to group like units for purposes of establishing emissions limitations. EPA's subcategorization decisions, however, must turn on legitimate "class" "type" or size" distinctions as required by §112(d).

The legislative history explains what Congress meant when it authorized EPA to distinguish among sources by "class" "type" or "size." The relevant Senate Report indicates that EPA should:

[T]ake into account factors such as industrial or commercial category, facility size, type of process and other characteristics of sources which are likely to affect the feasibility and effectiveness of air pollution control technology. Cost and feasibility are factors which may be considered by the Administrator when establishing an emission limitation for a category under Section 112 . . . where a group of sources may share the characteristics of other sources in the category, the Administrator may establish subcategories for such sources.

S. REP. NO. 228, 101st Cong., 1st Sess. 166 (emphasis added).

That language has two key implications. First, it confirms that Congress' use of the broad concepts of "class" "type" or "size" was meant to allow subcategorization based on (and require consideration of) a broad array of factors. That is particularly true given Congress' open-ended statement that EPA should consider "other characteristics of sources" when grouping them for purposes of establishing emissions limits. Second, this statement confirms that, while cost issues alone may not be sufficient to require subcategorization, costs are relevant to subcategorization decisions. See also, Id. (indicating that subcategorization "wholly on economic grounds" is

inappropriate) (emphasis added). By clarifying that individual facilities may not be granted categorical waivers "based on assertions of extraordinary economic effect," id., the Senate Report confirms that the threat of severe economic consequences on a

subgroup sharing other common attributes supports subcategorization [Footnote: A related House Report confirms that cost implications are relevant to all facets of MACT regulation by providing that "MACT is not intended to require unsafe control measures, or to drive sources to the brink of shutdown." HOUSE REP. NO. 101-490, Part 1, at 328.]

Thus, §112(d)(2) authorizes (and requires) EPA to consider differences in "commercial category, facility size, type of process and other characteristics" that may affect: (1) feasibility of control technology, (2) effectiveness of control technology, and (3) costs of control. Where those factors are present, subcategorization is warranted.

B. EPA must subcategorize sufficiently to ensure that emissions limits are

consistent with the statutory scheme and achievable

EPA's ability to subcategorize is a key tool in ensuring that MACT floors are achievable. In the Brick MACT decision, Judge Williams wrote about the need to use subcategorization to avoid imposing unreasonable or unachievable MACT floors:

What if meeting the "floors" is extremely or even prohibitively costly for particular plants because of conditions specific to those plants (e.g., adoption of the necessary technology requires very costly retrofitting, or the required technology cannot, given local inputs whose use is essential, achieve the "floor")? For these plants, it would seem that what has been "achieved" under § 112(d)(3) would not be "achievable" under § 112(d)(2) in light of the latter's mandate to EPA to consider here. . . . In other words, as applied to some sources, the floor compelled by the statutory language appears to be more stringent than "beyond-the-floor."

If this were all, we might be talking of a statute whose literal words produced a result so "demonstrably at odds with the intentions of its drafters" as to justify judicial surgery. . . .

Happily § 112 is not such a statute. Section 112(d)(1) authorizes the Administrator to "distinguish among classes, types, and sizes of sources within a category or subcategory," . . . . [O]ne legitimate basis for creating additional subcategories must be the interest of keeping the relation between "achieved" and "achievable" in accord with common sense and th

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 13

Comment: The proposed "energy assessment" is flawed and exceeds EPA's statutory authority

A. EPA has exceeded its statutory authority by requiring energy assessments of entire facilities, as section 112 is focused only on sources

EPA has proposed, as a "beyond the floor" measure, to require an owner or operator of a boiler to conduct an energy assessment/audit of the entire facility where the boiler is located. This requirement overreaches EPA's statutory mandate to regulate "sources" pursuant to Section 112 of the Clean Air Act.

Section 112(d) of the Clean Air Act is focused entirely on regulation of "sources," not on "facilities." It requires EPA to set emissions standards that are "applicable to new or existing sources" § 112(d)(2). Thus, it reaches no further than the specific "sources." The "sources" at issue in this rulemaking are existing, new and reconstructed boilers and process heaters. See

75 Fed. Reg. 32049, 32063-64 (Proposed § 63.7490 and § 63.7575) [Footnote: In this rule, EPA defines each of these sources. An industrial boiler is "a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity." A commercial/institutional boiler is "a boiler used in commercial establishments or institutional establishments such as medical centers, research centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water." A process heater is "an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials." 75 Fed. Reg. 32063 - 65.] The "affected source" regulated by this NESHAP is the specified emission unit – boilers and process heaters – not the entire plant which includes the location of the emission unit. A major source is a "stationary source...that emits or has the potential to emit" some threshold amount of HAP, and area sources are "any stationary source of [HAP] that is not a major source." 42 U.S.C. § 7412(a)(1) and (2). A stationary source is any "building, structure, facility, or installation that emits or may emit any air pollutant." 42 U.S.C. § 7412(d)' 42 U.S.C. § 7411(a)(3). This is consistent with the long-established understanding of the term "affected source" as it relates to the "major source" where the affected source is located. See preamble to rule establishing the General Provisions for all NESHAPs, 59 Fed. Reg. 12,408, 12,412-13 (1994)

Limiting the regulation to the affected source is also consistent with Congress's general statutory scheme, under which EPA is to publish a list of "all categories and subcategories of major sources and area sources" of the listed HAP. §112(c)(1). EPA's published list of source categories groups every conceivable type of industrial process and process unit into a category, each of which is regulated by its own NESHAP, each published as a separate Subpart to 40 C.F.R. Part 63. Therefore, any § 112 source other than the boiler and process heater affected units for this NESHAP would be covered separately by another NESHAP. The statutory scheme does not assign duplicative source category regulations for the same unit.

By its own terms, the proposed rule provision for the energy assessment will reach far beyond the regulated source (boilers or process heaters) to impact the entire facility. The proposed regulation defines an "energy assessment" to be "an in-depth energy study identifying all energy conservation measures appropriate for a facility given its operating parameters. 75 Fed. Reg. 32064 (proposed § 63.7575) (emphasis added). Further, the energy assessment extends far beyond boilers or process heaters to the entire facility, by requiring a site to, inter alia:

(2) Establish operating characteristics of the facility, energy system specifications, operating and maintenance procedures, and unusual operating constraints,

(3) Identify major energy consuming systems,

(4) Review available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,

(5) Identify a list of major energy conservation measures,

Id. at 32014. EPA also states that the assessment must be made on the "boiler system," which EPA defines as "the boiler and associated components, such as, the feedwater system, the combustion air system, the fuel system (including burners), blowdown system, combustion

control system, and energy consuming systems." 75 Fed. Reg. 32063. Assuming arguendo that an energy assessment is properly an emission standard under section 112, it is an emission standard that is applicable to the entire facility, not just a source within a facility. Congress clearly did not intend for the Clean Air Act MACT regulations focused on clearly delineated "sources" to dictate measures regarding and changes to the operation of machinery and processes throughout an entire facility.

B. EPA has exceeded its statutory authority, as an energy assessment is not an

"emission standard... applicable to ... [a] source"

Section 112 requires EPA to establish "emission standards" for each listed source category and subcategory. §112(c)(2); 42 U.S.C. § 7412(c)(2). By definition, the identification of energy saving measures is not an emission standard. In addition, were the efficiency measures actually to be undertaken, reduced demand for the output of a regulated source is not an "emission control" technology to limit emissions from the regulated source. §112(c)(2); 42 U.S.C. § 7412(d)(3) If this were so, the text of §112 would provide no limiting principle for EPA's authority.

EPA finds justification for the energy assessment by defining it as a beyond-the-floor control technology in CAA section 112(d)(2):

Emission standards promulgated...and applicable to new or existing sources...is achievable...through application of measures, processes, methods, systems or

techniques including but not limited to measures which...reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications.

75 Fed. Reg. 32,026 (citing 42 U.S.C. 7412(d)(2)). EPA posits that "process changes, substitution of materials or other modifications" encompasses "energy assessments."

EPA's reliance on that statutory language is misplaced, as when the statute refers to "process changes, substitution of materials or other modifications" it can only be referring to the specific source. In language that EPA omitted from the preamble's justification, the statute makes clear that the beyond the floor emissions standards are ones that "applicable to new or existing sources" and are "achievable for new or existing sources in the category or subcategory to which such emission standard applies." 42 U.S.C. 7412(d)(2). Thus, EPA's statutory authority is only to mandate emission standards that are "process changes, substitution of materials or other modifications" to the source itself, not to all of the energy using components of an entire facility.

EPA has developed MACT standards that permit sources to elect to comply with pollution prevention alternatives in lieu of standards for some units and under certain circumstances. See, e.g., Pharmaceuticals Production MACT, 40 C.F.R. Part 63, Subpart GGG; National Emission Standards for Hazardous Air Pollutants for Source Categories: Pharmaceuticals Production; Final Rule, 63 Fed. Reg. 50280 (Sept. 21, 1998)(Pharma MACT). These do not, however, establish analogous precedent for the action EPA proposes in this MACT. The provisions of the Pharma MACT, for example, are a compliance alternative to compliance with the MACT standard. Here, EPA defines this as a beyond the floor MACT standard, making it not only mandatory, but also conveying the notion that sources can and must achieve by its greater stringency than the floor, greater emission reductions. In addition, the Pharma compliance alternative relates directly to the reduction of the regulated pollutants

from the same four regulated source types as those regulated by the MACT standard. Here, no such direct correlation can be made, and the assessment covers unregulated, non-emitting elements of the company's operation beyond the regulated boiler and process heater.

EPA must limit regulatory requirements to methods that will reduce HAP emissions by the regulated combustion unit itself and not to other systems, energy using systems or process areas. EPA goes beyond its authority by imposing requirements beyond the combustion unit, even covering systems not directly associated with combustion units.

C. The assessment is arbitrary because it lacks a relationship to HAP reduction, and

EPA provides no record basis demonstrating such a relationship

EPA states that "[t]he purpose of an energy assessment is to identify energy conservation measures (such as, process changes or other modifications to the facility") that can be implemented to reduce the facility energy demand which would result in reduced fuel use. Reduced fuel use will result in a corresponding reduction in HAP, and non-HAP emissions." 75 Fed. Reg. 32,026. The problem with this assertion is that in many cases it is simply not true.

The simple comparison of two boilers – one using coal and one co-firing coal and bark – demonstrates EPA's misdirection on this issue. In this example, an energy efficiency audit would show that a boiler using only coal is more efficient than a boiler using bark and coal. However, a boiler using only coal would have increased emissions.

Reduced energy does not necessarily mean reduced pollutant emissions, even if it means reduced HAP emissions from the boiler. To offer but one specific countervailing example: periodic operation of solid fuel boilers in a highly turned down mode is common among many industrial sectors, as an efficient way to manage manufacturing process energy needs. For example, industrial process boilers in the wood products industry supply steam according to the immediate demand from processes for which they are operated. These boilers operate at widely varying load levels, depending on, among other things, the amount of steam the process equipment is demanding at the time. During high turndown periods the actual HAP emission load should be lower since the total fuel load is reduced from the normal operation. Conversely, however, high CO emissions are a common occurrence to all solid fuel boilers during high turndown operation due to a combination of well-known combustion fundamentals. It is impossible to avoid these countervailing effects. EPA has recognized boiler, or burner, turndown ratio as a factor affecting performance in several contexts. See, EPA, Final Technical Support Document for HWC MACT Standards, Vol. IV, p. 3.6 (July 1999); EPA Region 6 Center for Combustion Science and

Engineering, Hazardous Waste Combustion Unit Permitting Manual, Component 1 How to Review a Test Burn Plan, p. D-5.5 (Tetra Tech Jan. 1998).

In addition to a turndown resulting in increased non-HAP emissions from the boiler, in other scenarios, reduced energy could result in increased HAP emissions from other non-combustion processes. In fact, in this proposal, EPA acknowledges that categorical assertions regarding energy-pollutant emissions relationships are not accurate, when it notes that "[i]mprovement in energy efficiency results in decreased fuel use which results in a corresponding decrease in missions (both HAP and non-HAP) from the combustion unit, but not necessarily a decrease in emissions of all HAP emitted." 75 Fed. Reg. 32,026.

EPA does not and cannot demonstrate that conducting an energy assessment will actually reduce HAP emissions. Similarly, EPA does not and cannot demonstrate that even

implementing the findings of an energy assessment, assuming EPA were to require implementation (which it does not have the authority to do), will reduce HAP reductions. EPA admits as much in the proposal, offering unsubstantiated projections of possible reductions as support:

If a facility implemented the cost-effective energy conservation measures identified in the energy assessment, it would potentially result in greater HAP

reduction than achieved by a boiler tune-up alone and potentially reducing HAP emissions (HCl, mercury, non-mercury metals, and VOC) by an additional 820 to 1,640- tons per year.

75 Fed. Reg. at 32,026 (emphasis added).

Notwithstanding no demonstrated correlation between yet-unidentified energy saving measures and projected possible HAP reduction, and no proposal to require their implementation, EPA offers this flawed syllogism: an energy assessment identifies ways to reduce fuel use; reduced fuel use will reduce pollutant emissions; therefore an energy assessment will reduce HAP emissions consistent with 112(d)(2). 75 Fed. Reg. 32026. The proposal irrationally concludes that an energy assessment will contribute to achieving the maximum HAP emission reduction. 75 Fed. Reg. 32026. In fact, an unimplemented energy assessment will not reduce fuel use, will not reduce HAP emissions, and even if implemented, will not reduce HAP emissions consistent with 112(d)(2).

D. Any possible energy and cost savings from the energy assessment cannot be

projected reliably and the proposed rule irrationally presumes such savings

EPA presumes HAP reductions and energy and energy-related cost savings from implemented energy assessments 75 Fed. Reg. 32026 (estimating HAP reductions of 820 – 1640 tons per year). Each of these presumptions is unreliable, due principally to the diversity and complexity of the source category. As described above, at some facilities, reduced fuel consumption could result in increased emissions to the facility, rendering the measures inconsistent with §112(d)(2). Alternatively, undertaking measures to reduce fuel consumption could require more costly measures to counterbalance the effect of the reduced fuel consumption, rendering the measures not cost-effective. What is clear, however, is that EPA cannot possibly project with any accuracy the ability of sources in this category to cost-effectively undertake energy efficiency measures, much less their emission impacts, cost, or other factors that the CAA requires be included in that analysis. The complete absence of data makes any such presumptions irrational.

EPA makes an unsupported assertion that "the costs of any energy conservation improvement will be offset by the cost savings in lower fuel costs." 75 Fed. Reg. at 32,026. EPA to some extent assures that this assumption will be true by defining a "cost-effective energy conservation measure" as one that has a payback period of two years or less. Id. Yet this is an artificial criterion applied with no basis or support to EPA's conclusion that the benefits of the program outweigh the costs. There is not in the record any substantiation of this point. Project justification criteria vary significantly by company, facility, product and even time of year. EPA's conclusory analysis of the cost-benefit analysis vastly oversimplifies capital expenditure decisions and artificially limits the calculus to fit the need to justify the beyond-the-floor standard. Nowhere, however, does EPA explain what provision in §112(d) or elsewhere in the CAA grants EPA the authority to mandate investment criteria for projects implemented pursuant to the energy assessments.

Even regarding the presumption of emission reductions itself, the proposal is very inconsistent. In some sections, the proposal accurately points out that if efficiency measures are implemented, fuel use is reduced, HAP emissions may be reduced and energy-related savings are realized. 75 Fed. Reg. at 32,026. Yet, in other sections, the proposal inaccurately asserts that the energy assessment in-and-of-itself will lead to emission reductions. 75 Fed. Reg. at 32,026.

E. EPA lacks authority under the Clean Air Act to compel regulated facilities to implement any measures that may be identified in an energy assessment

EPA is considering whether to require the implementation of energy saving measures and seeks comment on whether that would be "economically feasible." 75 Fed. Reg. at 32,026. EPA needn't determine the economic feasibility of their implementation, because in any event, EPA has no authority to compel sources to implement the findings.

No provision of the CAA provides EPA with the free-ranging authority to compel energy efficiency reductions at a regulated source. As discussed above, EPA has no authority to use this rule to regulate processes and equipment beyond the "source." Further, it is quite possible that an energy efficiency measure, if implemented, would constitute a "modification" that would trigger other provisions of the Clean Air Act such as PSD or new-source status under NSPS.

This is probably likely, given that the assessment is intended to identify "major" energy conservation measures. 75 Fed. Reg. 32014. If indeed major measures are identified, then a fortiori EPA lacks authority to compel their implementation, where that would effectively require additional permitting measures unrelated to the MACT implementation. EPA likewise lacks authority to compel reduced fuel use to reduce HAP emissions from the boiler, where that would cause increased HAP or non-HAP emissions from systems affiliated with or served by the regulated boiler. In instances where energy consumption adjustments could cause adverse consequences at the source, such as, for example, exceeding allowable emission limits or consuming an unacceptable amount of the compliance margin for a particular pollutant, EPA lacks the authority to compel a source to undertake such measures.

F. The energy assessment will require sources to submit data that in many cases constitutes confidential business information

A requirement that an energy assessment be conducted for energy systems served by all combustion units that are affected sources would require evaluation of confidential processes and systems. Since these evaluations and resulting information do not reflect the control of HAP

emissions, EPA has no authority to require that sources provide this information. Even if EPA were to expressly indicate that such data provided does not constitute emissions data, and may therefore be protected from dissemination as confidential business information, this approach still does not resolve EPA's lack of authority to compel its submission in the first instance. In addition, CBI protections are not absolutely protective of sensitive data, as they are discretionary and always subject to evaluation and reevaluation by EPA.

Although current CAA CBI regulations permit a source to designate information provided to EPA as CBI, the type of information EPA proposes to compel companies to report here is, by legal definition, CBI. 40 C.F.R. § 2.301(e) (allowing information to be designated as trade secret, proprietary or company confidential). Therefore, EPA should not permit competitors to force reporting entities to defend the nature of this data in an agency CBI proceeding. Whether such information constitutes CBI should not be assessed on a case-by-case basis. Instead, it

should be given categorical protection because the entire class of information EPA is seeking here constitutes CBI, it is not emissions data and its collection is outside EPA's § 112 authority.

G. If EPA decides to require an energy assessment, several features should be

amended, and cost and other beyond-the-floor impacts should be analyzed. This will require notice and comment.

1. The assessment should be expressly limited to HAP reductions at the affected industrial, commercial or institutional boiler or process heater, consistent with § 112

As discussed above, EPA has no statutory authority to use this rule to regulate processes or equipment outside the "source." Thus, any requirement for an energy assessment should be limited to the affected industrial, commercial or institutional boiler or process heater.

2. EPA must also consider impacts of the assessment, including cost and whether boiler-related HAP reductions may be offset by HAP and other pollutant increases, or other energy-consumptive measures that could occur at the facility associated with the boiler

For any beyond-the-floor requirement, the CAA requires EPA to analyze cost, non-air quality health and environmental impacts and energy requirements. § 112(d)(2). EPA purports to propose as beyond-the-floor that an energy assessment be undertaken, yet it relies on projected energy and cost benefits from implementation of the assessment. The record lacks any beyond-the-floor analysis of requiring either the assessment or its implementation, without which EPA has no basis to sustain the requirement.

EPA estimates the cost of an energy assessment to be $2500 - $55,000, depending on the size of the facility. EPA also notes that 1551 facilities would be required to perform the assessment at an annualized cost of $26 million. Based on experience with energy assessments, we estimate the cost of an energy assessment at a complex facility with multiple types of combustion equipment and systems could well exceed $100,000 since multiple types of people would be needed. The need to evaluate economic viability of changes requires engineering and cost estimates of capital expenditures and determination of return on investment or economic payback; the level of engineering assessment typically requires some level of design, thus greatly increasing the cost of the assessments and project viability determination. The EPA estimated cost in no way would cover such a level of detail. Programs developed by DOE have not extended fully throughout facilities or to the level of detail envisioned by EPA, so that comparable costs to DOE programs

are not necessarily correct. Therefore, the total cost and burden of the energy assessment requirement as proposed will be significantly higher than estimated by EPA.

3. Adoption of ENERGY STAR should not be required to replace the far more sophisticated, source-specific energy management programs already in place at regulated sources

In many cases facilities and companies have already conducted detailed energy assessments. If any energy assessment requirement is included in the final rule, regulated entities should be allowed to utilize any existing programs or assessments to the extent possible.

4. The assessment should be done by facility or company staff rather than

by contractors

The proposal would require sources to hire a "qualified specialist" "who has successfully completed the Department of Energy's Qualified Specialist Program for all systems or a professional engineer certified as a Certified Energy Manager by the Association of Energy Engineers." 75 Fed. Reg. 32026. This is an arbitrary requirement that overlooks existing regulated entity resources. Sources have at their disposal the most qualified individuals to assess the energy savings opportunities for the regulated source – those who are most familiar with the processes involved, day-to-day operations, and historic patterns of operation at the site. Sources should not be compelled to contract with outside personnel who are far less knowledgeable about the operations of the site, to assess energy conservation measures that may be undertaken. This requirement would unnecessarily increase costs and burden to the regulated entities.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 17

Comment: EPA's proposal for addressing startup, shutdown, and malfunction (SSM) emissions violates the statutory requirement that standards be "achievable"

EPA's approach to addressing startup, shutdown, and malfunction (SSM) periods in the Proposed Boiler MACT is contrary to the statute's requirement that the standards established under section 112(d) be "achievable." See 42 U.S.C. § 7412(d)(2). Furthermore, EPA's claims that the MACT standards reflect startup and shutdown periods are not supported by the record.

To address the decision in Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008), cert. denied, 2010 U.S. LEXIS 2265(2010), which vacated the exemption in 40 C.F.R. § 63.6(f)(1) and (h)(1) for SSM periods, EPA proposes emissions standards in the MACT for industrial boilers and process heaters that apply at all times, including periods of SSM. EPA claims in the preamble that startup and shutdown periods were taken into consideration when setting the MACT standards. See Proposed Boiler MACT Rule at 32,012-13. According to the preamble,

continuous emissions monitoring data from the best performing units, which include startup and shutdown periods, are used to set the floor levels in the proposed rule. See id. at 32,013. EPA further notes that startup and shutdown are part of "routine operations" and are therefore "already addressed" in the MACT standards. See id.

With regard to malfunctions, however, EPA states that these periods should not be viewed as a "distinct operating mode," and thus, emissions from these periods do not need to be factored into developing the MACT floor levels. See id. Moreover, EPA states that even if malfunctions were to be considered a distinct operating mode, it would be "impracticable to take malfunctions into account in setting CAA section 112(d) standards for major source boilers and process heaters" given that these episodes are by definition sudden and unexpected events which vary in degree, frequency, and duration. Id.

When setting standards in the early 1990's under CAA 112(d), EPA used its New Source Performance Standards (NSPS) program as a model. The section 112 standards were acknowledged by EPA to be "essentially equivalent to [section 111] performance standards" and that "unpredicted and reasonably unavoidable failures of air pollution control systems" would occur. 58 Fed. Reg. 42,760, 42,777 (Aug. 11, 1993). To address this situation, EPA adopted a similar exemption to the one in the NSPS Program for SSM events and imposed a "general duty" to minimize emissions. Thus, EPA acknowledged, as early as 1993, that SSM events are not appropriate for inclusion in a MACT standard and that an alternative approach should be used to address these situations. While the D.C. Circuit has ruled that sources cannot be exempt from complying with MACT standards, the court noted that Congress recognized in some instances that it may not be feasible to prescribe or enforce an emission standard under section 112, and so section 112(h) "work practices" or "operational" standards are available in certain limited situations. See Sierra Club v. EPA, 551 F.3d at 1028.

The D.C. Circuit also has recognized that standards based on what sources achieve must account for the limitations inherent in the technology used to reduce emissions. For example, in a case reviewing NSPS under section 111 of the CAA, Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 398 (D.C. Cir. 1973), the court acknowledged that "'startup' and 'upset' conditions due to plant or emission device malfunction, is an inescapable aspect of industrial life and that allowance must be made for such factors in the standards that are promulgated." Id. at 399. Furthermore, in National Lime Ass'n v. EPA, 627 F.2d 416 (D.C. Cir. 1980), the court noted that "a uniform standard must be capable of being met under most adverse conditions which can reasonably be expected to recur." Id. at 431 n.46. The D.C. Circuit acknowledged this same principle almost 20 years later when reviewing emission standards for new sources in the medical waste incinerator rule under section 129 in Sierra Club v. EPA, 167 F.3d 658 (D.C. Cir. 1999). In that case, while the court did not find the record sufficient to support EPA's approach for new sources, the D.C. Circuit did not object to a standard-setting approach which would account for the performance of technology under the "worst reasonably foreseeable circumstances." See id. at 665. Furthermore, the D.C. Circuit reiterated the principle in National Lime that "where a statute requires that a standard be 'achievable,' it must be achievable 'under the most adverse circumstances which can

reasonably be expected to recur.'" Id. at 665 (citing National Lime Ass'n v. EPA, 627 F.2d 416, 431 n.46 (D.C. Cir. 1980)).

EPA's MACT floor-setting approach in the Proposed Boiler MACT ignores these longstanding principles and mischaracterizes the role startup and shutdown data plays (or rather, does not play, as the case is here) in EPA's floor-setting process. As noted above, EPA claims that the agency considered startup and shutdown periods when setting the floors because CEMS data, relied on by EPA in "establishing the standards," included data from those periods. See Proposed Boiler MACT Rule at 32,012. This representation is a serious misstatement of the Agency's record. EPA does not rely on the CEMs data when setting the floors for boilers and process heaters. To the contrary, as indicated by the ERG memorandum in the docket, EPA uses test run data collected through the ICR phase II testing process, which reflect normal (often steady state) operating conditions, to set the proposed floors. See Memorandum from A. Singelton, ERG, to J. Eddinger, U.S. EPA, MACT Floor Analysis (2010) for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source at 3 (April 2010). Thus, according to EPA's own docket materials, the data used to set the proposed floors fail to account for the dynamic conditions and variable emissions occurring during startup and shutdown episodes. Furthermore, as the ERG memorandum makes abundantly clear, EPA's approach does not make use of the CEMs data (with the startup and shutdown information) in its variability analysis where it would be the most helpful in reflecting real world fluctuations in emissions. Id.

Given the absence of startup and shutdown emissions information from the test run data relied on by EPA to set the proposed standards and the difficulty of collecting data from such brief operation periods, it is appropriate for EPA to set work practices for these events for boilers and process heaters. As noted earlier, section 112(h) allows EPA to set work practice standards for situations where "it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard . . . ." CAA § 112(h)(1); 42 U.S.C. § 7412(h)(1). Gathering data from startup and shutdown periods would be challenging given the brief nature of these periods as well as the need to define the exact time period for what is considered "startup" and/or "shutdown." Moreover, the definition of "not feasible to prescribe or enforce an emission standard" is defined in the CAA as any situation where "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." CAA § 112(h)(2); 42 U.S.C. § 7412(h)(2). Startup and shutdown episodes fit with this definition and would justify the agency setting work practices to address emissions during these periods. Furthermore, a work practices approach for these periods would be in keeping with the statute's requirement that MACT standards be "achievable" as well as with the requirement that a MACT standard apply at all times.

A work practices approach for these periods also would be consistent with EPA's recently promulgated MACT standards for compression ignition reciprocating internal combustion engines (CI-RICE). See National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, Final Rule, 75 Fed. Reg. 9648 (Mar. 3, 2010). Based on comments received from stakeholders, EPA finalized work practice standards for startup because the agency determined that it was "not feasible to finalize numerical emission standards that would apply during startup because the application of measurement methodology to this operation is not practicable due to technological and economic limitations." Id. at 9656. According to EPA, applicable test methods that would be needed to measure during these events "do not respond adequately to the relatively short term and highly variable exhaust gas characteristics occurring during these periods." Id. at 9665. Furthermore, EPA determined that the cost for testing all the engines affected by the rule to get the necessary data

could be more than $1 billion. See id. Startup and shutdown periods for boilers present similar levels of testing challenges and costs.

With respect to malfunctions, as noted earlier, EPA argues in the preamble to the Proposed Boiler MACT that these periods should not be considered a "distinct operating mode" and uses this to justify not factoring these emissions into the proposed MACT standards. Considering that EPA's proposed MACT standards are supposed to apply at all times, the implication is that periods of malfunction also are covered by the MACT standards that apply during normal operations. This directly conflicts with the statutory requirement that the MACT standard be "achievable."

Given that the floor data does not consider malfunctions and that the statute requires that the MACT standard be "achievable," EPA should set work practice requirements to address periods of malfunctions as well. As noted above, section 112(h) allows EPA to set work practice standards for situations where "it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard . . . ." Similar to startup and shutdown, malfunctions fit with the situations described in the definition of "not feasible to prescribe or enforce an emission standard" as any situation where "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." Emission testing for malfunctions would be near impossible to conduct given the sporadic and unpredictable nature of the events. As noted earlier, EPA acknowledges in the preamble to the Proposed Boiler Rule that it is "impracticable" to take periods of malfunctions into account when setting emissions standards given the "myriad different types of malfunctions that can occur across all sources in the category" and that "malfunctions can vary in frequency, degree, and duration, further complicating" the standard setting process. Proposed Boiler MACT Rule at 32,013. Section 112(h) work practice standards, therefore, are well-suited to address malfunction periods and the complexities and challenges surrounding collecting data and establishing numerical standards for those events.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 21

Comment: EPA should use the "health threshold" discretion that Congress allowed under Section 112(d)(4) of the Act

In the Industrial Boiler MACT proposal, EPA acknowledges its authority under

§ 112(d)(4) to establish a health-based emissions limitation ("HBEL") for threshold pollutants in lieu of a MACT emissions limitation. However, the Agency proposes not to establish any HBEL "[g]iven the limitations of the currently available information (i.e., the HAP mix where boilers

are located, and the cumulative health impacts from co-located sources), the environmental effects

of HCl, and the significant co-benefits of setting a conventional MACT standard for HCl." 75 Fed. Reg. 32032. Nevertheless, EPA asks for comment on a wide range of issues related to the justification for setting HBELs and the method by which they should be set.

A. There are several compelling reasons for setting HBELs for HCl and manganese

in the Industrial Boiler MACT

Section 112(d)(4) is a tool that enables EPA to match the stringency of a HAP emissions limitation to the level determined necessary to fully protect human health. As a result, the standard is no more stringent and no less stringent than needed to get the job done. As EPA explains in the proposed rule, § 112(d) generally requires MACT emissions limitations to be set at a level that reflects the performance of the better performing sources in the given source category or subcategory. Section 112(d)(4) provides an alternative to this basic approach for pollutants for which a health threshold has been established. For such pollutants, § 112(d)(4) authorizes EPA to "consider such threshold levels, with an ample margin of safety, when establishing emission standards" under § 112(d).

The default technology-based method of setting MACT standards is a cookie cutter approach that can and does result in HAP emissions limitations that go well beyond what is needed to protect the public from HAP emissions. The clear purpose of § 112(d)(4) is to prevent this from happening. The legislative history of § 112(d)(4) is abundantly clear on this point. In formulating § 112(d)(4), Congress recognized that, "For some pollutants a MACT emissions limitation may be far more stringent than is necessary to protect public health and the environment."[Footnote: S. Rep. No. 101-228 (1990) at 171. As a result, § 112(d)(4) was provided as an alternative standard setting mechanism for HAPs "where health thresholds are well-established ... and the pollutant presents no risk of other adverse health effects, including cancer...." [Footnote: S. Rep. No. 101-228 (1990) at 171.]

When the first Industrial Boiler MACT was promulgated in 2004, it included health based emissions limitations for HCl and manganese. Under both of these standards, a site-specific risk assessment had to be conducted to prove that emissions from the site were low enough that human health would be protected, with an ample margin of safety. Actual emissions testing of all affected emissions points was required to verify the emissions rates used in the risk assessment. All relevant site parameters were required to be recorded in the site's Title V operating permit to provide assurance over time that public health would be adequately protected [Footnote: See, generally, 69 Fed. Reg. 55218, 55227-55228 (Sept. 13, 2004).]

In short, these health-based emissions limitations were rigorous standards that demanded accountability. At the same time these standards were a winner for affected sources because the standards would not have blindly required emissions to be reduced far below the levels needed to assure that the public was protected. It was estimated at the time that these health based standards would have saved over $2 billion in compliance costs, as compared to the technology-based standards that otherwise would have applied. The first Industrial Boiler MACT was overturned by the D.C. Circuit, but on grounds unrelated to the health based emissions limitations. Notably, in defending the health based emissions limitations, the Department of Justice concluded that, "Environmental Petitioners' claim that the statute precludes EPA from

establishing alternative standards for threshold pollutants (which petitioners mischaracterize as an exemption) is meritless." [Footnote: Final Brief For Respondent United States Environmental Protection Agency, D.C. Cir. Case No. 04- 1385 (Dec. 4, 2006) at 53-54.]

Giving full consideration to the use of health-based standards is particularly important in the wake of the series of decisions from the D.C. Circuit that have progressively limited EPA's discretion to make common-sense decisions when setting MACT standards under § 112. EPA's authority to set health based standards under § 112(d)(4) is unassailable. For appropriate HAPs and where the relevant facts substantiate its use, EPA can set health-based standards with full confidence that they will survive judicial review.

B. In light of the exceedingly stringent proposed MACT emissions limitations for HCl and metals (including manganese), it is arbitrary and capricious for EPA not to develop HBELs for these pollutants

While EPA has discretion in deciding whether to set HBELs under § 112(d)(4), the Agency cannot be arbitrary and capricious in making such a decision. The proposed HCl and PM emissions limitations for all types of industrial boilers are exceedingly stringent. Affected sources will have to spend tens of millions of dollars in order to meet the standards and, as even EPA predicts, a significant number of existing units simply will not be able to meet the standards and will be required to shut down. In addition, the work that EPA performed in support of the HBELs included in the 2004 rule demonstrates that the proposed standards are far more stringent than needed to assure the protection of public health with an ample margin of safety. The costs and burdens on affected sources and the degree of control needed to provide adequate health and environmental protection are both key factors that should be considered by the Agency in deciding whether to adopt HBELs in the Industrial Boiler MACT.

In the proposed rule, EPA completely ignores these factors. The Agency's discussion of HBELs includes no assessment whatsoever of the costs that might be avoided by adopting HBELs for HCl or manganese. As to potential effects on health or environment, EPA simply raises implementation questions and asserts a lack of information to resolve the questions. Such an approach is facially inadequate in light of the extensive policy, scientific, and technical assessment developed in support of the HBELs in the 2004 Industrial Boiler MACT standard. In short, EPA's failure to fully consider key factors that are relevant to making an informed decision as to whether HBELs should be adopted is arbitrary and capricious.

C. EPA has failed to provide a rational basis for ignoring and contradicting the findings made in support of the HBELs included in the 2004 Industrial Boiler MACT rule

EPA asserts in the proposed rule that its decision to not propose HBELs "is not contrary to EPA's prior decisions where we found it appropriate to exercise the discretion to invoke the authority in section 112(d)(4) for HCl, since the circumstances in this case differ from previous considerations." 75 Fed. Reg. 32032. In contrast to "other source categories for which EPA has exercised its authority under section 112(d)(4)," EPA explains that boilers and process heaters are more likely to be co-located with other HAP sources and are often located in heavily populated urban areas where many other HAP sources exist. Id. The Agency concludes that, "These factors make an analysis of the health impact of emissions from these sources on the exposed population significantly more complex than for many other source categories, and therefore make it more difficult to establish an ample margin of safety." Id.

These assertions fail to reflect the fact that the industrial boiler source category is one of the few categories where EPA has previously "found it appropriate to exercise the discretion to invoke the authority in section 112(d)(4)." Id. As a result, EPA has already drawn conclusions as to how to deal with possible co-location with other HAP sources and how to appropriately consider HAP emissions from other nearby sources. These are not issues of first impression generally or in the specific context of industrial boilers and process heaters. The questions have been asked and answered in 2004 in the context of notice and comment rulemaking for the industrial boiler and process heater source category.

Thus, EPA is mistaken in asserting that its decision not to propose HBELs is "not contrary to EPA's prior decisions." Id. The decision not to propose HBELs is flatly inconsistent with EPA's prior determination that HBELs are appropriate and justified for the industrial boiler and process heater source category. EPA's failure to acknowledge its prior determination and failure to explain why it has raised as questions issues that previously were resolved (such as how to consider co-located HAP sources and nearby HAP sources) render its decision not to propose HBELs arbitrary and capricious.

D. The co-benefits of collateral non-HAP emissions reductions cannot be used to justify a decision to ignore HBELs

EPA explains in the proposal that "it considered the fact that setting conventional MACT standards for HCl as well as PM (as a surrogate for metals including manganese) would result in significant reductions in emissions of other pollutants, most notably SO2, non-consensable PM, and other non-HAP acid gases (e.g., hydrogen bromide) and would likely also result in additional reductions in emissions of mercury and other HAP metals (e.g., selenium)." 75 Fed. Reg. 32032. The Agency notes in particular that its belief that the rule will result in the reduction of up to 340,000 tons per year of SO2, which it characterizes as "substantial reductions with substantial health benefits." Id. EPA asserts that Congress acknowledged the possibility that MACT standards would result in collateral non-HAP emissions reductions and, therefore, that "the Agency may consider such benefits as a factor in determining whether to exercise its discretion under section 112(d)(4)." Id.

EPA is mistaken. Consideration of non-HAP collateral emissions reductions is impermissible in setting MACT standards. Section 112(d)(2) provides an express list of factors that EPA may consider in setting § 112(d) standards – including "the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements." This list does not allow consideration of non-HAP air quality benefits, such as the co-benefits of reducing PM2.5 emissions. This restriction is an unambiguous command that EPA should not consider non-HAP air quality benefits in setting standards under § 112(d). This prohibition extends of necessity not only to rules that literally list a criteria pollutant as a HAP but also to any rule that in effect treats a criteria pollutant as a HAP. National Lime Ass'n v. U.S. EPA, 233 F.3d 625, 638 (D.C. Cir. 2000).

By basing its rejection of the health-based approach for Boiler MACT on the co-benefits of criteria pollutant reduction, EPA is in effect unlawfully treating a criteria pollutant as a HAP. EPA's action here is not the simple use of a criteria pollutant as a surrogate for a HAP, which courts have upheld as long as EPA proves the scientific underpinning of the surrogate

relationship. Id. Rather, EPA argues directly that it is the reduction in criteria pollutant emissions that causes it to reject the health-based approach. This EPA cannot do.27

EPA's sole support for its "collateral benefits" theory is legislative history -- the Senate Report that accompanied Senate Bill 1630 in 1989. But the D.C. Circuit rejected precisely the same argument in National Lime. In that case, EPA supported its argument regarding particulate matter as a surrogate for HAP metals by referring to the same Senate Report discussed above. The court rejected EPA's argument, noting that the Senate Report referred to an earlier version of the statute that was ultimately not enacted, and hence was irrelevant:

The final statute, by contrast, unqualifiedly prohibits listing a criteria pollutant as a HAP, that is, regardless of the reason. Because the comment in the Senate Report regarding PM and metals was made before the blanket prohibition upon regulating PM as a HAP was added to the statute, the report is irrelevant to our construction of 7412(b)(2) as enacted.

National Lime at 638. Similarly here, EPA cannot use the language of a Senate Report that did not reflect the language of the statute as enacted to support its co-benefits theory and rejection of the health-based approach.

Moreover, even if it were relevant, the language in the Senate Report cited by EPA appears to address only area-source GACT standards under Section 112(d)(5), and therefore is not relevant to interpretation of MACT standards under Section 112(d)(2) or the health based alternative under Section 112(d)(4). And, in the final analysis, "it is the statute, and not the Committee Report, which is the authoritative expression of the law." City of Chicago v. Env. Defense Fund, 511 U.S. 328, 337 (1994). Here, the statute clearly provides that MACT standards may address only HAPs, not criteria pollutants. See National Lime Ass'n at 638.

But, even if it were not unambiguously prohibited, consideration of non-HAP air quality benefits under § 112(d)(4) would be unreasonable. National Ambient Air Quality Standards ("NAAQS") are in place for all relevant pollutants, including ozone, SO2 , and PM. A MACT standard is a very imprecise tool for helping to attain and maintain such NAAQS because it imposes across-the-board requirements in circumstances where tailored solutions are needed. Each area has its own unique mix of sources and it own particular needs in terms of what reductions are needed and where such reductions should be achieved. SIP-based air quality programs provide the needed flexibility to design a program that effectively addresses local air quality needs. MACT standards are an unreasonably blunt instrument for dealing with non-HAP air quality issues.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

1.5 Out of Scope: Boiler Area Source

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 28

Comment: I am the Director of Environment, Health and Safety for the National Automobile Dealers Association. NADA represents over 16,000 franchised automobile and truck dealers who sell new and used motor vehicles and engage in service, repair, and parts sales. The majority of our members are small businesses as defined by SBA.

We intend to file written comments on the proposed waste identification and area source NESHAP rules that are partially the subject of this hearing. Today, I'm just going to make two points: Number 1 – These proposals should exclude used motor oil; and, Number 2 -– Over-regulating used motor oil risks increasing harm to the environment.

Since at least 1992 the used oil recycling system has been guided by the comprehensive EPA regulations set out in 40 CFR Part 279. These rules were mandated by Congress in the 1980's, and they govern how used motor oil is collected by dealerships and other vehicle maintenance facilities and how it is subsequently managed, both on site and off site. Notably, Part 279 resulted from over 10 years of careful deliberation by EPA, a process which involved the studied examination of every aspect of used oil management, including its recycling as a fuel in burners and boilers. I began working on the development of these rules in the early 1980's as an EPA enforcement attorney and have been involved with their development and implementation ever since. I can assure you that every legitimate issue of concern was raised and resolved during those many years of rulemaking.

Consequently, I find it somewhat disconcerting to see EPA devoting precious Agency resources attempting to address used oil in the context of the area source NESHAP and waste identification proposals under consideration. When the proposals were recently issued, my first reaction was what am I missing. Could EPA have determined that used motor oil poses some newly-discovered risk to human health or the environment that calls for further regulation?

Well, the answer to that question is an unequivocal no. Moreover, the fine-tuned used-oil recycling system EPA helped to foster has never worked more effectively. Virtually all used oil collected at vehicle maintenance facilities is properly recycled, with do-it-yourselfer oil more than ever finding its way into the system. In addition, the used motor oil recycled today is significantly cleaner than in the '80's and '90's due to the cleaner properties of new oil, the reduced likelihood for in-vehicle contamination, and the minuscule potential for cross-contamination or adulteration during collection and processing. Simply put, given that there is nothing broken that requires fixing, EPA should exclude used motor oil from both its identification and area source proposals.

Given that it is legal for do-it-yourselfers to change their own oil in a manner that may result in soil, water, or air contamination, EPA has long recognized the importance of requiring proper used oil management while encouraging more used oil to enter into the legitimate recycling system. Thus, EPA crafted Part 279 to help reduce the hundreds of millions of gallons of used oil that are mismanaged by do-it-yourselfers each year.

For example, 40 CFR 279.23 allows used oil collected from motor vehicles brought in for service and from do-it-yourselfers to be burned in small on-site space heaters, recognizing both the efficacy of using motor oil as a fuel in on-site space heaters and the need to encourage the recycling of do-it-yourselfer oil. Many small business vehicle maintenance facilities recycle used motor oil as a space heater fuel, and in doing so they, Number one, reduce their reliance on

comparable petroleum-based fuels, achieving significant energy savings in the process; two, they reduce or eliminate the potential for off-site management liability; and three, they enhance the collection of do-it-yourselfer used oil.

Now, any unnecessary regulatory costs or burdens imposed on dealerships and other small business facilities recycling used motor oil, such as to the imposition of testing, recordkeeping, or incineration mandates, would decrease the amount of do-it-yourselfer oil brought into the legitimate used oil recycling system, resulting in increases in the amount of such oil poured on the soil, down the drains, or into trash barrels.

Moreover, used oil sent for off-site management, whether on- or off-spec, as defined in the regs, should not be considered solid waste for purposes of triggering Section 129 incineration mandates. Part 279 distinguishes between on- and off-spec used oil for legitimate off-site blending, marketing, and burning reasons and has served to appropriately protect the environment for many years.

There is simply no environmental justification for the artificial diversion of any used motor oil to Section 129 permitted facilities. Upending the sensitive economics of the used oil recycling system predictably will result in some amount of the used oil – excuse me, of the used oil falling outside of the system. Do we really want to risk going back to the days of improper road oiling or the mixing of used oil into heating oil for inner city apartment buildings? I think not.

In conclusion, used oil properly recycled as a fuel pursuant to 40 CFR Part 279 should be considered exempt traditional fuel under the h waste identification rule and exempt from many new requirements under the area source NESHAP.

Response: This comment deals primarily with the Identification of Non-Hazardous Secondary Materials That Are Solid Waste and the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers. These comments will be addressed within those rulemakings.

The commenter also mentions space heaters. Please refer to the CISWI preamble for a discussion on space heater units.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 29

Comment: Typically, the dealerships recommendation to the dealerships is -– the NADA has recommended to the dealerships is that we segregate the do-it-yourselfer oil that people bring in and that we, if they can, do a chlorine test on it; but that's about all that we have in the way of test data.

And to the extent that they do segregate it and ship it off site, perhaps some of the transporters and processors have some data.

We would be happy to look and submit for our written comments on any data regarding pure do-it-yourselfer oil.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 30

Comment: If you look at the regulations, I think that the citation is 279.12(c) –- the regulations in 279 specifically talk about what you do with off-spec used oil. And the specifications were set back in the days when there were particular concerns for particular constituents.

And, by the way, I don't think too many of those that are in the specifications in 279 are the HAPs of concern that you seem to be focused on.

So, I would take a hard look at not only the specifications in 279 but also what's permissible with respect to -- by the way, also, off-spec oil is permissible to be processed in the on-site space heaters I was talking about.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 56

Comment: Now how could this possibly be? These are the area sources -– area sources that are not subject to any of these requirements. How many sources are we talking about and where are they?

Well, we don't know because EPA never asked. We know that there are 1,700 chemical plants that are area sources, though. Any one of these things could be burning their waste chemicals right next to a community. They would not have to control the pollution. They wouldn't have to monitor it, and they wouldn't have to tell the neighbors what they were emitting.

How many of them are there? This is where it really gets remarkable. EPA states in the area source boilers rule that it believes that not one of the more than 165,000 area source boilers is burning any secondary material, whether it's a waste or not. What's the basis for that belief? There is none. There is absolutely nothing in the record which even suggests that EPA asked what the area source boilers were burning or how much of it or how many.

The one thing that EPA does know is that lots of the major source boilers are burning materials that are unquestionably secondary materials. So that it knows that there is a large proportion in the major source boilers rule, and it has no basis to assume that the proportion in the minor source –- in the area source boilers rule isn't just as large or larger.

Well, let's just assume that only 10 percent of the 165,000 area source boilers are burning secondary materials. That means that with this proposal EPA just exempted 16,000 facilities from any significant control, monitoring, or reporting requirements. That's 16,000 communities who will be subject to a waste incinerator right next to them emitting toxics without controls that they can't find out about or do anything about. Is that really the result that EPA wants?

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 90

Comment: EPA states in its area source boilers rule that it does not believe that any more than 165,000 boilers operating any source burn any source -– secondary material, whether its defined as waste or not, according to 75 Federal Register 38 -– 31896 and 31899 from June 4th, 2010. EPA has not attempted to determine how many area sources are burning wastes or what those wastes will be. It does know, however, that many boilers and process heaters are major sources –- are burning chemicals, spent solvents, and other secondary materials as the Agency prefers to call them. Even if 10 percent of the 165,000 area source boilers are burning these wastes, EPA's proposal will exempt more than 16,000 facilities from any meaningful control, monitoring, reporting requirements.

What toxic emissions will be released by these facilities in these communities? Neither the community, people in the communities, or EPA will ever know. The emissions won't have to be monitored or reported. What EPA does know is that burning wastes in poorly controlled boilers and process heaters produce highly toxic emissions. That's why Congress enacted a special provision to ensure protective emission standards for all waste incinerators.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 15

Comment: But specific to this rule, one of the things that we are very concerned about and many members, my colleagues in the environmental justice movement are worried about, is allowing area sources to burn waste, especially the kinds of waste that have been involved, shuffled into the definition of, I guess, secondary waste that it's now going to be. And the reason for that is because area sources do not have to -- they're not part of major sources so they do not have to have a viable permit. So for an area source to start burning waste with a lack of recordkeeping, public notification, even that such a facility would be burning waste, the increased air toxics emissions which would be very -- emission limits would be very limited even here in California. These are things that concern us greatly. And I have a number of folks that are going to testify about specific, you know, types of waste-burning and specific types of situations. But, for instance, this hotel has a boiler. This hotel could burn waste. It could burn, you know, demolition waste. It could burn waste from the coal industry. It could burn spent solvents. It could burn plastics -- and without any notification of anybody in downtown L.A. And the increase in the air toxics emissions and the increased risk from those air toxics emissions, air-based, the majority has huge risks from air toxics, have not been mitigated. So I would say that there's a number of concerns that we have about the rule. But in the short amount of time, I want to underscore that that is a huge problem. There are areas of the country where increases in air toxics emissions are not at the levels that they would be here in Los Angeles. Any large city where you have concentrated air toxics emissions that are essentially mitigated or there's not a state process to reduce the risk. And in Los Angeles we have some of that going on here. We have some of the highest air toxic risks in the country. A rule like this that allows that kind of activity to occur is very, very concerning to us.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 23

Comment: Under Boiler GACT we believe EPA should not set numerical limits for CO for biomass and oil-fired boilers located at small mills, but instead set good combustion practices and tune-up requirements that will achieve the same results at a far lower cost.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 28

Comment: I'm concerned that area sources aren't more strictly regulated.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 34

Comment: As far as the Boiler MACT -- or I'm sorry, the boiler GACT rule, SierraPine operates a sander dust fuel combustible boiler located in area source of HAPs and the unit will be subject to the Boiler GACT rule. We do not offer a CEMS on the unit, so it's difficult at this point to determine the specific impact of the rule; however, we do operate CO-CEMS on two other sander dust-fired boilers at other facilities. And we know that that limit will be very difficult to meet. To reduce HAP emissions from area sources EPA's numerous options including work practice and operational standards. We encourage EPA to utilize such options in lieu of emission limits for existing biomass boilers. As should be the case with Boiler MACT, facilities should have the option to comply with the emission limits for the HAP of concern rather than the surrogate.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 58

Comment: All burning facilities must be subject to these standards and controls for air quality monitoring and reporting requirements.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 27

Comment: I'm the general manager of the American Sugar Cane League of the U.S.A., Inc., and we're commenting on the U.S. Environmental Protection Agency's -- at this hearing today for the National Emissions Standards for Hazardous Air Pollutants for Areas Source Industrial, Commercial and Institutional Boilers under Section 12(d) of the Clean Air Act. And Docket Number EPA-HQ-0AR-2006-0790 . My name is James Simon. I'm the general manager of the American Sugar Cane League of the U.S.A., Inc., which is a non-profit organization of Louisiana sugar growers and processors. League members include the remaining 11 raw sugar cane mills still operating in Louisiana, and on behalf of the League, thank you for the opportunity to testify on the EPA's proposed regulation for area source biomass boilers. Although the League will provide a more comprehensive document prior to the deadline for written comment, our goal today is to provide you with a general summary of our unique industry and to introduce our proposal for a conditional de minimis source exemption from the regulation. We also want to lend support and agreement to the comments already made and to be made by similar situated raw sugar mills in Texas and Florida regarding the proposed regulations applicable to both major and area resources . The League requests that the EPA consider a conditional exemption for biomass-fueled area sources with de minimis HAP emission limits . Not only is each Louisiana mill well below the major source threshold for HAPs, but the sum of all permitted HAPs at Louisiana mills today total only three tons per year, far below the major source threshold. Further, when only HAPs from boilers are considered, no single mill is permitted for -- is permitted for greater than half a ton per year . The League also notes that the proposed boiler rules for major and area sources are contrary to the efforts of the current administration with regards to "green" energy initiatives. The proposed rules provide for a distinctive -- provides for dis- -- provides for a disincentive for the use of renewable resources and the reduction of our dependence on fossil fuels . All Louisiana sugar mills utilize bagasse-fired boilers as the primary source of power for mill operations, with nearly 100 percent of the bagasse burned at any given mill being generated on-site. Although a couple of mills supplement the bagasse with clean wood products during initial start-up, none supplements with fuel oil or coal . Louisiana's sugar cane grinding season is relatively short lasting approximately 115 days a year. Such a short grinding season means that under the proposed regulations, our mills would be required to test each boiler three times more often than non-seasonal industries, based on total hours of operation . After each grinding season ends, our mills shut down and begin a nine-month tune-up process. Because equipment malfunctions during the grinding season, can result in tremendous loss to a sugar mill as well as -- as well as to Louisiana sugar farmers. Nearly every piece of equipment undergoes an extensive inspection, maintenance and repair program to prepare for the next season. In contrast, boilers and associated emission controlled equipment at non-seasonal industries may run continuously for years before going through a turnaround to conduct the kind of thorough and comprehensive maintenance activities that each sugar mill goes through annually . The boilers operating at Louisiana mills are equipped with a minimum of multiple cyclone dust collectors. A large majority of boilers are also fitted with hydro scrubbers,

achieving an average particulate matter control efficiency above 90 percent. The extensive inspection and maintenance process is conducted annually to ensure that boilers and associated control devices will continue to operate as efficiently as possible throughout the grinding season . The League recognizes the value in continuing to conduct these maintenance activities as a condition of meeting the de minimis exemption, the League proposes that a maintenance and repair program similar to that described above be made mandatory, along with appropriate recordkeeping and reporting requirements. The cost of compliance with the proposed rule not only threatens the survival of Louisiana's sugar industry, but does so with minimal to no measurable air quality improvements. Given the nominal total HAP emissions from Louisiana's sugar mills, EPA can meet its mandate under the Clean Air Act to protect public health and the environment without throwing such a devastating, perhaps fatal, blow to this industry . As Louisiana struggles to survive and recover from recent economic, natural and man-made disasters, we ask that the EPA adopt a more flexible approach that is scientifically sound and technically attainable, that will actually result in a measurable reduction of toxic air pollutants.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 54

Comment: Under Boiler GACT, we believe EPA should not set numerical limits for CO for biomass and oil-fired boilers located at small mills, but instead set good combustion practices and tune-up requirements that will achieve the same results at far lower cost. The solid waste definitions EPA set have the potential to seriously restrict which types of biomass may be burned for their carbon-neutral energy and which may be pushed into the waste stream.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Troy Runge
Commenter Affiliation: Wisconsin BioEnergy Initiative (WBI)
Document Control Number: EPA-HQ-OAR-2003-0119-1473.1
Comment Excerpt Number: 1

Comment: The Wisconsin Bioenergy Initiative commends the U.S. Environmental Protection Agency (EPA) for setting emission standards for biomass boilers and pushing for clean-burning systems. However, EPA's analysis of biomass boilers uses an incomplete data set and puts in

place a standard that lacks a strong field tested scientific analysis and, further, threatens to undermine energy independence goals of the United States. The following comments are made in the spirit of improving the EPA rule.

Comments to the Proposed MACT Boiler Rule

Introduction

There is overwhelming scientific evidence that current fossil-fuel dependent energy sources are unsustainable and that immediate change in the resources from which we obtain our fuels is critical. Wisconsin is one of six Midwestern states that contribute 25% of greenhouse gas emissions in the United States and 5% worldwide [See submittal footnote 1 for reference.] Due to its lack of oil, coal, natural gas and uranium, the state is far more dependent on the importation of fossil fuels than most states. Wisconsin obtains 68% of its electric energy from coal and spends $853 million annually, making it fifth in the nation in the portion of electricity derived from coal. [See submittal footnotes 2 and 3 for references.] In 2008 Wisconsin's energy bill grew to 10% of Gross State Product, a rise from 6% in 2000. As demonstrated when Governor Jim Doyle announced last year that the University of Wisconsin-Madison Charter Street Heating Plant would use a mixture of biomass (such as wood waste and agricultural residues) and natural gas, Wisconsin has strategically invested in bioenergy.

Issue

The proposed rule will have a significant impact on the EPA-estimated 400 biomass-burning boilers in the nation. Many of the biomass-fueled boilers in compliance with the original 2004 rule will not be in compliance with the new rule's more stringent emission limits. The hydrogen chloride (HCl) limit will require many biomass fuel boilers to install scrubbers or inject an alkaline sorbent such as lime. The mercury (Hg) limit would require many boilers to install powdered-activated-carbon-sorbent injection systems, although sufficient data does not exist to know whether activated carbon injection is capable of reducing mercury emissions to the levels required by the new rule. The Carbon Monoxide (CO) and dioxin/furan limits will pose additional challenges for most biomass boiler projects as little emissions testing has been conducted to understand the magnitude of these emissions or how best to control them. Therefore, the stringent emission limits may force new biomass fuel boiler projects either to significantly upgrade their existing pollution-control equipment or consider switching to natural gas. Ultimately, this additional hurdle for the use of biomass will increase the use of fossil fuels, which is counterproductive to President Obama's energy policy and Wisconsin's investment in bionenergy.

In summary, we believe the proposed EPA Boiler MACT rule has the following negative unintended consequences:

The rule may severely limit and/or potentially eliminate the use of agricultural

biomass fuels, threatening the development of a new local, renewable energy

market.

The rule may increase either the facility costs and/or agricultural biomass fuel costs

(e.g. fuel may have to be processed to remove minerals) so significantly that these homegrown fuels could not compete with imported fossil fuels like coal or natural gas.

Without agricultural biomass fuels, additional pressure would be put on wood resources (as a substitute for coal), potentially increasing the cost of woody fuels and distorting existing forest products markets, thereby threatening sustainability of harvesting.

Even for woody biomass fuels, there is not sufficient data to know whether control technologies exist that are capable of reducing mercury emissions to the level required by the new rule.

One of the goals of the state of Wisconsin and the U.S. is to help build a local energy economy by using both woody and agricultural fuels (e.g. densified prairie grasses, corn stover, etc.). In order to jump-start these businesses, the state of Wisconsin is sponsoring a new biomass boiler planned for the Charter Street Heating Plant. This boiler is just one of several projects planned for the state to generate heat and power from biomass. These projects are critical to the goal of achieving 25% of Wisconsin's energy from renewable resources by the year 2025. However, the proposed MACT standards for new biomass boilers are extremely stringent and will severely limit – if not eliminate – the ability to burn many of the biomass fuels envisioned to be developed with these projects. To understand why the Boiler MACT could create this unintended consequence a few examples of issues created are described.

Example 1) Hydrochloric acid (HCl) emissions under the Boiler MACT would require emissions to be below 0.008 lbs/MMBtu. Whereas this is achievable for wood chips or wood pellets, agricultural fuels are expected to have issues as these materials have naturally higher chlorine levels with levels that can be as high as 0.50 lbs/MMBtu for incoming material. To insure emissions are low enough for compliance the boiler will be required to remove 98.4% of the HCl produced which will be challenging without capital intensive scrubbing equipment. This will undoubtedly lead to the use of more woody fuels which have lower HCl or the replacement of biomass for fossil fuels. Woody resources are currently available in Wisconsin but purposely grown bioenergy crops and agricultural residues will be required to meet long term energy independence goals.

Example 2) Mercury (Hg) emissions from some biomass are also envisioned to be problematic, with the MACT rules for a new biomass boiler requiring emissions to be below 0.0000002 lbs/MMBtu. Whereas this is not problematic for typical biomass, woody fuels in regions polluted with mercury emissions from coal burning plants can have naturally higher mercury levels up to 10 times higher than typical biomass with incoming Hg that could be as high as 0.000012 lbs/MMBtu. To achieve the MACT emission limit 98.3% of the incoming mercury would need to be removed which may be difficult to achieve with activated carbon technology scrubbing technology due to the dilute amounts already present. The proposed MACT rule may disallow whole regions from developing new businesses in renewable biomass energy and encourage the continued use of coal fired boilers which have limits 10 times greater than biomass boilers.

Recommendations

Rather than set a national MACT standard for biomass, we suggest that the EPA consider

the following changes:

First, delay adoption of the standard for biomass until EPA has more data. The data used in setting emission limits is largely limited to one fuelstock—wood. Extremely little data is available on agricultural fuels. We need more time to learn which agricultural fuels can be grown, harvested, densified and stored, as well as the chemical interactions of biomass fuels when combusted.

Second, revise the standards for biomass. We believe new standards based on fuel type, type of boiler and type of use need to be expanded. Consider woody biomass vs. agricultural biomass, geographical variance in mercury and HCl content (some areas of the country grow wood and agricultural fuels that contain lower levels of these pollutants), and whether any control technology would reduce emissions to the new limits.

Third, EPA should set more reasonable limits that reflect the variability of operations. Boilers go through many process upsets including start-ups, shutdowns, and fuel mix changes. When the EPA relies on HAP test data from a short period of time, it is missing this inherent variability that occurs even at well-operated boilers, but is regulating boilers at those levels.

Finally, EPA should not penalize emerging biomass fuels. Several of the existing and new source limits for biomass are extremely low because the baseline of emissions is very low compared to other fuels. Emissions of mercury, dioxin and hydrochloric acid are present in very small amounts in wood and are minor sources of these HAPs, yet the costs to achieve these very low levels becomes exponentially more expensive and essential only serves to eliminate the use of these fuels.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 10

Comment: EPA Should Reevaluate Source Testing Procedures.

In the proposed Boiler MACT, Boiler GACT, and CISWI proposals, EPA proposes initial and periodic compliance tests. EPA should refine the periodic testing proposal to reduce the undue burden on owners and operators, especially in the Boiler GACT source category.

The annual Boiler GACT testing requirement is unprecedented for area sources complying with Part 63 standards applying exclusively to area sources. Nowhere in the language of § 112(k), the GACT statutory authorization, did Congress instruct EPA to regulate area sources with the same rigor as major sources. GACT standards, by their nature, should not be as stringent as MACT standards. GACT compliance demonstrations, by definition, should be less onerous than MACT compliance demonstrations. GACT sources should not be subject to any annual stack testing of any boiler. If EPA believes that periodic boiler testing is required, a frequency of every five

to ten years is adequate, given the limited resources available to the typical GACT facility.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 17

Comment: EPA's proposed rule would set a MACT standard of 3.00 x10-6 lb/MMBtu for mercury emissions from new and existing coal-fired boilers with a heat capacity greater than 10 MMBtu/hr. This proposed standard was increased by approximately 20 percent in the rounding process and thus should be reduced to 2.50 x10-6 lb/MMBtu, in accordance with the comments outlined above, but is within a reasonable range of that limit and is otherwise feasible. The CO limit for coal-fired boilers appears to be an artifact of the limited number of test results employed in the MACT floor analysis and does not reflect a MACT level of performance for these units.

Having listed this large group of boilers in order to meet the statutory requirements under sections 112 (c)(3) and 112(c)(6) that MACT standards cover 90 percent of certain HAP emissions, EPA asserts that it need not issue MACT standards for other HAPs emitted by these units because this category is not needed to meet the 90-percent requirement for those HAPs. We are concerned that EPA is likely to be challenged on this interpretation, and that an adverse decision on this issue could interfere with implementation of other parts of the rule if the MACT floor calculation must once again be revisited.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 3

Comment: The proposed MACT Standard does not acknowledge the technological differences and does not establish separate requirements for the different combustion type

categories for BTE facilities such as those that were delineated in the Major Source MACT Standard (stoker, fluidized bed, fuel cell oven, and suspension burner/Dutch oven). U.S. EPA staff acknowledged they did not have the information on the combustion types used for the-Area Source Standard for biomass. It appears that the Area Source CO Standard may have been developed relative to what fluidized bed combustors can achieve. The analysis did not take into account that there are significant technological differences among biomass combustor designs and the associated emissions. Most BTE facilities in California utilize a stoker, Dutch oven or fuel cell oven design. Any proposed standard should be based on the ability of a particular combustion technology to reasonably meet the limits established by regulation.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 4

Comment: There is no de minimis level for boilers regulated under the Area Source Boiler

Rule, meaning this rule may affect a significant number of very small boilers typically not regulated in Colorado. The State suggests EPA consider regulating small boilers (less than 10

million British Thermal Units), including boilers burning clean wood pellets, by setting an emissions standard that manufacturers must meet for all new units, and establishing criteria to streamline compliance demonstrations for certain existing units. Compliance demonstrations for existing units might be made by relying on performance testing results from units tested under representative conditions coupled with a requirement to tune the unit.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Darrell Soyars
Commenter Affiliation: Avista Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2211.1
Comment Excerpt Number: 1

Comment: Avista is concerned that the requirements of the EPA's proposed Area Source Boiler MACT Rule would apply to biomass boilers. In particular, while the proposed rule has been designed primarily to address the large population of small biomass boilers, it would apply to large biomass boilers that have significantly different operating characteristics and emissions.

Avista owns and operates the Kettle Falls Generating Station (KFGS) in northeastern Washington. KFGS is a 50 megawatt (MW) wood waste (or traditional fuel) fired boiler considered large by biomass industry standards that operates as a base-loaded, steam-electric generating power station. The boiler is a Combustion Engineering Type VU-40 spreader stoker with an approximate heat input capacity of 850 M_MBtu/hr. The traditional fuel burned in the boiler is clean wood waste from sawmills and other sources in the facility region. The wood waste is used in the boiler after size reduction as-is, with a nominal moisture content of about 45 percent. When installed in 1982, KFGS diverted wood waste material from a broad region that

was previously burned in piles or "wigwam" burners, resulting in significant air-quality improvements.

Boiler operation is monitored and controlled using an electronic boiler control system. The key components of this system include oxygen analyzers at the furnace exit, furnace pressure sensors, electronic controls for the combustion air dampers, and electronic damper controls for the forced and induced fans. This set of electronic controls enables the operator to set the required amount of combustion air into the boiler with varying load and fuel characteristics, and draw off a matching amount of flue gas so that the furnace pressure is maintained at the target level.

Emission controls for the boiler include a mechanical collector (multi-clone) and an electrostatic precipitator (ESP). The Flakt, Inc. ESP is designed to limit particulate matter emissions to 0.02 grains/dscf or better. Actual total PM (front half and back half) emissions are typically less than 0.003 grains/dscf at 7% 02. Emissions of other pollutants include nitrogen oxides (NOx) of less than 95 parts per million (ppm) at 7% 0/, total hydrocarbons (THC) of 7 ppm at 7% 02, and carbon monoxide (CO) emissions of 425 ppm at 7% 0). However, due to the varying moisture content of the wood waste burned in the boiler there can be substantial swings in the CO concentration in the boiler flue gas.

The facility is currently permitted as a major source of criteria pollutants but is not considered a major source of HAPs based on a Washington Department of Ecology MACT applicability determination dated May 25, 2005. If updated stack testing confirms the previous determination, the facility would be subject to the Area Source Boiler Rule as proposed.

From Avista's perspective this is problematic since the Area Source Boiler MACT rule is designed and geared towards reducing HAP emissions from much smaller boilers, which have significantly different operational requirements and boiler combustion characteristics than those of large boilers.

Avista has reviewed the proposed Area Source Boiler MACT Rule and submits the following specific comments for EPA's consideration:

Inappropriate Sources Were Used for Setting the MACT CO Emission Limits for Biomass Area Source Boilers

The methodology and sources used in determining the proposed MACT emission limits for CO for area source boilers were described in the EPA document EPA-HQ-OAR-2006-0790-0049.pdf (April 2010 Memorandum from Amanda Singleton, ERG, to Jim Eddinger, EPA). Based on an initial review of some of the sources used as the basis for calculating the biomass fueled biomass boiler MACT CO emission limit, Avista believes that there are a number of sources that should not have been included in the calculations. The MACT CO emission limit for biomass fueled boilers was calculated using emissions data from eight biomass fueled boilers. As discussed

below, at least two of these eight boilers (or 25% of all the boilers used) should not have been included in the MACT emission limit calculations.

Simpson Door, W4 — Biomass Boiler

The top rated emission source (Rank No. 1 for biomass fuel in Appendix A-1) used for establishing the CO MACT emission limits is a 70-year old Dutch oven boiler at the Simpson Door Co. facility in McCleary, Washington. As described in the Technical Support Document

[Footnote:Technical Support Document (TSD) and Statement of Basis Air Operating Permit Simpson Door Company May 18, 2005. Olympic Region Clean Air Agency, Olympia, WA.] for the Title V Air Operating Permit (AOP) for this facility:

The boiler is a natural draft, Dutch oven-type boiler that was installed at the facility in the early 1940s. The original design capacity of the boiler was 1000 to 1200 hp, but has since been de-rated by the current maximum steam pressure rating of 200 psi. However the current maximum available seam production capacity is limited by the current grate area of the boiler to approximately 30,000 lbs/hr. The boiler combusts wood residuals generated on-site. On occasion, Simpson needs to supplement on-site generated fuel with purchased hog fuel. The boiler is equipped with a 236 foot high by 9 foot inside diameter concrete stack. Steam pressure, flow, water temperature and stack temperature are the only boiler performance indicators monitored with instrumentation.

Additionally the TSD states:

Since the boiler does not include in-stack air pollution controls, the only ash captured is the ash that remains in the boiler combustion chamber. The combustion chamber is manually cleaned several times a year. Boiler ash is raked out and disposed of in special enclosed dumpsters. The dumpsters are periodically picked up by the local waste disposal company and hauled away to be land-filled.

Both the Title V permits (AOP) and the Technical Support Document for this emission source can be found at http://www.orcaa.oro/sections/air-operatinq-permits-aoos/.

Section 112 (d) (3) of the Clean Air Act states that the "maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar sources." It is unclear how the Simpson Door biomass boiler, a 70-year old Dutch oven with no emission controls and which has the boiler ash raked out of the combustion chambers several times a year, can be considered as a source that meets the CAA condition of being a "best controlled similar source". As a result, we do not believe that this boiler should be included in calculations for determining a MACT CO emission limit for biomass boilers

Travis Lumber #2, AK — Biomass Boiler

Another boiler used in calculating the MACT CO emission limit for biomass boilers was the Travis Lumber #2 boiler at the Travis Lumber Company in Mansfield, Arkansas (Appendix A-I, Rank No. 6 for biomass fuel). This boiler is not a biomass fueled boiler it is a biogas fired boiler. As described in the Title V permits for the facility [Footnote: The Title V permit for this source can be found at:

Intp://www. ad eq. state, ar. ustftproot/Pub/WebD a tab ases/Penrr tsOnl ine/Air/ 1 3 8 6-A0P-R4 . p cif .]:

The powerhouse consists of two biogas fired boilers designed to produce 20,000 pph of 135 psig saturated steam each....Each boiler is close coupled to a biomass gasifier that consumes green sawdust to produce the biogas that fires the boilers. The boilers are equipped with multi-cyclone type dust collectors to control particulate emissions. Flue gas is exhausted through stacks.

In the proposed Area Source Boiler MACT Rule, biogas is listed as one of the fuel types that are included in the definition of a gaseous fuel. This boiler should be classified as using gaseous fuel

not biomass fuel, and since gas-fired boilers (any boiler that burns gaseous fuel) are not subject to the proposed rule, this boiler should not be used in the MACT calculations for CO emission limits for biomass boilers.

The Simpson Door and Travis Lumber #2 boilers are sources for which information was readily available. These two sources exemplify the degree to which the EPA appears to have done its due diligence in developing CO emission limits for biomass boilers. Simply identifying a biomass boiler that has a low emission rate is not a sufficient methodology. The specific sources included for the emission calculations should be thoroughly researched to ensure they are appropriate for inclusion in such a critical calculation.

EPA did not Adequately Recognize the Differences in Boiler Design and Capacity When Setting the Proposed CO Emission Limit for Biomass Area Source Boilers

Avista does not believe that the use of a single CO emission limit of 160 ppm at 7% 0, for biomass boilers is appropriate and applicable to all types and sizes of boilers.

We suggest that EPA establish CO emission limits for different categories of boiler types, similar to what was done for the Major Source Boiler Rule. In developing the Major Source Boiler

Rule, EPA recognized that different boiler designs will have different combustion and emission characteristics and specified different emission limits for subcategories of boiler designs for each type of fuel. For biomass boilers different CO emission limits were specified for stoker, fluidized bed, suspension burner/Dutch ovens, and fuel cell boilers. These same biomass subcategories of boiler design should also be used for the Area Source Boiler Rule. The universe of boiler types that will be affected by the proposed Area Source Boiler Rule is as large, if not larger than, that affected by the proposed regulation for major sources and should be addressed in

the proposed regulation for area sources. The issue of differences in boiler design and how they affect HAP emissions was not adequately investigated in the development of the proposed rule.

It is well established that different boiler designs will have different CO emission rates. These differences are acknowledged in the EPA AP-42 Chapter 1.6 - Wood Residue Combustion in Boilers. The CO emission factors for fluidized bed combustors cells in AP-42 are three times lower than the emission factors for stoker boilers. This underscores that a single CO emission limit is not applicable to all boiler designs.

Any rulemaking should establish CO emission limits for different sizes of boilers based on heat input or ranges of heat input. Different sized boilers can have different combustion and emission characteristics. These differences should be accounted for when specifying CO emission limits for area source boilers. There is no technical basis to assume that, when using CO as a surrogate for organic HAP, the same CO emission limit for a 1 or a 10 MMBtu/hr boiler is appropriate for a 250 MMBtu/hr or larger boiler. In fact, EPA has already acknowledged that CO emission limits should be different for different sized boilers. The proposed regulations for major HAP source boilers has a CO emission limit for existing stoker biomass boilers of 560 ppm at 3% 02. If this CO emission rate is considered MACT for organic HAP from what are presumably large biomass stoker boilers, it should be considered MACT for an area source biomass stoker boiler of the same size.

Operators of larger biomass boilers who have been proactive in reducing HAP emissions from their units and reduced the HAP emissions to minor HAP source levels will now be penalized and have to reduce their CO emissions to potentially unattainable levels. Avista does not believe

that it is technically and economically feasible for a minor HAP source to reduce the CO emissions from an existing wood waste stoker boiler (greater than 300 MMBtu/hr) from 560 ppm at 3% 02 (435 ppm at 7%02) down to 160 ppm at 7% 02, roughly a 63% reduction.

The Population of Large Biomass Fueled Boilers were not Adequately Considered in Developing the Proposed Regulations

In developing emission limits for the proposed Area Source Boiler Rule the EPA did not include emission data from larger sources that are minor HAP sources. Specifically, for biomass boilers, 250 MMBtu/hr was used as an upper limit for the size of boilers that would be minor HAP sources (EPA document EPA-HQ-OAR-2006-0790-0035.pdf). Boilers with heat input of greater than 250 MMBtu/hr were presumed, in general, to be major HAP sources and not included in the MACT analysis for area sources. Based on our experience, Avista believes that there are numerous biomass fueled boilers with heat inputs of greater than 250 MMBtu/hour that are minor HAP sources that should be included in the area source MACT analysis.

The Proposed MACT CO Emission Limits for Area Source Biomass Boilers May Result in Increased NOx Emissions

By setting an emission limit for CO at 160 ppm at 7% 02 as a means of reducing organic HAP emissions, boiler operators will be forced to focus on reducing CO emissions. This may have the unintended consequence of increasing collateral NOx emissions within the bounds of their existing permits, requiring a modification to permitted emissions limits, and/or the installation of additional emission controls to maintain compliance with permit limits. Industry boiler manufacturers typically recommend that the best way to reduce CO in a wood waste stoker boiler is the use of an over-fire air system and operations at higher levels of excess air. Both of these techniques result in decreased efficiency and increased NOx emissions.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Steven A. Brink
Commenter Affiliation: California Forestry Association
Document Control Number: EPA-HQ-OAR-2003-0119-2222.1
Comment Excerpt Number: 3

Comment: The standards proposed do not consider differences in biomass boiler technology and are not achievable by the current state-of-the-art biomass stoker and fuel cell boilers. The standards need to be reconsidered by using sub-categorization as was done for Major Sources.

According to BTEC, EPA's dataset did not include a single boiler that could meet the emission limits for both Particulate Matter (PM) and Carbon Monoxide (CO), thus the standards are not appropriate. Further, BTEC indicates an absence of EPA data on smaller biomass boilers (<10 MMBtu/hr) and non-woody biomass fuels. Without a wide

range of sizes of small boilers and data capture of the utilized biomass fuel types, the sample is not representative to generate a standard(s).

BTEC also points out that the proposed standards for CO and PM are sixteen and five times lower, respectively, than recent proposed European Regulations in the same boiler size ranges. This is an indicator that the EPA proposed standards are far more stringent than necessary, and perhaps unachievable with current technology, and would lead to prohibitive compliance costs.

Last, BTEC shows that EPA has assumed that all particulate emissions from new biomass boilers are very toxic. However recent research indicates that inorganic salt emissions are five times less toxic than petroleum-derived PM (Nussbaumer T., Klippel N., Oser M., "Health Relevance of Aerosols from Biomass Combustion in Comparison to Diesel Soot Indicated by Cytotoxity Tests," 2005). Further BTEC shows EPA's health cost model does not account for lower human population density in rural areas (which is where most biomass boilers are located) creating a higher value for emissions reduction, which affects the cost-benefit analysis.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

1.6 Out of Scope: Portland Cement NESHAP

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 46

Comment: Compared to baseline estimates, United States total emissions at cement plants that burn alternative fuels decline in 2020 as follows under the Pre-publication Portland Cement NESHAP:

* Mercury declines from 2.90 mg/dscm to 1.84 mg/dscm.

* Hydrochloric Acid declines from 510 ppmv to 348 ppmv.

* Particulate Matter declines from 3,807 mg/dscm to 2,342 mg/dscm.

* Nitrogen Oxide declines from 36,817 ppmv to 26,188 ppmv.

* Sulfur Dioxide declines from 17,200 ppmv to 8,062 ppmv.

* Dioxins/Furans declines from 2.73 ng/dscm to 2.37 ng/dscm.

* Carbon Monoxide declines from 38,807 ppmv to 26,751 ppmv.

* Lead declines from 4.38 mg/dscm to 2.19 mg/dscm.

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

Commenter Name: Andrew T. O'Hare

Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 53

Comment: The Pre-Proposal Portland Cement NESHAP emission standards will force cement plants to close. Closures are expected to result in two forms. First, some plant's emissions are sufficiently high that even with the installation of emission capture systems they will not be able to meet those NESHAP standards. Second, even if a plant can technically meet those NESHAP standards, the compliance investment required may not be justified on a financial basis. In either case, PCA assumes closure of the plant.

PCA estimates that 18 plants could be forced to close due to the inability to meet the Pre-Publication Portland Cement NESHAP standards or because the compliance investment required may not be justified on a financial basis. These closures represent roughly 11 million metric tons of clinker capacity, or roughly 12% of current capacity. Of these plants, 7 burn alternative fuels and would be subject to the standards in the Proposed CISWI Rule. Each of these alternative fuel burning plants would require at least as much compliance investment to meet the more comprehensive and harsher standards in the Proposed CISWI Rule. These 7 alternative fuel burning plants are assumed to be shut down and excluded in the CISWI analysis.

Unfortunately, the process of plant closures in light of prospect of tight emission standards may have already begun. Since August 2008, seven plants with an estimated annual capacity of nearly 4 million metric tons, have been announced for permanent closure. Undoubtedly, the harsh recession contributed to the decision to close these plants. Weak cyclical demand conditions, however, would likely dictate temporary – not permanent closures. It is likely that the prospect of tight emission standards, coupled with expectation for a slow recovery in demand, contributed to decisions to permanently close these plants. According to ISIS model runs, each of these plants would have been forced to close under the EPA's Pre-Publication Portland Cement NESHAP standards. These plants are not included in PCA's estimate of NESHAP closures. If included, NESHAP expected closures would equate to 25 plants and 15 million metric tons. These plant closures include [see submittal for Figure of recent permanent plant closures submitted by commenter.]

Response: The commenter primarily discussed issues that are being dealt with within the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. To the extent that the commenter has provided these comments to that rulemaking, they will be addressed there.

1.7 Other - Out of Scope Comments

Commenter Name: Lacy Frye
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-0354
Comment Excerpt Number: 1

Comment: I was told by this website this is the email address to contact to show our outrage that they are even considering letting a Incinerator be placed in our small town. This is way to close to homes and businesses and lakes and parks for our comfort. I really hope you guys can see that and not let this company or whoever this is, put this incinerator in. Being that it is toxic chemicals into the air, I dont want to put my children, myself, or anyone in danger just from living in the area. Why cant they let the extra tree parts just biodegrade into the earth like it was meant to? Not only would it make people sick but also property values are going to go down all over because of this, how are we supposed to sell our houses if no one else wants to live by an incinerator? Please dont let them release this onto our small town!

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Perry Phillips
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0089
Comment Excerpt Number: 1

Comment: I am writing to ask if it is true that the EPA is still allowing the use of Corexit in the Deepwater Horizon oil disaster?

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Nick Bartol
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0134
Comment Excerpt Number: 2

Comment: The coal industry has received huge subisidies in the form of free or low cost dumping of heavy metals into our environment where others pay the price of poor health and high healthcare costs to address the problems that King Coal forced upon them. You know that this must stop and your organization has a federal charter to do so. Please carry out your duty, even though great courage and ingenuity will be required.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 20

Comment: I'm a chemist. I have almost 25 years' experience in the hazardous waste business, and at one point I did own a RCRA hazardous transfer facility.

Currently I'm the President of Pharmacycle, and I'm commenting on the CISWI regulations.

Just quickly, what Pharmacycle does is we collect human excrement from patients that are on OSHA regulated chemotherapy drugs. Sounds kind of gross, but it is kind of gross.

So, why would we do that? We'll get into that a little bit.

And the title of my presentation, which usually takes over an hour -– I'm going to condense it -– is called Drugs Are Chemicals, Too.

So, the EPA, and industry and people, in general, for the past 30 years have divided pharmaceuticals and industrial chemicals into two different categories. Pharmaceuticals being medicines and good for the environment and good for people, and industrial chemicals being bad and nasty, which is kind of –- if you look at what the chemical structures are, most industrial chemicals are designed to not react with the environment -– paints, coatings –- they're designed to be resistant to the environment -- where a pharmaceutical is designed to have a specific effect on the human body.

So, we really should care what happens with these pharmaceuticals. And with these regulations on solid waste, I know from personal experience that if it was not a RCRA hazardous waste, we sent it to a non-RCRA landfill or to a non-RCRA incinerator across the board.

Anything came in, easiest way make sure it's not a RCRA which was from 1976. So regulations haven't quite kept up with the amount of chemicals that have been invented in the last 20 or 25, or 35 years.

So this regulation we have 165,000 pharmaceuticals coming into an incinerator, and we're testing for nine that come out, which it's impossible to test for all the chemicals that come out, but there are some common sense things that we need to look at.

The types of chemicals that we at Pharmacycle handle are OSHA regulated hazardous drugs. I don't know if anybody's familiar with the OSHA Hazardous Drug Policy. Most of these drugs are cytotoxic drugs. Most of the treatments are for chemotherapy. These chemicals were invented during World War II as chemical warfare agents, and they're now used to treat cancer.

And the way these drugs work is that being cytotoxic, they'll break into the cancer cell; they'll attack the DNA; and they'll break off the chromosomes. So when the cancer cell splits, it's been mutated. We no longer have a cancer cell. What we have, we really don't know, but we've cured cancer.

If it's a hair cell, it's no longer a hair cell. We've cured hair. Your hair falls out. And it works on skin cells and fast-growing cells.

So, there's an issue with how nasty these chemicals are. We have -– some of the pictures I like to use is –- this is a picture from Chemical and Engineering News; and it's a guy in a spacesuit making a chemotherapy drug called doxorubicin. So we've got guys in spacesuits that make these pharmaceuticals [See EPA-HQ-OAR-2003-0119 for picture submitted to the docket.]

We have pharmacists that are in Level 3 biological safety cabinets that are not allowed to be exposed to these materials preparing the drugs at a dose at some points that are at the nanogram per liter. I'll get back to that in a minute.

So once this is prepared, the nurse is given a splash shield and gloves and a hazmat suit and injects it into the patient where the patient is sent home to excrete the -– most of the medicine.

The analogy I like to use is if you take a vitamin and you haven't taken a vitamin in awhile and you go to the bathroom a couple hours later, it looks like you ate your highlighter. Well, that's the vitamin passing through your body unaltered. That happens with any sort of a pharmaceutical –- anything you take.

So if you've got a drug that has a very low absorption rate like a cytotoxic drug that's being made by a guy in a spacesuit, handled by a pharmacist in a Level 3 biological safety cabinet, handled by a nurse in a hazmat suit, injected into the patient, we should care what happens to this drug all the way through the process.

The guy in the spacesuit has a suit contaminated with materials. It's not a RCRA regulated drug. Where does it go? Solid waste incinerator. The pharmacist -– I don't know how you make a nanogram per liter -– there is no real scale. What you'd do is you'd start with a known amount of the material; then you dilute it. It's called serial dilutions.

So that pharmacist in the Homer Simpson-like glovebox is diluting this material to a nanogram per liter or a part per trillion. What happens to those dilutions? Well, it goes to solid waste incinerators. It's not regulated.

The tubings, the pipes -– they go to incineration. So we have a chemical that is so toxic that the absorption rate is less than one percent, and it's administered at a nanogram per liter.

An analogy I like to use is if you had a trillion one dollar bills and you stacked it like a deck of cards and you turned it sideways, the trillion would go from Boston to the middle of Ohio. And you take that one part per trillion and you inject it into a patient, and only one cent gets into the body. And that one cent that gets into his body makes his hair fall out and nearly kills him. Ninety-nine percent of it passes through the body. We should care what happens to this chemical all along the process. That's why we at Pharmacycle, we collect the sheets that get sweat and your shirts and materials that –- and your urine and your feces, and we do not send them to a solid waste incinerator because we don't know what's coming out the other end.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 72

Comment: Students at Virginia Tech have been working to transition from the current coal-fired steam plant on their campus to clean renewable energy by 2020. The student organization, Virginia Tech Beyond Coal, has grown in numbers and influence on campus through consistent public education of the health and economic issues of burning coal for energy. The campaign is contacting the university administration to begin finding a solution for ending coal use on its

campus. We expect that a similar campaign may be taken up at UVA to move their campus off coal and avoid jeopardizing the health of their students, faculty, and the larger community.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Joseph Breazeale
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0637
Comment Excerpt Number: 1

Comment: Thank you for doing what should, what must be done. If only we could get China to convert to lower carbon and mercury emitting power sources we would accomplish even more. The fight is going to be a long, but necessary one.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Richard Kommrusch
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0804
Comment Excerpt Number: 1

Comment: we need a fee on carbon and a rebate to the people.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Joseph & Rita Wooten
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0839
Comment Excerpt Number: 1

Comment: I live in NC where Duke Power reigns. Hazardous air quality, toxic coal ash dumps and pools that break their dams and get into our water. Surely here in the South solar energy could meet a good portion of our electricity needs. Perhaps it would even be cheaper in the long run than cleaning up coal messes and hidden costs such as those for people who have asthma, C.O.P.D., and other breathing disorders exacerbated by the burning of coal (and oil). I have never seen a cost comparison that includes dealing with the hazards of coal, including mountain

top removal and the poisons in coal ash. With these hazards, the illnesses they create and exacerbate, and the hidden cost of more carbon being released into the atmosphere, isn't it possible that solar power and wind generated electricity may actually be cheaper? What value do you put on a person's health (probably not much until it is your own health that is damaged).

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Cristina Iorga
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0937
Comment Excerpt Number: 1

Comment: Also, please check http://www.theorionproject.org/en/index.html

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Robert Miner
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0721
Comment Excerpt Number: 1

Comment: Despite the very small murcury contamonation thret to the envirnment and the populationfrom Amaluum fillinga the American Dental Association in general, and the New Jersey Dental Association as an example, through its "Best Practices Program," has done more to reduce

the minimal Hg contamination threat then the federal and state governments.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 1

Comment: Earthjustice has more than 220,000 supporters across the country. And in the coming weeks we will be asking them to submit comments on the proposed emissions standards for boilers, process heaters, incinerators and the definition of solid waste. These comments today are general comments on all four proposals. In the meantime, more than a hundred of our supporters

who live in and around L.A. wanted to share comments with you today but couldn't make it to the hearing in person. I'd like to read some of these comments now. Scott McKinsey, Los Angeles, California: The health of L.A.'s residents must be a greater priority to the EPA than corporate inconvenience or profit reductions. Our economy always recovers, but our children sometimes don't. J. Christine Schneider of Los Angeles, California, says: As a physician I witness the ill effects of air pollution in my patients. It is a huge public health issue, not only in regards to the compromised health of millions of individuals, but also in terms of health care costs. Please forge ahead with regulations that will continue to decrease the level of toxic pollutants in the area. Nadja West of Hemet, California, says: I lived in Los Angeles for 23 years and though I have never smoked, I now have terminal lung cancer. I didn't use drugs, medicinal or otherwise, live with a smoker or indulge in any unhealthy practices. I had an interest in nutrition and ate well. No one else in my family has had lung cancer, but they didn't live in L.A. Please reduce air pollution in an effective way, quickly. Rhonda Mumphrey of Lakewood, California, says: I am currently under a doctor's care for having metal poisoning. I have a ten-year-old that I would like to protect from this. Even as I go through my treatments, I can see nearby factories spewing chemicals into the air. The EPA is supposed to protect us from big polluters. Jeanne Fobes of Newport Beach, California, says: I am a grandmother who is terribly concerned about the air quality that my grandchildren are and will be breathing. Two of them have multiple chemical sensitivity, probably, as a result of toxins in their air and in their food and who knows where else. We must take seriously our obligation to clean up our environment, especially the air we breathe. Please don't let anything deter you from this effort. Hank Schlinger of Burbank, California, writes: Dear EPA, my wife is pregnant with our first child and I would like him to grow up in a city with cleaner air. Please maximally reduce emissions of toxic air pollutants like mercury, lead, and dioxins from boilers, process heaters, and incinerators. Rebecca Barker of Glendora, California says: It only takes one loophole, like the fact that thousands of facilities may burn solid waste without safeguards to protect public health, to poison the air we breathe every day. I strongly encourage the EPA to close such loopholes and ensure that the public has mechanisms in place that will allow communities to be informed of emission activities in the area. Informed communities are safe communities. Kirk Margo of Granada Hills, California, says: Don't let big polluters trash our lungs and endanger the health of our hearts. It's time to clean up this city and this great country we all live in. Diana Woods says: We as Americans depend on, rely on, and fully expect the EPA to do the job they were created to do and create and enforce strict regulations for these corporate polluters. And finally, Craig Kleber of Los Angeles, says: Our air is our health. Mr. Cleber's words, simple as they are, couldn't be more true. Our air is our health and we desperately need you, the protectors of air quality, to make sure we can keep breathing. The important work of the EPA is nothing short of the nexus between the health of the public and the industries whose operations endanger it.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Gene Killway
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0945
Comment Excerpt Number: 1

Comment: Also help develop cars that will not run on gasoline.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Greg Snyder
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0777
Comment Excerpt Number: 1

Comment: I realize it's probably a separate issue, but is the EPA going to soon officially revise its standards and policy on biomass incinerators? These plants are not carbon neutral as was previously thought and they should be held to the same pollution control standards as other similarly functioning types of power plants.

Please revise the standards and controls on biomass incinerators soon. Some of the elected officials in the state of Washington want to build several of these plants and they are currently not required to do anything at all to protect the people from the horrible pollution they generate.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Edith Borie
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0615
Comment Excerpt Number: 1

Comment: The heat from these facilities could be used to produce electricity. This should be required, and the local utilities should be required to purchase it at a fair price.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 45

Comment: Our organization was founded over 15 years ago when we found out we had two superfund sites in our backyard. I think at that time people believed that government officials and regulators were doing their jobs, and if these facilities were dangerous, then we wouldn't be allowed to be near them or they wouldn't be allowed to be near us. And what we found was a lot of us don't even know that proceedings like this are going on unless you happen to be connected to a network like we are and you have some good mentors who can help you navigate some of

these important rule-makings and some of the legislation that goes on in Sacramento with all of these lobbyists just really pushing for greed and what their needs are and really not looking at what we've done to our plant as a whole. And we've spent a lot of our time, when we're not working on our own community issues, trying to look at policy issues that can effect change; change that maybe won't come to communities that don't have such a fantastic youth that want to be involved and directors and assistant directors who can spend a great deal of their time away from their families and working on issues that, quite honestly, somebody should have been taking care of a long time ago. Regardless, we're here. We're here now and we offer elbow grease and brain-storming sessions and ways that we can change the direction that we're going in as a society, and what we're doing to our plant. Our planet is devastated. Especially here in the Los Angeles area, we can't have any more air pollution. We need to keep working on the reduction. We're never going to reach attainment. And we have shenanigans going on down here where people are making up this pollution trading thing-y so that they can, you know, sneak a new emission industry facility here, a new one there.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 47

Comment: My husband is a small business owner, so it's not like I'm not business-owner friendly, but we don't need people having a free reign at what they decide is something to put into our air or not, and to simply trade off one source of pollution for another. You've heard many people talk about -- these emissions just don't disappear. They end up in our lungs and in our children. On the way down here we were trying to explain to our youth a little bit about what these hearings are about. And I explained that I'm pretty much an old woman now, you know. And some of the impacts that I might receive, I'm probably going to outlive them. But these guys know and that's what we're talking about. We can't necessarily go back and recover some of the damage that we've caused but we can stop. We can stop and we can remember that the planet has much more time for other people besides ourselves. And that doesn't even really get into the other species that try to share this planet with us. We will continue to spend a great deal of our resources and our time away from our communities, but please resist the industry's pressure and implement the protected measures that we need in our communities. We need someone watching the hen house and it certainly shouldn't be the fox.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 1

Comment: I represent Earthjustice, a non-profit environmental law firm dedicated to protecting the magnificent places, natural resources, and wildlife of this earth, and to defending the right of all people to a healthy environment. I'm here on behalf of our 200,000 supporters who want clean air and strong protections, but were not able to attend today's public hearing. We sent an e-mail to our supporters asking them to comment on the U.S. Environmental Protection Agency's Emissions Standards for Boilers and Process Heaters and Commercial Industrial Solid Waste Incinerators . We have received thousands of responses, and continue to hear from our supporters who want the strongest regulations possible to guaranty clear air in Houston and surrounding areas. I'd like to take a few comments our supporters sent to us to deliver to you . A.J. Franklin, Houston, Texas: "As a long-time Houston, Texas resident, I am concerned about effects of our polluted air. It is hard enough to work and earn a living without having to worry that your family will have their health damaged by loopholes in the law. As a senior citizen, I would like to live my retirement years here in Houston without respiratory problems." Rodney Derbigny, Sugar Land, Texas: "Clean air is critical to health of all beings. Without clear air, not only do people suffer from debilitating ailments such as asthma, bronchitis, allergic reactions, et cetera, but poor air quality affects the environment in an multitude of ways. As a resident of the greater Houston area, the air pollution has been a long-time problem and menace to the residents and the environment. Please do everything in your power to establish and enforce regulations to clear the air in Houston and the surrounding areas. The regulations and changes need to be implemented immediately, not gradually enforced over years to come. Thank you in -- in advance for your efforts to bring cleaner air to Houston and this country as a whole." K. Craig Iles, Port Arthur, Texas: "As a lifelong asthmatic, caused by the oil refineries, chemical plants, and incinerators in Port Arthur where I grew up, I can personally speak to the horrible suffering the little children are condemned to with dirty polluted air. Grandmothers, aunts, uncles all died of cancer as did my father, who had colon cancer. Please make us proud of the EPA and our current administration by doing the right thing for the benefit of the citizens." Karon Allen, Cypress, Texas: "As someone who lives in Harris County, Texas, I fully understand the need for cleaner air. It does no good to produce an economy that destroys our environment." Carina Lobel-West, Houston, Texas: "For our childrens' childrens' future lives, and all that lives and breathes this air, please reduce emissions of toxic air pollutants from industrial boilers!" Anne Utech, Houston, Texas: "I can always tell when I return to Houston from a long trip -- the acrid smell of Houston is distinct and depressing. When I am gone more than a couple weeks, returning to Houston can give me flu-like or allergy-type symptoms, neither of which I routinely suffer from. The best thing about leaving Houston for a weekend or other trip is being able to breathe deeply without -- without that very distinct smell or feeling that you're breathing bad air. Please don't let it get any worse." Lisha Doucet, Houston, Texas: "Thank you for your recent plans to reduce emissions of toxic air pollutants like mercury, lead, and dioxins from industrial boilers, process heaters, and incinerators, but I think you could have gone much further. Please consider strengthening your standards to protect health." Dianne Travis, Richmond, Texas: "Houston has a disproportionate share of people with breathing difficulties. Children with asthma are commonplace now. Some parts of Houston simply stink from the fumes of incinerators." Karen White, Houston, Texas: "Dear EPA, Houston has become a cesspool in terms of air quality and unhealthy water. This can be changed but not without you taking your job seriously and working for the highest good." Maria Gelat, Kingwood, Texas: "Dear EPA, It is unbelievable to me that in this day in age, people have to fight corporations to have their right to breathe unpolluted air.

Do these corporate CEO's have children, grandchildren? Do they ever listen to scientists, or do they like to stay ignorant?" Finally, I'm wearing a T-shirt that read, "Don't Trash Our Lungs." It's as simple as that. Thank you.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 15

Comment: Trees are the most powerful contractors of carbon on earth. The paper industry does more to store carbon than any other industry. Forests and forest products absorb and store enough carbon dioxide to equal 10 percent of annual carbon emissions in the United States. This is who we are. We are American workers trying to survive.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 24

Comment: Trees are the most powerful concentrators of carbon on earth. The paper industry does more to store carbon than any other industry. Carbon is stored within the product; paper, boards, wood and furniture. More trees are planted to help manage the forest, and these new trees help absorb carbon. Forests and forest products absorb and store enough carbon dioxide to equal 10 percent of the annual carbon emissions in the U.S. On average, paper and wood product mills generate 65 percent of their own energy needs from renewable biomass. Our increasing use of renewable energy has allowed the industry to reduce its use of carbon-intensive fossils fuels and purchased energy per ton of product 19 percent since 2000. This industry has continually increased efforts to recover recycled paper which saves space in landfills, reduces methane emissions and minimizes waste. The forest products industry is the leading producer of carbon neutral renewable biomass energy and produces more energy from biomass than all the energy produced from solar, wind, and geothermal sources combined . This is who we are, but most importantly, we are American workers trying to survive. We hunt, fish, and love the environment. We all want clean air, we also believe in the balance between protecting the environment and preserving American jobs. We believe this balance can be reached.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 39

Comment: I don't know if anybody noticed today, but we actually have an ozone warning today. It's something that happens a lot in the city. It's something that will decrease with these new standards for local area plants. Also, by allowing for these standards, benzine, a known carcinogen, will increase in our air pollution. Cancer rates have been on the rise for the past couple of decades. This will not help to aleve the situation.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 41

Comment: Although it is not known exactly what caused the asthma that I had as a kid, I was hooked up -- or I had to use an oxygen breathing machine for several years when it was the worst. I -- I had to go through, you know, two or three inhalers at a time. And I eventually did grow out of it and now only have cold or exercise-induced asthma. And it is proven that ozone and other particulates and -- or particulates in other airborne pollutants and chemicals have a strong connection to asthma, I don't have any particular documents to cite for that, but I believe it is readily available to the public . And, you know, having grown up as one of the -- that was affected by asthma, I can say that it is not pleasant and definitely hinders your ability to develop, when you lose hours and days of school and these types of things.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 45

Comment: I'm alarmed and concerned by the proposed deregulation of emission controls and redefinition of solid waste. We've already experienced the negative. Results are attributed to deregulation in this country. Watching our banks fail and living through the recession, which I think is better described as a depression, yeah, has exemplified the great need for accountability in all American industries . I no longer trust big business, corporations, industry. My short life experience in education has shown me that they don't always have my best interest at heart.

White collar crime is so prevalent that it was offered as a course at my Alma mater, which is St. John's. We need the Environmental Protection Agency to protect us from the dangerous and harmful pollutants that industry creates. I don't think there's a price that can be put on human health. There are some things that money can't cover up and fix; a great example being the oil spill. BP can't write a check yet to fix that.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 64

Comment: So a couple of months ago, the EPA had a similar panel meeting here to discuss raising the ozone standards for the entire region. There were only three in the entire country and it was awesome to hold it here, because obviously Houston has some of the worst air quality in the entire country, and we have a lot of people living in this city that have asthma and upper respiratory diseases, and it's because you can't breathe the air . And I think everybody in this room can acknowledge that, and so when we came here, we went out into the neighborhoods around the Hobby Airport, which is where there's a ton of pollution. I mean, if you take 45 southbound, you're gonna hit about -- I mean, there are oil refineries, there are petrochemical plants, and these places are already pretty unregulated, as far as what they're allowed to pump into the atmosphere that we're expected to be able to breathe . And so we went out into neighborhoods trying to get people to come to the meeting and write letters discussing the ozone standards, and we generated hundreds of letter from even like small children who said, you know, "I have asthma," or, "I have lung cancer." And so the ozone standards were raised for Houston, so thanks for doing that. So what I find ironic is that we're now discussing, you know, letting industries that make billions of dollars that could easily just fix their machinery or do -- you know, they don't need -- they could easily be spending money on improving the way that they do their business, the way that they pump toxic crap into our air, but they don't want to spend that money . They want to make more money by, you know, just saying, oh, well, never mind. We'll just deregulate it so these people won't know what we're dumping into their air whether or not it's mercury, lead, arsenic, dioxins, stuff that we all know causes birth defects and cancer . I mean, I don't -- I don't understand how that is an acceptable compromise at all. We've already raised the ozone standards. Why would we let these companies put more junk into our air and not have it be regulated at all. People living near those places where they're going to be doing this aren't the rich people that live in Houston and River Oaks; they're people that live in small houses and pay rent and, you know, can't -- can't always afford buy their kids -- like, do we have to start buying our kids gas masks pretty soon? I mean, these people can't afford to do that. So they're the ones that are really at risk here, and I think their public health and safety is worth a lot more than a couple of million dollars for a refinery we or petrochemical company that makes more profit in one year than anybody in any of those neighborhoods combined. So yes, that's pretty much all I have, and I think also we need to start talking about corporate responsibility in a way that makes sense . You know, these are industries that -- they -- they're

accountable to their shareholders before the public. And I mean, obviously, we can look at BP and the Chevron spill, and all these events that are happening. And it's because, for years, we've said, "Oh, well. Don't worry. Just take care it yourself. We trust you." So I don't understand why we would be doing more of that. We need to be -- have more regulations, not less. We need to make sure that they're held accountable, and so doing this -- saying, hey, burn whatever you want, just call it fuel so that nobody will know what it is, I understand how that makes no sense and I think it's a ridiculous idea, so don't do it.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 89

Comment: In the City of Port Arthur, Texas, we have an incinerator facility called Veolia, and for the last three or four years, Veolia has been petitioning our federal government very hard, our military, Office of Defense, to bring in mustard gas contaminated waste to burn in the City of Port Arthur. Port Arthur is home to at least 20 refineries, small and large, and we are being disproportionately impacted at this particular time and have been for over 50 years. Veolia is an incinerator facility and they propose to burn mustard gas in our community once again . Two years ago, they brought in VX nerve gas from back east to burn in the City of Port Arthur; we protested that, but still, it was -- it fell on deaf ears, and they brought it in anyway. This incinerator has no way of measuring the toxicity level of this mustard gas. They have no way of proving that all the mustard gas is 99.99 percent destroyed, other than models that they have used. Port Arthur has a disproportionate number of people in it with severe respiratory problems, and most of the time, when people die in our community, it's because of cancer . Enough is enough already. Port Arthur is disproportionately impacted, and so is the Louisiana area.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: J. Wainwright
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1189
Comment Excerpt Number: 1

Comment: I am very concerned about the rising levels of pollution in all areas of our lives, especially air pollution. I recently learned that our neighborhood in Portland, OR., across the street from Grant High School, is in the 17th percentile for polluted air related to nearby industry. A study done by USA today using an EPA model ranked the air quality for schools across the United States. This model did not include the pollution from nearby freeway traffic so

our air quality is even worse than the study would indicate. This is a nice neighborhood, so it was quite a surprise to read the study's results.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Kevin P. Bundy
Commenter Affiliation: Center for Biological Diversity
Document Control Number: EPA-HQ-OAR-2003-0119-2144.1
Comment Excerpt Number: 1

Comment: Re: Inventory of U.S. Greenhouse Gas Emissions and Sinks Dear Mr. Hockstad:

The undersigned organizations respectfully submit the following comments on the United States Environmental Protection Agency's ("EPA") Inventory of U.S. Greenhouse Gas Emissions and Sinks (the "Inventory").

EPA's inventory document repeats a pernicious assumption that has profound consequences for both the climate and the nation's forests: the assumption that biomass combustion is "carbon neutral." EPA recognizes, as it must, that the combustion of biomass and biofuels produces CO_2 and other greenhouse gases. Yet EPA declines to include these emissions in national totals "because biomass fuels are of biogenic origin."1 According to EPA, "[i]t is assumed that the carbon (C) released during the consumption of biomass is recycled as U.S. forests and crops regenerate, causing no net addition of CO_2 to the atmosphere."2

As described in detail below, scientists have concluded that this assumption represents a critical error in EPA's climate accounting methodology. This error pervades all of EPA's biomass calculations, but it is especially glaring as applied to facilities that burn woody biomass from tree plantations, forest thinning projects, or fire salvage projects. Promotion of new and expanded biomass energy facilities predicated on this assumption is beginning to threaten both the ecology of the nation's forests and the stability of the world's climate. EPA thus should revise the Inventory to eliminate reliance on the "carbon neutrality" assumption and should adopt accounting methods that

1 U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2008; Public Review Draft (March 9, 2010), Ch. 3 (Energy) at 1.

2 Id. (emphasis added).

accurately measure emissions from both biomass combustion and associated land use change on time scales relevant to climate protection efforts.

I. Scientists have identified critical errors in EPA's carbon accounting methods.

Recent scientific work has identified a "critical climate accounting error" in the EPA's inventory method: namely, its failure to account accurately for carbon emissions associated with biomass and biofuels in the land use sector.3 Specifically, EPA's accounting "erroneously treats all bioenergy as carbon neutral regardless of the source of the biomass, which may cause large differences in net emissions. For example, the clearing of long-established forests to burn wood

or grow energy crops is counted as a 100% reduction in energy emissions despite causing large releases of carbon."4

Energy generated from biomass reduces greenhouse gas emissions "only if the growth and harvesting of the biomass for energy captures carbon above and beyond what would be sequestered anyway."5 Scientists thus believe that the better solution is to focus first on carbon emissions from the smokestack, and then to factor in emissions and reductions associated with land use change. According to Searchinger, et al. (2009):

The straightforward solution is to fix the accounting of bioenergy. That means tracing the actual flows of carbon and counting emissions from tailpipes and smokestacks whether from fossil energy or bioenergy. Instead of an assumption that all biomass offsets energy emissions,

biomass should receive credit to the extent that its use results in additional carbon from enhanced plant growth or from the use of residues or

biowastes. Under any crediting system, credits must reflect net changes in carbon stocks, emissions of non-CO_2 greenhouse gases, and leakage

emissions resulting from changes in land-use activities to replace crops or timber diverted to bioenergy.6

Such accounting also must include site-specific and regional analysis of energy generation, distribution, consumption, and demand trends sufficient to support any conclusion that biomass generation will actually offset fossil-fired generation. As discussed below, moreover, proper accounting also demands that the short-term impacts of biomass combustion be considered especially significant in light of the long time period required for resequestration of released carbon. Accurate accounting is absolutely critical to determining whether smokestack emissions from biomass combustion can be treated as "carbon neutral" in the manner proposed by EPA.

3 Timothy Searchinger, et al., Fixing a Critical Climate Accounting Error, 326 SCIENCE 527 (2009).

4 Id. at 527. As described in more detail below, this error is not limited to situations where forests are cleared entirely or converted to energy crops; rather, this error also infects analysis of the carbon impacts of thinning existing forests for biomass fuels.

5 Id. at 528.

6 Id.

II. The Carbon Neutrality Assumption Ignores the Critical Time Lapse Between Present Carbon Dioxide Emissions and Future Carbon Sequestration.

The claim that biomass combustion is "carbon neutral" because biomass is "biogenic" is both false and dangerous, primarily because it ignores the fact that carbon emitted during biomass combustion may remain in the atmosphere for decades or centuries before being resequestered. The claim thus ignores the critical temporal relationships between present carbon emissions and the future effects of global warming and climate change. In other words, because meeting (or exceeding) atmospheric CO_2 targets has a strong temporal element, the time that it takes for CO_2 released into the atmosphere today to be reabsorbed is of critical importance in assessing the climate impacts of carbon emissions, regardless of their "biogenic" origin.

Scientists agree that "[t]he amount of carbon sequestered by forest ecosystems plays an important role in regulating atmospheric levels of carbon dioxide."7 The removal and processing of forest biomass reduces storage in forest carbon pools and results in short-term emissions of greenhouse gases, even when some of that biomass remains sequestered for a period of time in commercial forest products.8 According to recent studies, "[t]ypically 30–50% of the harvested C is lost in manufacturing and initial use, a loss that is larger than could be expected from even the most extreme forest fire."9 Where harvested biomass is combusted for energy, rather than processed into wood products, short-term emissions are necessarily far greater, and long-term sequestration in forest products is eliminated altogether.

Thinning and post-fire salvage operations reduce the future carbon sequestration potential of a given forest stand by removing trees that otherwise would have continued to draw CO_2 from the atmosphere.10 This is true even for projects that are intended to reduce fuel loads in order to lessen the potential severity of future wildfires. One recent study concluded that "fuel removal almost always reduces C storage more than the additional C that a stand is able to store when made more resistant to wildfire. . . . [I]t is inefficient to remove large amounts of biomass to reduce the fraction by which other

7 Tara Hudiburg, et al., Carbon Dynamics of Oregon and Northern California Forests and Potential Land-Based Carbon Storage, 19 ECOLOGICAL APPLICATIONS 163, 163 (2009).

8 See id. at 176-77 (discussing carbon storage reductions associated with shorter rotations and emissions caused by logging); see also Mark E. Harmon, et al., Modeling Carbon Stores in Oregon and Washington Forest Products: 1900-1992, 33 CLIMATIC CHANGE 521 (1996) (concluding that harvesting for sawtimber results in sequestration of only about 60% of carbon previously stored in forest pools).

9 Mark E. Harmon, et al., Effects of Partial Harvest on the Carbon Stores in Douglasfir/Western Hemlock Forests: A Simulation Study, 12 ECOSYSTEMS 777, 778 (2009).

10 See Brooks M. Depro, et al., Public Land, Timber Harvests, and Climate Mitigation: Quantifying Carbon Sequestration Potential on U.S. Public Timberlands, 255 FOREST ECOLOGY & MGMT. 1122 (2008) (concluding that eliminating timber harvest on public lands would increase forest carbon storage capacity by roughly 40-50% over "business as usual").

biomass components are consumed via combustion."11 Another recent study confirms that significant amounts of carbon remain sequestered in forest pools even following a high-intensity wildfire.12 Surveys of the world's most carbon-dense forests, including the moist temperate conifer forests of North America, have confirmed that the greatest accumulations of carbon biomass occur in the absence of human land-use disturbance.13

Removal of forest biomass also affects long-term carbon storage in forest soils. Thinning and harvesting operations can reduce carbon inputs to soils and stimulate soil respiration, resulting in both reduced soil sequestration and near-term emissions.14 Some studies have shown that forests remain net sources of carbon emissions for more than a decade after logging operations, primarily due to increased soil respiration.15 Fuel treatments that change the amount and composition of decomposing forest biomass can influence long-term below-ground carbon storage.16

The time between harvest and complete reabsorption of lost carbon by a forest stand can extend into hundreds of years. For example, one recent study concluded that even assuming perfect

conversion of biomass to energy and a one-to-one displacement of fossil-fired generation, it still took from 34 to 228 years for western forests to reach carbon neutrality for biomass used directly for energy generation, and between 201 and 459 years if the biomass was converted to biofuels (the ranges depending upon the characteristics of the trees, forests and fire return intervals).17 Accordingly, because forest biomass utilization is not carbon neutral in the near term, the near-term effects of carbon emissions associated with biomass combustion must be considered.

It is well established as a matter of science and policy that in order to avoid the worst impacts of global warming and climate change, global temperatures must not be allowed to exceed 2°C over pre-industrial levels.18 Whether we exceed the 2°C threshold depends on the level at which atmospheric CO_2 levels are eventually stabilized. The greater the CO_2 levels, the greater the risk of exceeding this threshold and triggering

11 Stephen R. Mitchell, et al., Forest Fuel Reduction Alters Fire Severity and Long-Term Carbon Storage in Three Pacific Northwest Ecosystems, 19 ECOLOGICAL APPLICATIONS 643, 652 (2009); see also CHAD HANSON, THE MYTH OF "CATASTROPHIC" WILDFIRE: A NEW ECOLOGICAL PARADIGM OF FOREST HEALTH (2010).

12 Garrett W. Meigs, et al., Forest Fire Impacts on Carbon Uptake, Storage, and Emission: The Role of Burn Severity in the Eastern Cascades, Oregon, 12 ECOSYSTEMS 1246 (2009).

13 See Heather Keith, et al., Re-evaluation of Forest Biomass Carbon Stocks and Lessons from the World's Most Carbon-Dense Forests, 106 PROC. NAT'L ACADEMY OF SCI. 11,635 (2009).

14 Robert Jandl, et al., How Strongly Can Forest Management Influence Soil Carbon Sequestration?, 137 GEODERMA 253, 257-58 (2007).

15 Id. at 258.

16 Mitchell 2009 at 652.

17 Mitchell 2009 at 651.

18 J. Hansen, et al., Target Atmospheric CO_2: Where Should Humanity Aim?, 2 OPEN ATMOS. SCI. J. 217 (2008).

likely catastrophic climate changes. The probability of overshooting 2°C is as follows according to Hare and Meinshausen (2006) 19:

85% (68-99%) at 550 ppm CO_2 eq (= 475 ppm CO_2) 47% (26-76%) at 450 ppm CO_2 eq (=400 ppm CO_2) 27% (2-57%) at 400 ppm CO_2 eq (= 350 ppm CO_2) 8% (0-31%) at 350 ppm CO_2 eq

According to these scientists, "[o]nly scenarios that aim at stabilization levels at or below 400 ppm CO_2 equivalence (~350 ppm CO_2) can limit the probability of exceeding 2°C to reasonable levels."20 But in order to achieve stabilization levels that avert the worst impacts of climate change, emissions must peak by about 2015, and must decline very rapidly thereafter.21

In short, minimizing CO_2 emissions in the next few years is critically important to meeting climate targets, even if some of all of that CO_2 might in theory be reabsorbed from the atmosphere in the decades or centuries to come. The science makes clear that the time frame for resequestration of CO_2 emitted from forest biomass combustion is on the order of decades or centuries, not years. Indeed, in evaluating carbon emissions from other biofuels, independent scientists have begun to develop strategies for evaluating the carbon impacts of biofuels in

relation to the high social and environmental cost of short-term emissions.22 Even EPA has begun to recognize the importance of this temporal analysis in other contexts.23 Short-term CO_2 emissions from woody biomass combustion are thus significant—not "neutral"—in the context of efforts to avoid the worst impacts of climate change, and should be treated as such in both environmental analysis and air permitting decisions. EPA's failure to acknowledge this fact in the context of the annual emissions inventory is arbitrary and unsupportable.

19 B. Hare & M. Meinshausen, How Much Warming Are We Committed To and How Much Can Be Avoided?, 75 CLIMATIC CHANGE 111 (2006).

20 Id. at 137.

21 See IAN ALLISON, ET AL., THE COPENHAGEN DIAGNOSIS: UPDATING THE WORLD ON THE LATEST CLIMATE SCIENCE 9 (2009); see also M. den Elzen & N. Höhne, Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilisation targets, 91 CLIMATIC CHANGE 249 (2008).

22 See M. O'Hare et al., Proper Accounting for Time Increases Crop-Based Biofuels' Greenhouse Gas Deficit Versus Petroleum, 4 ENVTL. RESEARCH LETT. 024001 (2009) (applying discount rate to account for importance of early emissions).

23 See U.S. EPA, EPA Lifecycle Analysis of Greenhouse Gas Emissions from Renewable Fuels (2009) ("[T]he time horizon over which emissions are analyzed and the application of a discount rate to value near-term versus longer-term emissions are critical factors").

III. Logging for Biomass Combustion Is Potentially More Harmful to the Climate and the Forest than Natural Fire.

Although EPA does not specifically mention it, another common justification for treating forest biomass as "carbon neutral" is that if not removed and burned for energy, wood is likely to burn up in forest fires, resulting in both uncontrolled carbon emissions and substantial ecological damage. Once again, recent scientific analysis has shown this premise to be false in terms of both carbon accounting and forest ecology.

Combustion of trees, brush, and litter in forest fires releases carbon emissions. Yet the emissions from fires may be far lower (and far fewer live trees may be killed) than previously believed, depending upon forest type and fire intensity.24 Carbon lost in fires also may rapidly be resequestered by early successional species following disturbance.25 Furthermore, recent scientific studies call into question the entire enterprise of removing (and burning) biomass in order to avoid carbon emissions associated with wildfire:

[F]uel removal almost always reduces C storage more than the additional

C that a stand is able to store when made more resistant to wildfire. Leaves and leaf litter can and do have the majority of their biomass consumed in a high-severity wildfire, but most of the C stored in forest biomass (stem wood, branches, coarse woody debris) remains unconsumed even by high-severity wildfires. For this reason, it is inefficient to remove large amounts of biomass to reduce the fraction by which other biomass components are consumed via combustion.26

Accordingly, it is not accurate to assume that carbon emissions from biomass combustion would have occurred in the forest anyway, on the same time scales and to the same degree, as a result of fire. Indeed, biomass energy generation ensures that forest biomass is converted into carbon dioxide on a very short time scale, whether or not similar emissions would have occurred as a

result of fire, and regardless of whether logging is as effective as natural succession in facilitating sequestration of those emissions. Once again, these detailed questions must be answered before any particular biomass energy project can claim to be "carbon-neutral."

Current scientific work also indicates that fire, even the high-intensity variety, is a natural event that we should accept and encourage, not attempt to forestall through speculative, intensive, and destructive logging projects aimed at "forest cleaning" or "fuel reduction."27 The dead trees left standing after a high-intensity fire provide critical wildlife habitat as well as soil nutrients that encourage rapid growth of early successional species. Moreover, unlike emissions produced in biomass energy facilities, carbon in standing dead trees and forest floor pools remains sequestered for a long time following

24 See, e.g., Meigs 2009.

25 See id. at 1260-61.

26 Mitchell 2009 at 652.

27 See generally Hanson 2010.

even a high-intensity fire, and decays slowly into the atmosphere even as new plant growth recolonizes a burned area. The eventuality of forest fire cannot be used as an excuse for wholesale logging and burning of forests to create energy.

Finally, the demand for wood created by large-scale construction of biomass energy facilities is likely to be more than our forests can sustain, and thus may have very significant cumulative impacts on biodiversity, water quality, and forest health.28 In addition, if each of these facilities were to claim "carbon neutrality," in the absence of any evidence or analysis, the result could be a dramatic and uncontrolled overall increase in near-term CO_2 emissions during precisely the time period when emissions most need to be curtailed.

[See submittal for attachments of articles and papers provided by commenter.]

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 3

Comment: The current statutory structure forces EPA to undertake a complex series of determinations and, almost inevitably, to favor command-and-control regulations. The result is a protracted regulatory process, which often produces policies that fail to maximize net social benefits. Instead, it would be more efficient and rational to impose taxes on emissions of hazardous air pollutants or to design a set of local, marketable pollution permit programs. Under these market-based regulatory programs, sources that could reduce their pollution most cheaply would do so, while the others would pay taxes or buy permits, thus achieving emissions reductions at the lowest marginal cost. While the standard marketable pollution regime (such as the Title IV Acid Rain program) may not translate seamlessly to the control of local pollutants

(like HAP), it is possible to design modified programs that reap the economic and environmental benefits of a flexible system while minimizing potential problems, such as "hot spots." [Footnote: See, e.g., Jonathan Remy Nash & Richard L. Revesz, Markets and Geography: Designing Marketable Permit Schemes to Control Local and Regional Pollutants, 28 ECOLOGY L.Q. 569 (2001).]

Though some have argued that market-based mechanisms are already allowed or even envisioned by many provisions of the Clean Air Act,[Footnote: See Inimai M. Chettiar & Jason A Schwartz, The Road Ahead: EPA's Options and Obligations for Regulating Greenhouse Gases at 65-67 (Policy Integrity Report No. 3, 2009) (interpreting CAA terms like "emission standard" and "emission control" to allow market-based mechanisms); see CAA § 112(d)(3) (using terms like "emission standards" and "emission control").]EPA has struggled in the past to read permission for a cap-

and-trade program into Section 112(d). [Footnote: See Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Performance Standards for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 69 Fed. Reg. 4652, 4661-62 (proposed Jan. 30, 2004) (proposing—as alternatives to command-and-control regulation under § 112(d)—to develop a cap-and-trade program for utilities under either § 112(n) or § 111, presumably because a cap-and-trade would not work under § 112(d)). Note that in striking down the final version of that rule, the D.C. Circuit Court of Appeals did not rule on the validity of a cap-and-trade program under either § 111 or § 112, see New Jersey v. EPA, 517 F.3d 574 (D.C. Cir. 2008).]Therefore, the most straightforward solution would be for Congress to pass a new law explicitly granting such authority. Congress has considered similar changes to increase the statutory flexibility of other sections of the Clean Air Act, [Footnote: For example, Senator Voinovich has proposed giving EPA authority under § 111 to enact a "multistate emissions trading program" for sulfur dioxide and nitrogen oxides. See Draft Voinovich Legislation at http://www.eenews.net/features/documents/2009/07/31/document_daily_01.pdf.]and Congress has specifically asked for EPA to report to it on the status of standard-setting under Section 112(d). [Footnote: CAA § 112(s).]EPA should advise Congress of the need and potential for such legislative fixes, to give the agency the flexible authority under Section 112 to tackle the environmental problems of the twenty-first century with twenty-first century solutions.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Mass Comment Campaign sponsoring organization unknown (53)
Commenter Affiliation: sponsoring organization unknown
Document Control Number: EPA-HQ-OAR-2003-0119-2449
Comment Excerpt Number: 3

Comment: Please keep the Tailoring Rule and actively seek the funds to implement it.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 47

Comment: EPA should modify the language in 63.7525(g)(3) to make the calibration requirements for pH meters site-specific. As proposed, EPA would require all pH meters to have a two point calibration every 8 hours. CRWI members have extensive experience with pH meters and consider this level of attention to be unnecessary. The length of time between checking the calibration of a pH meter is site-specific and the unit should have flexibility to determine a frequency of calibration based on the historical experience without EPA prescribing a one-size-fits-all frequency. A set frequency for all instruments regardless of the sophistication of the instrument and regardless of the service environment for the instrument is not appropriate. In other words, one size does not fit all. Companies that Have gone to the expense of using sophisticated instruments such as smart transmitters and other instruments with self-diagnostics as opposed to continuing to use older, less sophisticated systems would not benefit from upgrading their systems. It is the facility's responsibility to develop and implement an adequate monitoring program. This is already required as a part of their site-specific monitoring plan. Putting this level of detail in a regulation does not help; it only creates unnecessary work under most circumstances.

Response: EPA thanks the commenter for their input. For the purposes of this rulemaking this comment is out of scope.

2.0 GENERAL SUPPORT FOR/AGAINST THE RULE

2.1 General Support

Commenter Name: Sherilyn Coldwell
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0074
Comment Excerpt Number: 1

Comment: I am writing in support of EPA's proposed rule regulating hazardous air pollutants from industrial/commercial/institutional boilers and process heaters, and commercial and industrial solid waste incineration units.

I strongly support EPA's decision to reduce toxic pollution from such boilers, and especially applaud EPA's proposed regulation of hydrochloric acid and other dangerous acid gases produced by commercial and industrial boilers. Such acids pose substantial risks to industrial workers, as well as surrounding communities, and must be limited by the strict conventional Maximum Achievable Control Technology standards. I oppose any effort to establish a lesser "health-based" standard for acid gases; no such health-based standard exists.

Response: EPA thanks the commenter for their input.

Commenter Name: Shirley Hao
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-0072
Comment Excerpt Number: 1

Comment: I would like to thank you for proposing long-overdue standards to cut down on toxic air emissions from industrial, commercial, and institutional boilers. Tens of thousands of these facilities at chemical plants, oil refineries, and other industrial plants are polluting the air with unsafe emissions of dioxin, lead, mercury and other hazardous pollutants.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 26

Comment: I am a Senior Staff Associate with NACAA, the National Association of Clean Air Agencies, which is the association of state and local air pollution control officials in 53 states and territories and over 165 metropolitan areas across the country.

On behalf of NACAA, thank you for this opportunity to testify on four related regulations EPA has proposed under Sections 112 and 129 of the Clean Air Act. The proposed rules will substantially reduce emissions of HAPs and criteria pollutants from a broad sector of industrial, commercial, and institutional boilers and from commercial solid waste incinerators. After coal-fired power plants, these combustion units are among the largest emitters of toxic and criteria pollutants in the country. Accordingly, the benefits to public health and welfare that will result from a well-considered rule are substantial.

NACAA strongly supports adoption of timely final regulations for each of these sectors that meet both the letter and the intent of the law. If EPA fails to adopt a standard in a timely fashion or fails to adhere to the statute and the rule is overturned again, the public health benefits will be delayed. In addition, state and local agencies could be faced with the significant burden of developing MACT for several thousand permits on a case-by-case basis.

After analyzing the proposals more thoroughly, NACAA will submit detailed written comments. However, we appreciate this opportunity to provide EPA with our initial impressions. Overall, NACAA is pleased that the recent proposals are a vast improvement over earlier efforts and that EPA is generally on the right track.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 35

Comment: I'm a resident of Takoma Park, Maryland, and a long-time volunteer for the American Lung Association. I am testifying today as a member of the general public to voice my strong support for the EPA's proposed regulations governing emissions from commercial, institutional, and solid waste incinerators. These comments are intended to provide general support for all four of the proposed regs under discussion today rather than addressing any particular proposed rule.

I'd just like to also note for the record I noticed that my name on the speaker's list was associated with NC4. That is my employer. I am not speaking on behalf of my employer today but as a general -– as an individual.

The proposed regulations will substantially reduce emissions from industrial, commercial, and institutional boilers and solid waste incinerators. These boilers and incinerators are spread across the country, in our communities, in our big cities, in industrial parks, and are minimally regulated and historically have generated the toxic brew of particulates, carbon monoxide, heavy metals, and other materials -- again, common sense that the human lung is just not intended to ingest.

For those of us that like to exercise outside, the reduction of these pollutants is not just an academic or legalistic discussion. I bicycle to work on a daily basis, from Maryland, across the District of Columbia, and into Virginia. On one hand, that exercise is substantially improve my physical fitness; but on the other hand, lungful of lead, cadmium, dioxide, and God knows what else, certainly doesn't do much for my well being.

As I said at the outset, I'm not an expert -– medical expert, a chemical engineer, but I am an accountant by training and profession. The EPA, to their credit, has done an in-depth cost-benefit analysis of these proposed regulations. Without going into great detail, it's pretty clear that the benefits to be achieved on an overall or on a large scale –- on a macro basis far outweigh the cost of implementation.

Obviously there's going to be local dislocations as we've heard one of the previous speakers point out; but I think if we look at the large picture, this is not something that,, in fact, is a cost but a long-term benefit.

We just finished watching the political drama of enacting major health care reform legislation. If nothing else, we've come away from that conversation with a clear, clear understanding that the long-term cost of health care in this country is measured in the hundreds of billions of dollars. And anything that we can do to reduce that cost will have a resounding and positive economic impact. These rules are going to do that.

We've waited way too long for these rules to be proposed by EPA. This is not something radical. This is not dangerous. This is not economically destructive. These rules are just plain common sense. It's common sense that we don't want our kids -– my kids – breathing mercury. It's common sense that formaldehyde is not good for anyone's lungs, and it's just common sense that

the economic cost of an asthma attack triggered by minimally regulated particulates is simply unacceptable these days.

My mother used to say, when all else fails, apply common sense. Ladies and gentlemen, I urge you to apply that common sense. Let's move these rules from the proposed stage to the done-deal stage now.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 36

Comment: I am Assistant Vice-President for Policy and Advocacy for the American Lung Association. Thank you for this opportunity to share our thoughts. These comments will apply to all the proposed rules, and we will provide more complete comments into the docket.

The American Lung Association saves lives through the prevention of lung disease and the promotion of lung health. We are committed to the fight for healthy air.

Key to that fight has been our work to support the cleanup of emissions from widespread pollution sources. We have long been concerned about industrial, commercial, and institutional boilers as well as solid waste incinerators. We want to thank the EPA for taking this critical step to cut down the toxic air pollution, including sulfur dioxide and particulate matter, which spew from these boilers and incinerators.

The American Lung Association strongly supports EPA requiring the cleanup of major source and area source industrial, commercial, and institutional boilers and solid waste incinerators. These steps are long overdue. These chemical plants, refineries, paper mills, and other industrial, commercial, and institutional sources have been sources of life-threatening and life-altering gases and particles in communities all across the nation. It is time they were cleaned up.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 40

Comment: We urge EPA to not allow industry to burn waste in uncontrolled and unmonitored facilities. We see today powerful and vocal industry lobbies here opposing these rules. We're not that powerful and, certainly today, not that vocal; but we represent children with asthma and the communities next door to these facilities. We speak for the adults on oxygen who cannot be here to say that we must have air that does not make it harder for them to breathe. We speak for those whose lives are threatened by the pollution spewing from these boilers and incinerators. All of us

deserve to breathe clean air. We are counting on EPA to deliver cleaner, healthier air in every community. Too many people have suffered too long. Now is the time to require all of these plants to clean up.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 45

Comment: Basically, I may be unique here in that I am not connected at all to the energy industry, to lobbying, to politics, to anything. I'm from the Allied Health Industry; and basically I saw a call go out to say come on down and make some comments about this and help us. It was an environmental organization say help us to push for increased regulations of what goes into our air. So I'm here as a breathing citizen of the United States, basically.

But my industry -– I've never done this before either. I'm not like a hired gun. I don't go out and do this ever. So this is the first time I've done it.

My industry is Allied Health. I work for a small association in D.C., and we have found that what most people think about what my industry is about, which is orthotics and prosthetics, is that returning war veterans come home, and they need prosthetics. What is really true about my industry is that it's obesity which is the problem in my industry. So, most of the problems in my industry are a health issue.

So I'm here to say that we have to be thinking about the air that we breathe as a health issue for the future. We didn't think about that 30 years ago when we started pushing sugar into the diet, et cetera, in the industry that I'm in. And that's caused the -– it's 80 percent of my industry is because of obesity. And that surprises a lot of people because they think that prosthetics are something to do with accidents and war wounds, and things like that.

And I'm basically here using this -– this is what I know, and that's why I'm talking about it. I'm using this to say that we have to be incredibly mindful of what we're putting into our air because it's going to affect us in 30, 40, 50 years, which I know we all know because we've polluted far worse than we're doing now.

But when we hear -– and I represent a lot of people -– the people I talk to, the people in my community, my relationships, my girlfriend's daughter, for example, who has asthma –- people are beside themselves when they hear that there's a potential that regulations will be cut back or that anybody would ever want to cut back regulations on what goes into our air, especially when it's the heavy metal pollutants and things like that.

And I'm here as a kind of representative. I may be unique in this room that I'm just a representative of those people that are simply saying we do not want more stuff going into our air. We don't want less regulation. We want more regulation. And we're willing to pay, also. There's a lot of -– will the taxpayer pay for that. We actually don't mind. We know –- and again, this is a group of maybe 40 people that I converse with on a daily basis over a month's time.

But we know that in countries where their taxes are through the roof that they have clean air, that they have better services, and we're fine with that.

So, that's why I'm here. I'm here to say that I and everybody I talk to -- I don't meet many people that would ever say that we want to cut back –- pull back any kind of regulation.

So I can't speak -- I don't know the industry; I can't speak to specifics about what's in all the paperwork that's on the table out there. I understand the industry has a bottom line that they're worried about; but in my opinion and all these people's opinions the bottom line is the health in the future. It isn't the finances of a corporation. The corporations, if they provide jobs, if they're progressive, they move forward.

They do what Denmark has done, for example. I know that Denmark has trash-burning plants, for example, that are putting nearly zero emissions into the air of any heavy metals. And they're all over the country, and they provide power and heat for that country. And that's astounding that we don't have a huge system doing that ourselves.

And we don't know why. They people I'm talking for don't know why that is. We are the United States of America; we're supposed to be innovators. We're supposed to have all the scientists at all the universities that have done all these wonderful things over the past century to develop technologies; and yet other countries are doing these kinds of highly, highly progressive technologies and solving their problems -– solving our problems, but we're not getting on board.

So that's what a lot of the people I'm talking to are thinking. That's what they're saying.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 70

Comment: I am the Field Organizer with the Virginia Beyond Coal Campaign of the Sierra Club.

The sierra Club is the largest and oldest grassroots environmental organization in the country. And in Virginia we work with thousands of members and volunteers in our communities to pursue policies that protect the environment and public health which is intrinsically linked to the health of our ecosystems.

In Virginia, we are glad that the EPA has proposed to take steps to reduce toxic air pollution from commercial boilers. We hope the Agency will go further and be stricter in its regulation of such facilities in the future, ensuring that there are no loopholes leaving our communities vulnerable to their dangerous pollutants.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 82

Comment: So, first off, I wanted to thank the EPA for coming up with a MACT rule for boilers and incinerators that's really strong, and, I think, protective of communities throughout the country.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 85

Comment: So, first off, I want to thank you for that and hope that you guy promulgate a rule that continues to suggest that it will be protective of communities throughout the country.

Response: EPA thanks the commenter for their input.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 87

Comment: I wanted to come as a private citizen because, I mean, I live in D.C. When you look around, we are impacted by petrochemical industries and chemical industries not because they're right here in our back yard but because they're basically upwind and because we're downwind, we're failing at our air toxics tests.

There are reasons why basically our lungs are being poisoned and they're not because of emissions that are happening right here in our back yards. And a lot of it are coming from boilers and incinerators that aren't being regulated with off-the-shelf technology. And for us, it's just really important to see communities protected.

I'm a person who's of childbearing age. I am probably going to be having kids in the next five years. I have no idea what pollutants are going into my lungs, what those pollutants are going to have on my reproductive system, what they are going to have on my potential children down the line. And as I get older, it just gets more distressing that the EPA basically has the authority to move forward with promulgating protective rules, yet we're seeing things like the definition of solid waste that genuinely are protective of people.

Response: EPA thanks the commenter for their input.

Commenter Name: Jennifer Krause

Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0927
Comment Excerpt Number: 1

Comment: We are already seeing the devastating affects of clear cutting, deforestation, all around us. The Biomass plant near us spews toxins & ash all over it's neighbors. It goes unchecked, burns tires, it's

just the next great disaster, not a clean or renewable solution at all! It's time to stop corporate destruction of life on the planet!

Response: EPA thanks the commenter for their input.

Commenter Name: James Klein
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0886
Comment Excerpt Number: 1

Comment: This issue is particularly important here in Corpus Christi where the Las Brisas Energy Center wants to build a toxic waste incinerator to generate electricity. Corpus Christi's medical community is finishing an article on the relationship between the existing pollution (benzene, SO2, NOx, lead, mercury, etc,) and the abnormally high rate of birth defects and childhood asthma in neighborhoods closest to the area's six refineries. Now LBEC wants to increase emissions by 70% over what we have currently (8,000 tons of SO2 annually, etc.).

Corpus Christi needs help from the EPA as the TCEQ acts on behalf of industry rather than the public. Despite emissions figures taken from LBEC's application, the TCEQ seems ready (this fall) to grant an air permit for this plant.

Response: EPA thanks the commenter for their input.

Commenter Name: Lisa Whitaker
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0749
Comment Excerpt Number: 1

Comment: I support the EPA's regulation and enforcement of all hazardous air pollutants from all boilers, process heaters, and waste incineration units. I also hope the EPA will become a much more visible agency and one that will help educate the public through greater visibility about its initiatives and courses of action.

Response: EPA thanks the commenter for their input.

Commenter Name: Los Angeles Public Hearing Transcript

Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 17

Comment: We also want to thank the administration. This is a huge rulemaking. It has been over a decade in the making. I sat on the first federal advisory or the only federal advisory committee, the ICCR and worked on these rules back then. EPA's new rules will make some of the largest facilities control emissions from boilers and process heaters. It has been a long time in coming. The Clean Air Act was passed in 1990. It is now 2010, which means that most of an entire generation of children have grown up without the protections of the Act which Congress promised them. So with that, as my closing statement, we thank you all for your hard work. And I know that there is more hard work for you to come. And I'm sure we'll be in touch.

Response: EPA thanks the commenter for their input.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 49

Comment: The American Lung Association saves lives through preventing lung disease and promoting lung health. We are committed to the fight for clean healthy air. Here in Los Angeles we breathe some of the most polluted air in the country and suffer serious health consequences. The American Lung Association strongly supports the EPA requiring the clean-up of major source and area source industrial commercial and institutional boilers and solid waste incinerators. These steps are long overdue. These chemical plants, refineries, paper mills and other industrial, commercial and institutional sources have been sources of life-threatening and life-altering gases and particles in communities all across the nation. It is time they were cleaned up. These boilers and incinerators produce particulate matter, the most dangerous of all widespread air pollution. It triggers asthma attacks, heart attacks and stroke, among other damage, but most critically, particulate matter kills. Breathing fine particles increase the risk that children with asthma and older adults with chronic obstructive pulmonary disease or cardiovascular disease will end up in the emergency room or the hospital.

Response: EPA thanks the commenter for their input.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 52

Comment: Cleaning up these boilers and incinerators will save lives. Having less pollution to breathe should prevent over 3,000 non-fatal heart attacks, avoid over 35,000 cases of worsened asthma, and eliminate nearly 3,500 hospital and emergency room visits each year.

Response: EPA thanks the commenter for their input.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 59

Comment: I'm speaking on behalf of the Natural Resources Defense Council, the NRDC. And we want to thank the EPA for this effort to further regulate significant sources of air toxics such as refineries, chemical plants and the burning of solid waste.

Response: EPA thanks the commenter for their input.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 55

Comment: The American Lung Association urges the EPA to strengthen the proposed rule for incinerators and for the definition of solid waste.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 7

Comment: I'd like to thank the EPA not only for taking on these new rules, which will improve protection of public health, but I'd like to thank you for coming to Houston.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 12

Comment: So we applaud the EPA for pushing forward on this. We think there are some things that need to be further improved, further protected, but we support this and I think the environmental justice communities of this region will support this rule so I thank you for taking it on.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 18

Comment: We want to definitely encourage you and thank you for your proposed rules for boiler and heat processer emissions. We think this is a real positive step to limit the air pollution here in Houston and all over the country . Putting specific limits on very toxic air pollutants that put our kids in Houston in the hospital is a very, very positive step and you're to be applauded for that and encouraged to make those rules as strong as possible. We know that the industry lobbyists will -- will lobby for these before they are finally adopted, but we would encourage you to keep them strong and adopt them as soon as possible.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 37

Comment: I'm here today first to applaud the EPA for its increased standards on general emissions with large plants. It's something that we definitely need.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 42

Comment: Thank you to the EPA for definitely doing more to protect the air and the people that breathe it in terms of fighting emissions and telling the TCEQ to the Texas Emission on Environmental Quality to strengthen their -- their actions and protections and -- and actually getting refineries and different plants to obey the Clean Air Act more -- more or less.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 58

Comment: I just want to say thank you so much for taking the steps in order to really -- to try to send regulations on these boilers. It's been ten years coming, so thank you so much. I have been living in the Houston area since '97 so I really do appreciate y'all finally taking those steps in order to really protect human health and our environment, so thank you. I appreciate it.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 62

Comment: So thank you for finally proposing emission standards for incinerators.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 67

Comment: On behalf of NACAA, thank you for this opportunity to testify on four related regulations EPA has proposed under Sections 112 and 129 of the Clear Air Act. The proposed rules will substantially reduce emissions of hazardous air pollutants (HAPs) and criteria pollutants from a broad sector of industrial commercial and institutional boilers and from commercial solid waste incinerators. After coal-fired power plants, these combustion units are among the largest emitters of toxic and criteria pollutants in the country. Accordingly, the benefits to public health and welfare that will result from a well-considered rule would be substantial across the country and here in Houston, which is the fourth largest city in the nation with a broad industrial-based economy in energy, manufacturing, transportation and others. NACAA strongly supports adoption of timely final regulations for each of these sectors that meet both the letter and the intent of the law.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 71

Comment: The American Lung Association strongly supports EPA requiring cleanup of major source and areas where its industrial, commercial, and institutional boilers and solid waste incinerators. These chemical plants, refineries, paper mills and other industrial commercial and institutional sources have been sources of life-threatening and life-altering gases and particles in communities all across the nation . I personally don't want anyone in my family having to breathe the polluting air coming from these plants, especially my newborn daughter. I'm concerned that these boilers and incinerators produce particulate matter, the most dangerous of widespread air pollutants. I'm also concerned with CT and it spreading mercury and lead, hazardous metal to children -- that harms childrens' brains and limiting their ability to learn and remember what they've learned . Many of the other air toxics pollutants seen from these sources cause cancer including, formaldehyde, dioxin, furans, and hydrochloric acid. My mother is battling cancer, and I hope to do all I can to shelter myself and the rest of our family from such a cruel disease. Because these devices are so numerous and so widespread the air pollution infiltrates communities across the nation.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 75

Comment: We urge the EPA to strengthen these requirements on boilers, incinerators, and solid waste.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 86

Comment: We want to first thank the Environmental Protection Agency administration, Lisa Jackson, for taking the steps to control toxic air pollution from chemical plants, refineries, paper mills, and other industrial sources that are making our air unsafe to breathe. The EPA new rules will finally make the largest of these facilities control the emissions from their boilers and process heaters. It is about time. These standards are ten years overdue and our families and communities need the protection these rules will provide.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 90

Comment: I see where it's like mercury, lead, cadmium particulate matter, sulfur dioxide, dioxins. This is serious stuff, and I'm glad to see that EPA is looking at this seriously. I'm here to encourage you to use all your power that EPA -- that has available to protect the environment.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 95

Comment: I'd like to thank the EPA today for taking this step to control toxic air pollution from chemical plants, refineries, paper mills and other industrial sources. These new rules, ten years overdue, will finally address mercury and other toxics from over 13,000 large industrial boilers; utilities, petroleum, chemical, paper and plastic industrial facilities nationwide . These industrial boilers emit about 16,000 pounds of mercury annually. The second largest source of man-made mercury air emissions. In water bodies, this mercury can transform into methylmercury, a potent neurotoxin that bio accumulates and completes to human exposure through fish consumption. Mercury is associated with impaired brain development in children . As outlined in an EPA report from November of 2009, concentrations of toxic chemicals in fish tissue from lakes and reservoirs have been found in nearly all 50 U.S. states. As reported in the 2008 biannual National Listing of Fish Advisory, the presence of these toxic compounds in fish tissue have led to fish consumption advisories, and 43 percent of our nations's lakes, meaning that pregnant women and other sensitive populations should be especially careful to limit their intake of certain fish species.

Response: EPA thanks the commenter for their input.

Commenter Name: A. Stevenson
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1265
Comment Excerpt Number: 1

Comment: Do your job: Protect the environment.

Response: EPA thanks the commenter for their input.

Commenter Name: David Mickey
Commenter Affiliation: Blue Ridge Environmental Defense League
Document Control Number: EPA-HQ-OAR-2003-0119-1966.1
Comment Excerpt Number: 1

Comment: The Blue Ridge Environmental Defense League supports enforceable regulations that reduce emissions from all sources, whether they are permitted as boilers, area sources or solid waste incinerators. The proposed rules for Commercial and Industrial Solid Waste Incineration Units will have the desirable effect of reducing emissions from existing incinerator units. Depending on the final rules defining non-hazardous solid waste, solid waste incineration in industrial boilers will decrease as well. As EPA has recognized, many existing sources will choose to stop burning solid waste if they are required to meet Section 129 requirements. The result will be cleaner air in the many communities where such boilers and incinerators operate today.

Response: EPA thanks the commenter for their input.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 1

Comment: We applaud the U.S. Environmental Protection Agency ("EPA") for proposing maximum available control technology ("MACT") standards for commercial and industrial solid waste incineration units ("CISWI") that will provide greater protections for public health against the hazardous air pollutants emitted by CISWI.

Response: EPA thanks the commenter for their input.

Commenter Name: Kevin P. Bundy
Commenter Affiliation: Center for Biological Diversity
Document Control Number: EPA-HQ-OAR-2003-0119-1949.1
Comment Excerpt Number: 2

Comment: We appreciate EPA's efforts in the above-referenced proposed rules to comply with numerous recent court decisions governing the agency's implementation of the Clean Air Act's hazardous air pollutant programs. We urge EPA to adopt the most stringent achievable emissions standards (MACT) for all boilers and waste incinerators, in accordance with the requirements of sections 112 and 129 of the Clean Air Act (as applicable).

Response: EPA thanks the commenter for their input.

Commenter Name: Mass Comment Campaign sponsoring organization unknown (53)

Commenter Affiliation: sponsoring organization unknown
Document Control Number: EPA-HQ-OAR-2003-0119-2449
Comment Excerpt Number: 1

Comment: The EPA decision to count emissions from burning biomass as it regulates greenhouse gases from large power plants and other large industrial facilities is an extremely important decision. I am in full support of this rule as it clearly demonstrates a commitment to continue a scientific evaluation of the true carbon impact of the many forms of biomass energy.

Response: EPA thanks the commenter for their input.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 1

Comment: NESCAUM strongly supports EPA's efforts to develop new source performance standards

(NSPS) for commercial and industrial solid waste incineration (CISWI) units. Such a rule will substantially reduce emissions of hazardous air pollutants (HAPs) from this sector, and will

directly limit emissions of sulfur dioxide (SO2), nitrogen oxides (NOx), and particulate matter (PM).

Response: EPA thanks the commenter for their input.

2.2 General Opposition

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 30

Comment: It is a scientific principal -- and Bill Donawick (phonetic) once said: You don't lose anything in the process, you just change its state or its form. And when you burn trash, you're exchanging a landfill for my lungs. You're moving the landfill into my lungs. Now, I'm looking at your materials on -- your background materials on how you were making your decisions. And just this one, auto-shredder residue. And in looking it over, it's very heavily weighted from an engineering standpoint. And I have learned this, that most environmental engineers are just that -- engineers. They're not biologists, they're not health professionals, so they do what they know best. And they see a problem, a tremendous mass of shredded automobiles -- we're talking billions of pounds. And we're pouring it into landfills and we're running out of landfills and it

looks like a good engineering solution to burn it. You reduce the mass, but it doesn't disappear. Humans have this real big problem. If we don't see it, it doesn't exist anymore. Well, your lungs see it. And your lungs, more so than your skin, are permeable membranes. Things go straight from your lungs into your blood stream. There's not a barrier like your skin, so we have to be more cautious about these things that we don't see than the things that we do see. That pile in the landfill, we can do something with it or about it. You turn it into gaseous material or small particulate material, you're ingesting it, every one of you. And just to look at some more. Your own materials from the EPA, these are the counties designated as non-attainment under the Clean Air Act's National Ambient Air Quality standards. And if you look, this area has a concentration of non-attainment counties. And you also have color-coded it as for how many pollutants. And yellow is the largest number of pollutants not being controlled and it's this area right here. We cannot meet the air quality standards for decent health. Not even good health. We're barely on the edge of survival on some days. We need to reduce, not see how much we can get away with polluting our air by some process that might be of economic benefit only if you look at the small picture. Once again, broaden it. You have to look at the big picture. Health care costs are the biggest problem in this country. Industry always recovers. I've been with Action Now for 20 years, but I was raised on an organic chicken ranch starting in the 1950's. First edition Rachel Carson in our house. And every time there's an environmental fight it's, Oh, the end of our economic world as we know it. And it never ends up that way. Now, on the other side, our health does continue to decline. Rampant health problems and old health problems we thought we had gotten rid of. And on a personal level, I've noticed -- and you can call it anecdotal, but my husband is a registered nursed in an emergency room in a local hospital. But approximately two weeks ago a local auto dismantler had a fire that continued for quite a long time. Within a week people started coming in with flu-like symptoms. I myself have it now myself. We've seen this every time when there's an extra burden, any extra burden on our environment, immediate health results and that's not counting the chronic and continuing health effects that we have. Now, if you're talking about burning old tires, shredded autos, and all these process heaters and boilers, which are in almost every building around --including right across the street there's old boilers -- I don't know how you're going to control it. A lot of the larger companies have said they can't afford more controls, pollution controls. Certainly small buildings with old boilers aren't going to be able to control their pollution. And like you said, it's not what's put in, it's what comes out. And we do not have the ability to control what comes out of all these small boilers in this area. And I just want to wrap up with what the first speaker from Earthjustice said: Our economy always recovers, but sometimes our children don't. I want to thank him for that comment and I thank you for your time.

Response: EPA thanks the commenter for their input. See preamble Sections IV and V for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Michael R. Shoemaker
Commenter Affiliation: Wenck Associates, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1840.1
Comment Excerpt Number: 1

Comment: The proposed rule will negatively impact industry and beneficial use of materials. Industry will effectively be prohibited from implementing new technology to recover energy or dispose of materials.

Response: EPA thanks the commenter for their input. See preamble Sections IV and V for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Stephen E Woock
Commenter Affiliation: Weyerhaeuser Company
Document Control Number: EPA-HQ-OAR-2003-0119-2094.1
Comment Excerpt Number: 2

Comment: In the event EPA finalizes the four concurrently-proposed rules in ways that cause Weyerhaeuser to consider the CISWI regulations in order to continue operating some of our boilers or process heaters, we believe the proposed CISWI rules are in need of substantial improvement.

Response: EPA thanks the commenter for their input. See preamble Sections IV and V for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Nikki Tsantrizos
Commenter Affiliation: Terragon Environmental Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2093.1
Comment Excerpt Number: 1

Comment: Terragon Environmental Technologies appreciates the opportunity to put forward its strong opposition to EPA's proposed rule on the Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (Document ID EPA-HQ-OAR-2003-0119- 0040).

Response: EPA thanks the commenter for their input.

3.0 APPLICABILITY/LEGAL ISSUES

3.1 Applicability/Regulated Entities

Commenter Name: Richard Luczyski
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0715
Comment Excerpt Number: 1

Comment: Before I support the EPA I would like more specific of where these boilers and heaters are working to foul our air and health.

Response: See the “Facility” table in the CISWI Access Database in the docket.

Commenter Name: Steven B. Smith

Commenter Affiliation: Verallia (formerly Saint-Gobain)

Document Control Number: EPA-HQ-OAR-2003-0119-1965.1

Comment Excerpt Number: 2

Comment: Glass Manufacturing Furnaces Are Not "Solid Waste Incineration Units".

The Clean Air Act expressly defines "solid waste incineration unit" as "a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)." CAA § 129(g)(1) (emphasis added).

Glass furnaces do not "combust" waste. The batch ingredients (primarily silica sand, soda ash, and limestone) are raw materials and are not solid wastes under RCRA and neither is cullet (recycled glass) under EPA’s "legitimacy test." An explanation of why cullet is not "solid waste" was provided in Verallia’s comments on EPA’s proposed rule, Identification of Non-Hazardous Secondary Materials That Are Solid Waste (75 Fed. Reg. 31844, July 4, 2010);2 however, this analysis is secondary since raw materials and cullet are not "combusted" in a glass melting furnace. In most glass furnaces, natural gas is combusted to apply heat to the raw materials to induce a phase change in the cullet and raw materials. In other words, melting cullet and other raw materials is different from the exothermic burning of organic material in the presence of an oxidant.

The intent behind §129 of the CAA was to regulate air pollution from "solid waste incineration units" as such — i.e., facilities that are truly in the business of burning waste. This definition encompasses incinerators of municipal waste, medical waste, and other commercial or industrial wastes. CAA §129 simply was never intended to cover basic manufacturing processes such as melting raw materials to manufacture new glass containers. Congress evidently recognized this point in CAA §129(g)(1), which specifically excludes from the definition of a "solid waste incineration unit" "materials recovery facilities."

Moreover, EPA’s own statements confirm that a "solid waste incineration unit" should be given a common-sense meaning: "the intent of an incinerator, and similar type units, is to destroy wastes, and thus, such non-hazardous secondary materials that are burned in such units are considered discarded, and thus a solid waste." 75 Fed. Reg. at 31882. See also EPA "Combustion" webpage ("Incinerators are used to burn hazardous waste primarily for waste destruction/treatment purposes; however, some energy or material recovery can occur.").3 Therefore, Verallia’s main concern with this proposed rule is that it could be interpreted to incorrectly shoehorn every glass melting furnace into a broadened definition of "incineration;" a drastic departure from any logical interpretation of that term.

The glass manufacturing industry is not in the business of "incinerating" or "combusting" waste. Glass melting furnaces are not "incineration units" and they should not be regulated as such under the Clean Air Act. We urge EPA to clarify these points in the Preamble to the final rule and in the rule itself. Thank you for the opportunity to comment on this important rulemaking.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). As to the exemption noted by the commenter, it exempts "materials recovery facilities (including primary and secondary smelters) which combust waste for the primary purpose of recovering metals." Section 129(g)(1)(A). Thus, the type of materials recovery noted by the commenter is not expressly exempt pursuant to the statute. A furnace at a glass manufacturing facility is a solid waste incineration unit if it combusts solid waste. If such a unit combusts solid waste, the owner or operator should consult the definitions of the sources for which standards are being promulgated to determine if this final CISWI rule applies to the unit. If a unit uses solid waste in its process, but the solid waste is not combusted, the unit is not an incineration unit.

A glass melting furnace that does not combust solid waste is not subject to CISWI.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 7

Comment: Some clarification is needed that self-cleaning ovens involved in food preparation at industrial and commercial establishments are not in scope. Dow does not believe EPA needs to regulate ovens in cafeterias and lunchrooms.

Response: EPA is establishing standards for units that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule. We do not believe self cleaning ovens would meet any of those definitions.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 16

Comment: EPA should clarify the applicability of the proposed CISWI/EG standards to OCS sources and vessels.

We find no mention or intent in the preamble or rule for the applicability of the proposed rules to incinerators employed on OCS sources (exploratory or production platforms or vessels attached to these) or incinerators employed on vessels (in various operating scenarios such operating on

the OCS, operating in state waters or operating while docked at port). In addition, we see no consideration of these incinerators in the data used to develop the MACT floor or, recognition in the RIA of the unique practical issues with installing controls on these incinerators or escalated emission control costs (capital and operating) associated with these incinerators. Given these facts, we conclude it is not EPA's intent to apply the CISWI or EG standards to OCS sources and vessels. We recommend clearly clarifying this intent in the final regulation to ensure consistent interpretation and enforcement of the CISWI NSPS and emission guidelines across state agencies and EPA Regions.

Response: The applicability of part 60 standards to OCS sources and associated vessels is addressed in 40 C.F.R. 55.13(c). Owners or operators of OCS sources should consult their permitting authority to determine whether and to what extent this final rule applies to such sources.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 8

Comment: EPA should list those materials that EPA has previously identified as non-hazardous secondary materials that are solid wastes in the CISWI Rule. Similarly, EPA should consider doing the same for those materials that EPA already has identified as non-hazardous secondary materials that are NOT solid wastes in the Boiler/Process Heater MACT and Area Source Boiler Rule Rules. These advance determinations should complement the current procedures used to make the determination of whether a solid waste is now a non-hazardous secondary material. These revisions would also decrease the number of requests for agency determinations.

Response: The final non-hazardous waste definition rule in fact recites certain materials which are considered to be traditional fuels, and hence not solid wastes under the new definition. See section 241.2 (definition of "traditional fuel"). Other parts of the definition eliminate entire categories of materials from the definition (contingent on satisfying legitimacy criteria). However, other parts of the definition can only be applied to specific facts, so it is not possible to list all materials which either are or are not solid wastes under the definition.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 10

Comment: EPA should clarify whether the proposed rules will be applicable to marine vessels and OCS sources.

Response: See comment response above for discussion of OCS sources.

Further, an incinerator on a marine vessel is treated as a stationary source and, as such, is required to meet CISWI requirements, unless the vessel is powered by an internal combustion engine. CAA section 302(z) defines "stationary source" as meaning "generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in section [216] of this title." CAA section 216(10) defines "nonroad engine" as "an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under [section 111] of this title or [section 202] of this title." CAA section 216(11) defines "nonroad vehicle" as "a vehicle that is powered by a nonroad engine and that is not a motor vehicle or a vehicle used solely for competition."

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 18

Comment: EPA must appropriately coordinate the interaction between this and other rules.

(a) For Prevention of Significant Deterioration (PSD): EPA should exempt from PSD permitting requirements emission increases that result from modifications, addition of control technologies, or changes in operation needed to comply with CISWI standards.

(b) For Mandatory Greenhouse Gas Reporting: EPA must identify if continuous emission monitoring requirements on CISWI energy units that are created by a final CISWI rule will change the monitoring systems requirements for these units under the GHG monitoring rule. The GHG monitoring rule requires combustion devices that are subject to regulations that require them to use continuous emission monitors to install continuous carbon dioxide monitors and conform to Tier 4 monitoring and reporting provisions.

(c) For New Source Performance Standards: EPA should specifically define how existing NSPS Subpart D, Db and Dc requirements (and future applicability evaluations) will be addressed for boilers that are re-defined as CISWI energy recovery units.

Many boilers potentially regulated as CISWI energy recovery units are already subject to one or more new source performance standard (NSPS) such as Subpart D, Da, Db, or Dc) with overlapping provisions. Boilers complying with CISWI should no longer be subject to redundant, less stringent yet different requirements for the same regulated pollutants. Retaining applicability of these limits and associated monitoring requirements simply adds unnecessary regulatory complexity and burden with no added environmental value.

Response: As to comment (a) above, we believe such an exemption would be inconsistent with New York v. EPA, 413 F.3d 3 (D.C. Cir. 2005).

For comment (b), sources should review 40 CFR 98.33(b)(4) in conjunction with the monitoring requirements in the final CISWI rule. Sources should contact EPA at e-mail ghgmrr@epa.gov with any questions about the reporting rule.

In response to item (c), a combustion unit that combusts solid waste is a solid waste incineration unit, not a boiler, and such a unit that is located at a commercial or industrial facility may be subject to the CISWI rule as an ERU. We have included in the final rule provisions that address sources that periodically start and stop combusting solid waste.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 1

Comment: Cement kilns are regulated under CAA Sections 111 and 112, and should not be regulated under CAA Section 129

The cement industry fundamentally disagrees with the EPA in regards to its proposed approach, which would ultimately result in the regulation of cement kilns as incinerators. Cements kilns are, first and foremost, productive units central to the manufacture of the key component in concrete, a building material widely used to construct and repair our country's vital infrastructure. Cement kilns are valuable economic entities whether or not any NHSM is utilized as an alternative fuel or ingredient. Coincidentally, the distinct aspects of the cement manufacturing process enable it to be an effective means to recover the energy and mineral components in materials destined for disposal in landfills. However, the regulation of cement plants as incinerators will compel these industrial facilities to cease this practice. The costs to

comply with alternative regulations under CAA Section 129 and the associated solid waste stigma will likely undermine the continued utilization of NHSM, and ultimately result in the uneconomic management of these materials such as disposal in landfills.

It is important to note the misperception central to these proposed rules: that cement kilns that utilize NHSM are currently avoiding stringent environmental performance requirements by not being regulated under CAA Section 129. However, this could not be farther from the truth. Cement kilns are currently regulated under New Source Performance Standards (NSPS) under CAA Section 111 and under the Portland Cement Maximum Achievable Control Technology (PCMACT) under CAA Section 112, and, face stringent environmental requirements under both sections. As such, compliance with CAA Sections 111 and 112 ensures that the cement industry's utilization of secondary materials as alternative fuels and ingredients is a safe and environmentally-sound practice. As such, the proposed rules place major impediments on reuse and recycling with no justification that such impediments are necessary to protect human health and the environment.

Response: First, EPA agrees that cement kilns are subject to stringent standards for hazardous air pollutants under sections 111 and 112, and did not intend any suggestion that the industry was seeking to evade stringent standards by questioning inclusion under section 129 standards. Indeed, EPA has found that burning alternative fuels does not significantly affect HAP emissions from cement kilns, so that the standards under those provisions would not be influenced by whether or not a cement kiln is burning alternative fuels 74 FR at 21138. However, the D.C. Circuit has held that a solid waste incinerator includes any device that combusts "solid waste", and rejected arguments that a combustion device's primary purpose for operating (or for

combusting a solid waste) can change that classification. NRDC v. EPA, 489 F. 3d 1250, 1261 (D.C. Cir. 2007).

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 9

Comment: NESCAUM requests that EPA provide a clearer definition of facilities that would be subject to the CISWI rule. We have identified three facility types for which it is unclear whether or not they would be subject to the rule.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments. The final CISWI rules include standards for incinerators, small remote incinerators, waste burning kilns, and energy recovery units, and the final rule defines those subcategories. In addition, we have defined a number of other types of combustion units .

3.2 Legal/Applicability: Proposed exemptions for units included in other CAA section 129 standards

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Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 73

Comment: Burning waste of any kind is a very bad practice, and the current proposal allows an enormous amount of waste burning to go unregulated because it exempts a huge amount of industrial waste. We believe that the EPA can do better, but we applaud this effort to help us move to a clean energy future. The EPA has the authority and the obligation to impose the strictest available standards on anyone burning industrial or other waste.

Response: Any combustion unit burning any solid waste, as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking, is considered a solid waste incineration unit. EPA in this final CISWI rule is establishing standards for four subcategories of units that combust solid waste.

Commenter Name: E. Gordon
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1407
Comment Excerpt Number: 1

Comment: Regarding the proposed April 29, 2010 CISWI rule, I think that agriculture businesses should be exempt from this rule. Agriculture managers are in a unique position to economically and effectively reuse waste agricultural biomass for supplemental heat. Most agriculture businesses are already under economic hardship. They will not be able to continue biomass projects under this proposed rule. This would mean the loss of potential future small agriculture business biomass projects including biomass supplemental heating, cellulosic recycling, methane recovery projects, ethanol projects, etc.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Anonymous
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1123
Comment Excerpt Number: 2

Comment: Farms should be exempt from this rule. Farms are economically strapped already. Farm operations are the ideal place for agriculture biomass projects and biomass heat recovery but this rule would be too economically burdensome for farm-sized systems.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)

Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 1

Comment: In the preamble to the proposed rule [FR p. 31960], the U.S. Environmental Protection Agency (EPA) states the intent to regulate pathological incinerators as Other Solid Waste Incinerator (OSWI) units. However, pathological waste incinerators are not listed as exempt in the proposed rule. Will pathological waste incinerators be regulated as Commercial and Industrial Solid Waste Incineration Units (CISWI) or OSWI?

Response: The 2000 CISWI rule excluded pathological waste incinerators at commercial or industrial facilities, and defined pathological waste incineration units as incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in §60.2265, subject to notification and recordkeeping requirements. The final rule retains and does not alter that exemption.

Commenter Name: Chris Hornback
Commenter Affiliation: National Association of Clean Water Agencies (NACWA)
Document Control Number: EPA-HQ-OAR-2003-0119-2123.1
Comment Excerpt Number: 1

Comment: Over the past year EPA has proposed several rule changes that will have major impacts on sewage sludge incinerators (SSIs). NACWA remains concerned that EPA's actions via these rulemakings will create unnecessarily duplicative and burdensome regulation of SSIs. EPA's proposed rule for CISWI units includes provisions to avoid duplicative Clean Air Act (CAA) requirements for SSIs presuming the Agency finalizes its planned Section 129 maximum achievable control technology (MACT) rulemaking for SSIs. However, as proposed the CISWI exclusions for SSIs contain errors that must be revised before finalizing the rule.

NACWA offer the following comments and suggested revisions:

(1) NACWA supports excluding all SSIs from applicability under the CISWI rule.

NACWA strongly supports EPA's exclusion of SSIs under the plain meaning of the CAA, which will help avoid the potential for duplicative and conflicting requirements. While we agree that SSIs should be addressed under a single set of standards, we disagree with EPA's current approach of setting those standards under CAA section 129 instead of section 112.

NACWA and its members have been submitting information to EPA regarding the separate SSI rulemaking, and NACWA intends to submit comments on the proposed SSI rule when it is published. In addition, NACWA recently commented on EPA's proposed definition of non-hazardous solid waste (75 Fed. Reg. 31844; June 4, 2010), which EPA is using to determine which secondary materials are a solid waste when combusted. NACWA believes that sewage sludge should be excluded from the definition of solid waste and, thus, SSIs from the definition of solid waste incineration units. [See submittal for NACWA Attachment A – Comments on the Identification of Non-Hazardous Secondary Materials that are Solid Wastes provided by commenter.]

In particular, we emphasize the importance of harmonizing any future standards for SSIs so as to preserve the existing framework for regulating sewage sludge incineration under 40 C.F.R. Part 503. The risk of disrupting the unique regulatory scheme for sewage sludge incineration with incompatible or redundant requirements is apparent. For example, in the preamble discussion regarding the rationale for the SSI exemption (75 Fed. Reg. 31960/1), the Agency lists sewage treatment plants and SSIs together with other categories of exempt units that are subject to, or will be subject to, new source performance standards and emission guidelines, and concluding that there are "no standards" in effect for SSIs. If this reference to "standards" means NSPS or EG (see 75 Fed. Reg. 31939/3), then EPA is mistaken. The NSPS for sewage treatment plants (40 C.F.R. Part 60 Subpart O) contains particulate matter and opacity standards applicable to sewage sludge incinerators that combust more than 10 percent sewage sludge or that charge more than 1000 kg per day sewage sludge produced by municipal sewage treatment plants. In addition, 40 C.F.R. Part 503 Subpart E imposes risk-based limitations for arsenic, cadmium, chromium, lead, and nickel; compliance with the National Standards for Hazardous Air Pollutants (NESHAPs) for mercury and beryllium; operational emission limits for total hydrocarbon (the surrogate for all potentially toxic organic compounds) or an alternative emission limit for carbon monoxide; and numerous other general management, monitoring, recordkeeping and reporting requirements. The importance of harmonizing EPA's incineration rulemakings with the Part 503 program is discussed in detail in NACWA's comments on the proposed non-hazardous solid waste definition rule.

Finally, we emphasize that EPA cannot regulate SSIs under the CISWI category because EPA has not developed the legal or factual basis to do so. The rulemaking record is devoid of any substantive evaluation of SSIs and does not evaluate the merits of regulating SSIs under the CISWI category. Through a separate rulemaking process EPA has collected some (albeit limited) emission data from SSI stack tests; however, these data are apparently not contained in the CISWI rulemaking docket and are not considered in the MACT floor analysis.

Response: In a separate notice in today's Federal Register, EPA is issuing emissions standards for Sewage Sludge Incineration (SSI) units under section 129 of the CAA. Any comments related to that rulemaking are not relevant to the CISWI rule. Regarding the commenter's recommendation that all SSIs should not be subject to the CISWI rule, the final SSI rule does not apply to units incinerating sewage sludge at commercial and industrial facilities. Those units are commercial and industrial solid waste incinerators, and as such are properly regulated under emissions standards issued under section 129(a)(1)(D), rather than as "other" solid waste incinerators under section 129(a)(1)(E). The final SSI rule applies only to units located at wastewater treatment facilities that are designed to treat sewage sludge.

The combustion of sewage sludge that is not burned in an SSI unit located at a wastewater treatment facility designed to treat domestic sewage sludge is subject to other section 129 standards, including the CISWI standards.

The commenter is also concerned about preamble language that referred to there being "no standards" in effect for SSIs. The "no standards" reference pertained only to CAA section 129 non-hazardous solid waste combustion standards currently in place to regulate SSI units. Those standards are being finalized today, but were not in place at the time the CISWI rule was proposed. EPA recognizes that there are other standards in place for SSI units under different sections of the CAA and under the CWA.

3.3 Air Curtain Incinerators burning clean wood: Title V requirement

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 1

Comment: The EPA has requested comments on the requirement for air curtain incinerators, combusting "clean wood" to obtain Title V operating permit. As stated in the Clean Air Act (CAA or Act) Section 129(g)(1) "The term solid waste incineration unit does not include....(C) air curtain incinerators provided that such incinerators only burn wood waste, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule." The CAA Section 129 (e) also states "each unit in the category shall operate pursuant to a permit issued under this subsection and Title V." Since the ACI is not considered a solid waste incineration unit as defined by the Act; then subsequently the requirement in the Act for all solid waste incineration units to obtain a Title V permit does not pertain to ACI units.

The proposed rule contains only two requirements for ACI units: 1-meet a 10% opacity limit (35% during a 30 minute start-up period) and 2- monitor that opacity limit through performing a Method 9 test on an annual basis. Requiring an ACI unit to obtain a Title V permit merely to comply with an opacity requirement is overly burdensome to permitting agencies, who have been struggling to best use their resources in light of recent budget cuts. In addition, the majority of ACI units operating in South Carolina are owned and operated by small businesses. The requirement to submit a Title V permit application would be costly to them, especially considering there are no substantive requirements in comparison to other units subject to CISWI. South Carolina proposes that the EPA allow permitting agencies flexibility in addressing the ACI opacity limitation. This opacity requirement can be addressed through minor source permits, federally enforceable state operating permits, registration permits or Title V general permits. These options will allow each permitting agency to permit the ACI units according to their own permitting options.

Response: Thank you for your comments. At this time, we are not making any changes to the rule relative to the permitting of air curtain incinerators. In the future, however, we may examine, within the context of sections 129 and 502(a) of the Act, whether the air curtain incinerators in this rule and all 129 rules may be exempted from title V permitting requirements. If we do decide that such an exemption is appropriate, we will propose regulatory language at that time. In the meanwhile, the CISWI NSPS/EG, as well as other 129 rules, will continue to require that air curtain incinerators apply for and obtain title V permits.

Commenter Name: Darryl Sanderson

Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 14

Comment: Section 129 does not require a Title V permit for an excluded class of units, air curtain incinerators

Dow requests that EPA remove the requirement for air curtain incinerators to obtain a Title V permit.

Dow believes that the proposed requirement for an air curtain incinerator to obtain a Title V permit in 40 CFR 60.2242 of Subpart CCCC and 40 CFR 60.2805 of Subpart DDDD is not supported by an appropriate reading of Section 129. The Section 129(g)(1) definition of "solid waste incineration unit" excludes a number of types of units, of which air curtain incinerators is only one of several. Dow believes that none of these excluded units are subject to the requirement in Section 129(e) to obtain a Title V permit, much less an air curtain incinerator. Section 129(e) applies to "solid waste incineration units" from which Section 129(g)(1) gives several exclusions. Air curtain incinerators do have some Section 129 conditions to meet to qualify for this exclusion, as do all of the other types of units that are excluded.

Both of the proposed paragraphs in CCCC and DDDD say that an air curtain incinerator must "operate pursuant to a permit issued under section 129(e)." However, Section 129(g)(1) excludes them (along with other types of units that are not listed in these proposed paragraphs) from the definition of "solid waste incineration unit," which is the basis for the requirement under Section 129(e).

In summary, an air curtain incinerator is excluded from the statutory definition of "solid waste incineration unit." Although Section 129(e) requires a "solid waste incineration unit" to obtain a Title V permit, Dow does not believe that the requirement extends to units that are excluded from the definition of "solid waste incineration unit," of which an air curtain incinerator is only one of several types of excluded units. Dow believes EPA must remove this requirement from both Subparts CCCC and DDDD in keeping with the statutory language.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1839.1, excerpt 1.

Commenter Name: Mary Uhl
Commenter Affiliation: New Mexico Environment Department
Document Control Number: EPA-HQ-OAR-2003-0119-2151.1
Comment Excerpt Number: 2

Comment: EPA requests in the preamble (page 31960) comments on the need of air curtain incinerators that burn "clean wood" to obtain a Title V permit.

These devices would of course be required to obtain a Title V permit if they were major sources as defined elsewhere in the CAA. At issue here are Title V permitting requirements for non-major sources.

Section 129 of the Clean Air Act does not provide authority for requiring Title V permits for these sources. Title V permit requirements are specified in 129(e) only for "solid waste incineration units"; no combustion or incineration units other than "solid waste incineration units" are referred to in 129(e). In the definitions of terms as used in Section 129(g)(1), the term "solid waste incineration unit" is specifically defined to exclude "air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule." This means that permitting or other requirements applicable to "solid waste incineration units" in Section 129 do not apply to such air curtain incinerators, just as they do not apply to materials recovery facilities, and qualifying small power production facilities, all of which are also specifically excluded from the definition of "solid waste incineration unit".

In the current proposal, there is no indication that EPA considered the appropriateness of requiring Title V permitting for air curtain incinerators burning vegetative material. We contend that Title V permitting should not be mandatory for these sources, and request that EPA consider the following issues:

(1) State Title V permitting programs are excessively burdensome for non-major sources with relatively simple NSPS requirements such as the opacity limits, recordkeeping and reporting requirements for air curtain incinerators in the proposed Subpart DDDD (60.2242, 2250, and 2260). In the absence of EPA rulemaking under 40 CFR 70.3(b)(1) to "determine how the program should be structured for non-major sources", state permitting programs and rules have been structured for application to major sources with complex requirements and ample technical resources.

(2) States with delegated authority for this proposed NSPS can implement and enforce requirements for air curtain incinerators by procedures more appropriate than a Title V permit. Any state taking delegated authority for this NSPS must have an EPA-approved procedure for implementing and enforcing the standard.

(3) In our jurisdiction, the most likely owners and operators of these air curtain incinerators are rural local governments, particularly in areas where stepped-up removal of vegetative material has become an urgent necessity to reduce wildfire risk. These local governments will find it extremely difficult to bear the additional burden of Title V permitting costs, on top of the costs incurred in obtaining and operating an air curtain incinerator in compliance with the other proposed requirements.

(4) New Mexico's Smoke Management Program (part of our Regional Haze SIP), following guidance from the Western Regional Air Partnership, identifies the use of an air curtain incinerator as an emission reduction technique (compared to open burning) and commits us to reduce administrative barriers to the use of emission reduction techniques. EPA's proposed Title V requirement for air curtain incinerators burning vegetative material is such an administrative barrier.

(5) Faced with the burden of Title V permitting, most potential users of these air curtain incinerators will instead dispose of vegetative material by either landfill or (more likely) open burning. Open burning of vegetative material would produce more air pollution and would increase the likelihood of wildfires. EPA should also consider these factors in their decision to require (or not exempt) Title V permitting for these air curtain incinerators.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1839.1, excerpt 1.

Commenter Name: Renee Lesjak Bashel
Commenter Affiliation: Small Business Ombudsman and Small Business Environmental Assistance Programs (SBO/SBEAP)
Document Control Number: EPA-HQ-OAR-2003-0119-2254.1
Comment Excerpt Number: 3

Comment: Recommendation: Require only those units at sources that are at major sources or sources that took federally enforceable limits to become minor sources to obtain a Title V permit under this rule.

According to both 60.2242 and 60.2805, all units covered would require Title V permits. The number of area sources with burn off ovens and air curtain incinerators requiring Title V permits would create an unmanageable workload for states and affected sources alike. Most states require simply an open burning permit for the typical air curtain incinerator, where the unit is created for short term operations at Land clearing or road construction sites or for natural disaster clean up. For industrial sources with burn-off ovens, it would make more sense to treat them the same as the industrial/commercial/institutional boilers in the Area Source NESHAP proposed rule, where only those at major sources or those currently having federally enforceable limits in synthetic-minor source permits would trigger a Title V permit. Another possible exemption from Title V for air curtain incinerators could be applied to those defined in 60.2245(b) and 60.2810(b).

Response: Title V permits are required for all solid waste incinerators under section 129(e) of the Act. As a result, the exemption you are requesting cannot be granted.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 14

Comment: We request that EPA consider removing the requirement for sources regulated under the proposed rule to have a Title V permit. CNH has a burnoff oven at a facility that is not a major source and is regulated as an Option D source in Minnesota. This requires that emissions be approximately 1/10th of minor source limits. It was not intended for facilities with such low emissions to be permitted as Title V sources. Such facilities have accepted extremely low limits, which is a good thing and EPA should encourage that. Requiring a Title V permit removes any incentive to operate with low emissions.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2254.1, excerpt 3.

3.4 Legal/Applicability: Statutorily exempt references

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 10

Comment: ARI is a technology development firm, and I'm here to talk about deconstruction and demolition waste for materials and lead-based paint. Currently, EPA policies are interfering with useful recycling recovery of a lot of different kinds of waste. And I want to share with you a specific example of how some of these policies, if they were implemented in a smarter way, would result in better protection of human health and the environment. There was congressional funding provided to the U.S. Army Corps of Engineers Construction Research Engineering Laboratory and ARI to develop a holistic method for dealing with these 100 million plus square feet of World War II buildings that have to betaken down eventually. Most of these buildings were repeatedly painted with lead-based paint. And the presence of that paint is causing difficulties in the effective recycling of these buildings. One two-story barracks in the Army, just the siding contains about 215 pounds of leachable lead. Because of the difficulties that lead is introducing, these buildings are simply being smashed and hauled off to the landfill. And because the average weight of the building is taken into account, all of this lead is going into the landfill in a leachable form. It is hazardous. But because of the way that the policies are implemented, this stuff is still going in the landfills. In Fort Ord alone, 210,000 pounds of leachable lead went into landfills because we were not able to recover and recycle these buildings. Now, we developed a process where we could economically deconstruct the army barracks, reprocess the used lumber to produce a value-added product. And I've got examples here. This is an example of the siding that comes off of these buildings, and that can then be reprocessed by removing the lead into very valuable wood products. Then the shavings can be thermally processed to concentrate the lead into a product which is higher grade than lead ore going into smelters. That material has a value of $415 per ton and can then be sent to a smelter for reprocessing. In this way, we're taking old materials from the buildings, diverting it from the landfills and, including recycling the lead itself, keeping all of that material out of landfills. So, this process was demonstrated, both at Fort Ord here in California, Fort Lewis in Washington, and Fort Chaffee in Arkansas. The process is safe. It conforms to all existing emission standards for hazardous waste incinerators. The lead is very easy to control because it's all a particulate and it's not volatile. This can be performed on-site with mobile equipment. We could recover millions and millions of more feet of old growth timber because this was the highest quality timber that went into these buildings. And again, this diverts 100 percent of the materials away from landfills, produces a value-added product and recovers and recycles the lead itself. Now, EPA policy is preventing this process from being implemented by how the regulations affect or are implemented towards lead. So we are promoting the demolition -- well, the policies are promoting the demolition and the landfilling of hazardous materials rather than the responsible management of these materials. Even though there is a hazardous component, it can be effectively controlled and recovered, and again, kept out of the environment by recycling it. So this is resulting in literally thousands and thousands of buildings being sent to the landfill when, in fact, materials like this can be made out of them. So I think EPA can better fulfill its mission

of protecting human health and the environment by modifying the classification of materials, even if some of them exhibit hazardous characteristics, and by simplifying the permitting process for addressing these. I'm not suggesting that we ease emission standards for these things, but take a closer look on a case-by-case basis to address some of these specific things where we can really do good things and keep hazardous materials out of landfills. Recycled Arm barracks which contains lead-based paint has gone through a process to remove the lead-based paint and create this kind of product. Those shavings and the paint are then thermally processed, yes, to concentrate the lead. And again, it results in a material that consists of 30 percent lead by weight, which is a higher value than lead ore which is being smelted. So it actually has some value. It is being legitimately recycled. The EPA kind of has a presumption of sham recycling. And, in many cases, it's true, but not in this case, and I think not in many cases.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 5

Comment: SARUs are already subject to regulation under 40 C.F.R. Part 60, Subpart H and 40 C.F.R. Part 266, Subpart H.

SARUs are already regulated under 40 C.F.R. Part 60, Subpart H, Standards of Performance for Sulfuric Acid Plants. The Agency indicates that it is "proposing to exempt from CISWI the waste combustion units that are currently included in the scope of another effective NSPS or EG or that EPA currently intends to regulate in an NSPS or EG." 75 Fed. Reg. 31,938, 31,959. The units identified for this exemption are municipal waste combustion units, medical waste incineration units, sewage treatment plants, sewage sludge incineration units, and other solid waste incineration units. Id. Even though they are already subject to another NSPS standard, SARUs are not included in this exemption. No explanation for this oversight is given in the Federal Register preambles.

The Agency has also recently evaluated emissions from SARUs in a nationwide enforcement initiative under the New Source Review/Prevention of Significant Deterioration programs. The Agency entered into six settlement agreements with owners and operators of SARUs that specifically set even more stringent emission standards for SO2 and sulfuric acid mist than those

contained in 40 C.F.R. Part 60, Subpart H. These limits forced SARUs to spend tens of millions of dollars to add emission control equipment. The required controls and emissions levels represent the best achievable level of control for SARUs. For additional information on this enforcement initiative, see http://wvvw.epa.gov/compliance/civil/caa/acidplant-nsilindex.html .

Because Part 60 and Part 266 already regulate SARUs, the Agency has expressly rejected regulating SARUs under other sections of the Clean Air Act. For example, the Agency considered and rejected addressing SARUs under Section 112 of the Act:

Sulfuric acid regeneration facilities burn spent sulfuric acid and sulfur-bearing hazardous wastes or hazardous waste fuel to produce sulfuric acid and are subject to 40 CFR part 266, subpart H, (i.e., the RCRA Boiler and Industrial Furnace Rule) as a listed industrial furnace. We are not proposing MACT standards for these sources because EPA did not list sulfuric acid regeneration facilities as a category of major sources of HAP emissions. See 57 FR 31576 (July

16, 1992). We obtained emissions and other data on these sources and confirmed that they emit very low levels of HAP. Accordingly, these combustors will remain subject to RCRA regulations under part 266, subpart H.

69 Fed. Reg. 21,197, 21,213 (Apr. 20, 2004). SARUs that do not combust hazardous wastes would have even lower HAP emissions. No Rhodia SARU is a major source of HAPs.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

EPA acknowledges that spent sulfuric acid used to produce virgin sulfuric acid is not a solid waste by operation of EPA's RCRA Subtitle C regulations at 40 CFR 261.4(a)(7), if the conditions of the exclusion are met. EPA is not reopening its Subtitle C regulations in the RCRA rule that accompanies the Clean Air Act rules. Thus, if the spent sulfuric acid is the only secondary material burned, the SARUs would be subject to otherwise applicable section 112 standards.

The Agency does not have sufficient information to decide whether any other materials may be discarded in the first instance or whether they may pass the legitimacy criteria of newly promulgated 40 CFR 241.3(d). The mere fact that secondary materials are used beneficially does not render them non-wastes, as EPA states a number of times in the preamble to the RCRA rule. These SARUs may need to avail themselves of the non-waste petition process in the RCRA rule.

EPA notes that historically, legitimacy criteria expressed in EPA policy apply to all recycling exclusions under RCRA, even if not codified, and would apply to the spent sulfuric acid recycled under 40 CFR 261.4(a)(7). Statements in the 1999 CISWI rule, or in any subsequent letter, are overtaken by the fact the court in NRDC vacated the CISWI rule.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 1

Comment: The Proposed CISWI Rules Should Exclude SARUs.

The proposed revisions to the CISWI rules at 40 C.F.R. Part 60, Subpart CCCC and DDDD represent a dramatic departure from the existing CISWI rules. The proposed rules eliminate several regulations EPA has adopted in the past under RCRA Subtitle C could be required to undergo a new legitimacy evaluation under Subtitle D. See discussion, infra, at Section II.A.

exemptions from the existing rules, thereby expanding the scope of regulation well beyond previous limits. As explained in further detail below, the Agency never intended to regulate SARUs under the CISWI rules. [Footnote: On February 17, 2004, the Agency revisited the CISWI definitions and proposed revisions to the definition of "commercial and industrial solid waste" in a proposed rule. That proposed rule did not indicate that the Agency was considering changing the exemptions in Section 60.2020 or 60.2555. 69 Fed. Reg. 7390, 7397 (Feb. 17, 2004).] The best way for the Agency to correct this mistake is by adding back an explicit exemption in proposed Subparts CCCC and DDDD for SARUs by including the following language at Section 60.2020(j) and 60.2555(j):

(j) Sulfuric acid regeneration units. Units burning spent sulfuric acid and other materials to produce virgin sulfuric acid.

Alternatively, the Agency could re-incorporate its previous exemption for chemical recovery units more generally at Sections 60.2020(j) and 60.2555(j) (with a clarification regarding SARUs from the Agency's August 27, 2004 letter to Rhodia, discussed in detail at Section I A , infra, [See submittal for attached letter submitted by the commenter]:

(j) Chemical recovery units. Combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The seven types of units described in paragraphs (j)(1) through (7) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning spent sulfuric acid and other materials to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.[Footnote: In the absence of such an exemption, the Agency should at least exempt SARUs from emission standards within the proposed CISWI rule for pollutants that are already regulated by existing provisions in Sections 60.2020(j) and 60.2555(j) as follows: (j) Sulfuric Acid Regeneration Units are not subject to the emission standards contained in Tables 5-9 of Subpart CCCC or Tables 6-10 of Subpart DDDD for pollutants that are regulated under 40 C.F.R. Part 60, Subpart H.]

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs). See response comment response EPA-HQ-OAR-2003-0119-1122.1 above.

Commenter Name: Eric L. Hiser
Commenter Affiliation: Nucor Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-0903.1
Comment Excerpt Number: 1

Comment: EPA has failed to address the impact of the statutory exclusion of "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals" on its proposed rules.

Although EPA references the statutory exclusion for "materials recovery facilities" in the Introduction to its Secondary Materials Proposal and in the Background of its CISWI Proposal, it does not describe the interface between the proposals and the statutory exclusion in Section 129(g). This omission is unfortunate and should be rectified in the final rules.

Clean Air Act Section 129(g)(1)(A) clearly underscores congressional intent that metal recovery processes, including iron and steel production from scrap, secondary materials and even wastes, should not be subject to Section 129 controls, but should remain regulated by the Clean Air Act controls historically applied to their industries. For steel mills, that means NSPS Subparts N and Na (Basic Oxygen Process Furnaces), AA and AAa (Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels) and NESHAP Subparts FFFFF (Integrated Iron and Steel Manufacturing) and YYYYY (Electric Arc Furnace Steelmaking Facilities) and, to a lesser extent, L and CCCCC (Cokemaking). Accordingly, Nucor believes that EPA must clarify the application of the proposed rules to materials recovery facilities in light of the unambiguous expression of congressional intent.

EPA must clarify that there are no notification requirements applicable to materials recovery facilities in § 60.2020

EPA must acknowledge in the final rule that, notwithstanding the principles it espouses in the proposal, the use of scrap, secondary materials and wastes by metals recovery facilities,

including iron and steel mills, for the primary purpose of recovering metals is not subject to Section 129. Currently, § 60.2020 contains general language that could imply that materials recovery facilities are subject to notification requirements. This general language should be revised so that only those units subject to notification (which should not include materials recovery facilities exempt pursuant to Section 129(g)) are directed to consult the relevant notification requirements.

Response: The final CISWI rule applies to solid waste incineration units. As the commenter notes, "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals" are not solid waste incineration units pursuant to section 129(g)(1)(A). The final CISWI rule retains the 2000 exemption for such units. The owner or operator must determine whether their facility is combusting solid waste for the primary purpose of recovering metals. If the combustion of solid waste is not for the primary purposed of recovering metals, the units may be subject to CISWI as an "incinerator", "energy recovery unit", "waste burning kiln", or "small-remote incinerator," and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 2

Comment: According to the Agency, the 2007 decision by the D.C. Circuit in National Resources Defense Council v. EPA, 489 F.3d 1250 (D.C. Cir. 2007) ("NRDC") compels the elimination of the exemptions in Sections 60.2020 and 60.2555. The Agency has interpreted the Court's decision too broadly, however. The NRDC court held that by excluding "solid wastes" burned for energy recovery from the definition of "commercial or industrial solid waste," the EPA had created a definition of a CISWI unit that conflicted with Congress's definition as a facility that burns "any solid waste material." 42 U.S.C. § 7429(g)(1) (emphasis added); NRDC, 489 F.3d at 1258. The court found that the absence of a definition of "commercial or industrial solid waste" did not create an ambiguity in the statute, and that the EPA's definition excluding solid wastes burned for energy recovery conflicted with the plain language of the unambiguous statute. The court's primary issue with the definition of a CISWI unit was that the Agency had poorly drafted the definition of "commercial and industrial solid waste." The D.C. Circuit did not refute the EPA's analysis that some materials, when combusted, are not "discarded" and are therefore not "solid wastes." The NRDC decision, therefore, neither compels the Agency to include certain types of materials in its definition of "solid waste," nor prohibits the Agency from excluding certain types of materials from its definition of "solid waste."

A. Materials burned in SARUs are not "solid wastes."

The materials combusted in Rhodia's SARUs are not "solid wastes" because they are not burned for the purpose of disposing them. Burning these materials, therefore, is not "discarding" them. In the preamble to the final CISWI rule in 1999, the Agency explicitly stated that burning spent sulfuric acid for the purpose of producing virgin sulfuric acid is not done for the purpose of discard:

Burning - with some exceptions - is considered a form of discarding

materials. However, EPA believes that certain other materials are not burned to discard them. The primary example where burning materials is not a form of discard is where materials are burned to recover their chemical constituents. An example is burning spent sulfuric acid to produce fresh sulfuric acid.

64 Fed. Reg. 67,092, 67,105 (Nov. 30, 1999).

The Agency later clarified to Rhodia that when it referred to "spent sulfuric acid," it intended to include not only spent acid but also other sulfur-bearing materials that are burned to make virgin sulfuric acid. See August 27, 2004 letter from Sally L. Shaver to Mathew Quigley [See submittal for attached letter submitted by the commenter.] The exemption was based on EPA's clear understanding that SARUs combust "spent sulfuric acid, air, an additional sulfur source (molten sulfur, hydrogen sulfide, disulfide oil, other sources), and fuel (natural gas, fuel oil, alternative non-hazardous fuels). Id. In fact, the EPA acknowledged that, "Your description of the roles of each of these raw materials in the process

clearly demonstrates the necessity of each of these additional materials in the regeneration process." Id. The Agency stated that it would "amend the standards and guidelines to clarify the exemption in the CISWI rule to include" SARUs, but the Agency never made that clarification.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs). See comment response EPA-HQ-OAR-2003-0119-1122.1 above.

Commenter Name: Eric L. Hiser
Commenter Affiliation: Nucor Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-0903.1
Comment Excerpt Number: 3

Comment: EPA must address, and confirm, that secondary materials used to facilitate the metals recovery process are similarly exempt from the scope of the Secondary Materials Proposal and from reclassifying the material recovery facility as a CISWI under the CISWI Proposal.

There is more to the production of iron and steel than ferrous and trace metal inputs. Fluxing agents, sulfur, carbon, and other constituents may be required in some, or all, batches, to achieve the proper metallurgical balance and final product. EPA must clarify that secondary materials used for these purposes do not threaten the facility's exempt status under Section 129. An example is instructive. Several Nucor facilities receive used tires, either whole tires on rims, whole tires not on rims, tire pieces, or "green tires." The tires are used for two purposes: first, they provide a good source of carbon, a necessary ingredient in the production of carbon steels; second, they provide a source of steel (from the rims, steel belts, etc.). While the tires may also provide some Btu input, they are not used primarily for that purpose, but rather for the steel and metallurgical purposes served by the addition of carbon (and steel) in the steelmaking process. If the tires were not used, additional carbon, in the form of coal, coke, or petroleum coke, would be required.

In the Secondary Materials Proposal, EPA repeatedly states that used tires are solid waste. EPA also states that a cement kiln that uses tires is subject to the CISWI rule, even though the metal constituents are incorporated into the product. See 75 Fed. Reg. at 31877. In light of these statements, EPA must clarify that material recovery facilities, and specifically iron and steel mills, may use used tires in any form as a carbon and steel source without becoming subject to Section 129.

EPA must clarify the status of materials used for both material and energy recovery at an otherwise exempt facility pursuant to Section 129(g).

Nucor believes that EPA must provide a more explicit discussion of the scope of the Section 129(g) exemptions to avoid surprise to the industry or the public. Specifically, EPA needs to clarify when 129(g) facilities may combust secondary materials without jeopardizing their exemption. The use of secondary materials as an ingredient to produce a final metal product clearly falls within the protections of Section 129(g). Similarly, "mixed use"—where the material is used for incorporation into the product or as part of the product reaction and also provides heating value—falls within the Section 129(g) in the final rule.

EPA must address the status of materials used for energy recovery at an otherwise exempt facility pursuant to Section 129(g).

EPA needs to address whether Section 129(g) units may combust secondary materials for energy recovery in support of their primary purposes (metal recovery), but without any ingredient aspect, remain covered within the scope of the Section 129(g) exemption. So long as the material does not exceed the energy requirements for the metal production process, the facility is still "combust[ing] waste for the primary purpose of recovering metals" and meets the exemption criteria of Section 129(g)(1)(A). EPA should so state in the final rule.

Response: The final CISWI rule applies to solid waste incineration units. As the commenter notes, "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals" are not solid waste incineration units pursuant to section 129(g)(1)(A). The final CISWI rule retains the 2000 exemption for such units. The owner or operator must determine whether their facility is combusting solid waste for the primary purpose of recovering metals. If the combustion of solid waste is not for the primary purposed of recovering metals, the units may be subject to CISWI as an "incinerator", "energy recovery unit", "waste burning kiln", or "small-remote incinerator," and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. To the extent the commenter is requesting an applicability determination, the commenter should contact EPA's Office of Enforcement and Compliance Assurance.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 3

Comment: No impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 4

Comment: SARUs are "industrial furnaces," as the Agency has recognized. [Footnote: 69 Fed. Reg. 21,197, 21,213 (Apr. 20, 2004). See discussion, infra, at Section II.B.] The primary purpose of these units is to combust materials to recover sulfur in order to produce virgin sulfuric acid. The Clean Air Act already exempts analogous processes, such as the combustion of materials for the purpose of recovering metals, from the definition of a "solid waste incineration unit." 42 U.S.C. § 7429. SARUs should also be exempted because they are similar to other types of units that are already exempted under the Act.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs).). See comment response EPA-HQ-OAR-2003-0119-1122.1 above.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 3

Comment: The CISWI rule should include an exception for trial use of new and innovative technologies and fuels. The trials could be restricted by mass of fuel used, an operating time limitation, or some other appropriate measure to assure that a true limited trial period is

enforceable. Performance testing should be on a case-by-case basis as determined by the EPA or permitting agency.

In the preamble to the proposed rule on FR p. 31967, under Section V Impacts of the Proposed Action, C. Energy Impacts, the EPA states "Since we do not anticipate any new CISWI units to be constructed, there would be no energy impacts associated with control of new units." But the rule includes many requirements applicable to units that commenced construction after June 4, 2010. Accommodations have been made in the rule for the possibility of new CISWI units. Accommodations should also be made for innovative technologies and fuel usage for the purpose of determining the appropriate classification of those innovations.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 11

Comment: EPA has Properly Removed Exemptions to the 2000 CISWI Rule that were Struck Down by the D.C. Circuit as Illegal.

In the 2000 CISWI rule, EPA attempted to exempt from regulation a number of different types of combustion units. A variety of facilities were exempted, including, for example, pathological waste incinerators, agricultural waste incinerators, incinerators regulated by CAA § 129, municipal waste combustors, qualifying small power producers, and cyclonic barrel burners, among others. See, e.g., 75 Fed. Reg. at 31,948. While some of the listed units in the 2000 CISWI rule, such as small power producers, were exempted due to explicit language in § 129(g)(1), EPA had exempted others based only on a unit's stated design capacity for "thermal recovery." In 2007, the D.C. Circuit Court of Appeals struck down the non-statutory exemptions based on thermal recovery as violations of the plain language of the statute and remanded the rule to EPA, stating that "[t]he effect of these definitions is to substantially reduce the number of commercial or industrial waste combustors subject to section 129's standards." NRDC v. EPA, 489 F.3d 1250, 1258 (D.C. Cir. 2007).

In light of the court's ruling, EPA's proposed CISWI rule tracks the language of the statute and does not allow illegal exemptions. The proposal explicitly removes the 2000 CISWI rule's illegal exemptions for agricultural waste incinerators, cyclonic barrel burners, cement kilns, rack,

part and drum reclamation units (known as "burn-off ovens"), chemical recovery units, and laboratory analysis units. 75 Fed. Reg. at 31,948.

We support EPA's proposed removal of these unlawful exemptions. The proposed rule reflects the clear language of § 129 of the Clean Air Act, and properly includes for regulation the above-listed six categories of incinerators.

Response: EPA agrees that the final rules no longer classify solid waste incinerators on the basis of a device's function, and that EPA has removed from the rules provisions vacated by the D.C. Circuit.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 26

Comment: EPA has removed the exemption for laboratory analysis units, but we cannot find any cost or impacts analysis for these units.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 63

Comment: EPA Should Continue to Exempt Laboratory Analysis Units

By proposing to eliminate the exemption for laboratory analysis units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD, EPA may be inadvertently increasing the applicability of these standards by a large number of units. If laboratory analysis units are to be regulated as CISWI, EPA has underestimated the number of CISWI units due to flaws in the data collection activities and has therefore underestimated the economic impact of the proposed emission standards.

Existing description of laboratory analysis unit and the issue created with proposing to eliminate the exemption

EPA describes laboratory analysis units as those "...that burn samples of materials for the purpose of chemical or physical analysis." The preamble states these units "...may be CISWI units under this proposed rule." Further EPA states, "These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility." Id The existing description uses the term, "materials," whereas the preamble uses the term, "solid waste." It is uncertain in this context if EPA considers a material combusted in a laboratory analysis unit is a solid waste. AF&PA believes subjecting a laboratory analysis unit to the suite of CISWI requirements is problematic whether or not EPA means that the combustion of a material implies it is solid waste, as discussed below.

Need for laboratory analysis units

A number of laboratory methods involve combustion of some sort in order to generate analytical results (ash analyses, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, etc.), and the use of these technologies is certainly not restricted to commercial and industrial establishments. Indeed, these devices are used extensively in educational and governmental locations. If EPA is intending to regulate such devices, it would seem inappropriate to only be concerned about those located at commercial and industrial establishments, which AF&PA maintains is inappropriately applied usage of the statutory language of Section 129 ("any" solid waste).

For example, a number of EPA regulations require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamber in the device may be no larger than 100 in3 (about the size of a large box of facial tissue). In addition, these types of units are also commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of stacks, very small vents that cannot accommodate stack sampling equipment, etc.), the use of the device at commercial and industrial establishments would most likely cease. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to use university and governmental laboratories. This result would not be workable for many facilities that are not near such institutions and need sample results quickly.

Other examples of devices that would also be affected by the proposal include flame ionization detection, bomb calorimetry, and atomic absorption spectroscopy.

Data collection flaws

EPA has underestimated the number of these devices because 2008 CAA Section 114 ICR did not make it clear that these units were included in the scope of the survey. In using the existing description of a laboratory analysis unit, AF&PA estimates a large number of these devices located in virtually every facility or research lab that analyzes samples, and it is likely respondents did not include them in the response to the 2008 ICR since they had no idea they may have been within scope. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 179 existing CISWI's, AF&PA believes that EPA's data base does not adequately consider the universe of these units and as such EPA must not finalize this rule without reconsidering the impact on the industry.

Lack of sampling ability

Laboratory analysis units could not accommodate sampling equipment. Indeed, most, if not all, would not have stacks. It would seem ludicrous to employ test methods to sample devices that, themselves are required by test methods. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units.

Other CISWI requirements

There are a number of other CISWI requirements that would be unworkable for these units or useless. CISWI operator certification requirements would seem useless, especially since the primary activity is operating a piece of analytical equipment, as opposed to operating a CISWI. Performance tests would likely be impossible due to the size of the devices and virtually non-existent emissions that could not be measured. SSM requirements do not seem to fit this type of activity.

EPA admission of eliminating most of the units

In the Preamble to the proposal (75 FR 31956) with reference to the beyond-the-floor discussion, it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."

Samples are not solid waste

The analysis of samples has a definite purpose, completely separate from disposal of the sample material. The samples, themselves, as well as the analytical procedure, have a value or use, and the results of the analysis provide a useful function. The samples and their subsequent analysis do not constitute discard because there is a definite use involved. A number of analytical methods involve thermal destruction of the sample to generate the analytical result (ash analysis, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, to name a few). These actions are part of analytical methods, some of them prescribed by EPA in SW-846 and elsewhere.

Samples or any sample residues from subjecting samples to analytical methods is not waste until the material is discarded. Often, samples and sample residue, such as ash from a combustion method, is retained until the source material the sample came from is managed.

EPA recognized the value of excluding samples long ago under Subtitle C (46 FR 47426; September 25, 1981 exclusion for samples) when they promulgated the exclusion in 40 CFR 261.4(d). Later, EPA also added exclusions for treatability samples and treatability studies [40 CFR 261.4(e) and (f)]. Of note in the preamble to the sample exclusion with reference to storage requirements, EPA states (46 FR 47426,

third column), "... samples are excluded from the storage requirements until the decision is made to discard the sample." It would seem obvious that if a sample is not being discarded during storage that it would not be discarded while it is being analyzed either.

It is imperative that samples be excluded from regulation as solid waste, by either excluding the samples themselves, clarifying that analytical procedures which involve combustion do not involve discard, or by using some other mechanism.

Summary of requested changes for laboratory analysis units

EPA should clarify that these types of units are not included in the scope of CISWI applicability. EPA should include language in the proposed Definition of Solid Waste that combustion in such devices is not considered discard or that samples are not solid waste.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 65

Comment: EPA has removed the exemptions for cyclonic burn barrels and chemical recovery units. We request that EPA provide a definition for cyclonic burn barrel and chemical recovery unit in the final rule so facilities can understand what units are now regulated under CISWI. We assume that our chemical recovery furnaces in the pulp and paper industry would not be covered by this rule if burning only black liquor and non-waste auxiliary fuels.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs) and rationale

for subcategories. In addition, we have added a definition of “cyclonic burn barrel” to the final rule and removed cyclonic burn barrel from the definition of “incinerator.” See comment response EPA-HQ-OAR-2003-0119-1122.1 above.

Commenter Name: David W. Hacker
Commenter Affiliation: United States Steel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2091.1
Comment Excerpt Number: 1

Comment: The proposed rule needs to clearly articulate the fact that "traditional fuels" are not solid wastes and those combustion units that burn traditional fuels are exempt from the proposed CISWI NSPS/EG regulations.

The preamble to this proposed regulation discusses the fact that materials excluded from regulation as solid waste or not defined as solid waste (traditional fuels) according to the newly proposed non-hazardous secondary materials regulation are not subject to regulation under this new subpart.

However, neither the proposed "Non-hazardous secondary materials regulations" nor the CISWI NSPS/EG proposed regulations very clearly address this issue in the preamble. Nor do such proposed regulations codify the definition of "traditional fuel." As such, we recommend that combustion units that burn traditional fuels be specifically included as an exemption from regulation under the subpart in 40 CFR § 60.2020 — "What Combustion Units are exempt from this subpart?"

U. S. Steel proposes the exemption below as an appropriate measure to reflect this concern:

40 CFR § 60.2020 (b) materials that are traditional fuels as defined in 40 CFR § 241.2 or 40 CFR § 60.2265

Response: The Non-hazardous Solid Waste Definition Rulemaking provides a discussion of tradition fuels and those fuels are not solid waste. CISWI only applies to units combusting solid waste. We do not think it is necessary to include an exemption for units that combust traditional fuels.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 2

Comment: EPA Should Fully Implement The Statutory Solid Waste Combustion

Exemptions.

In NRDC v. EPA, 489 F.3d 1250 (D.C. Cir 2007), the Court of Appeals for the District of Columbia Circuit (“D.C. Circuit”) instructed EPA to fully comply with applicable Clean Air Act

§§ 112 and 129 provisions in the Boiler and Process Heater ("Boiler") Maximum Achievable Control Technology ("MACT") at 40 CFR 63 Subpart DDDDD and CISWI New Source Performance Standards ("NSPS") at 40 CFR 60 Subparts CCCC (for new units) and DDDD (for existing units). The court instructed EPA to regulate all HAP from all Boiler MACT units, and to properly distinguish boilers from CISWI units based on design specifications and fuel usage capabilities. Because the court could not validate the floor determinations for either the Boiler MACT or CISWI, it vacated both sets of rule floors and remanded the underlying rules back to EPA for what became this proposal package.

EPA expended significant resources to address the court's floor concerns and added provisions to regulate all HAP in the Boiler MACT proposal. However, the Agency, in editing the existing CISWI regulations that were not vacated by the court, also improperly stripped at least one critical exemption from the prior CISWI regulations. In our comment from the DSW docket, we explained how § 129 restricts EPA from regulating metal recovery processes from solid waste regulations. § 129(g) restricts EPA from regulating "material recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals." In the prior CISWI rules, §§ 63.2020(h) and 63.2555(h) included a subset of the statutory material recovery facility exemption ("Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters."). EPA inappropriately proposes to delete these two required provisions. Instead should expand these provisions to address two specific issues.

In evaluating the material recovery exemption, we suggest that EPA is not limited by the parenthetical "primary and secondary smelters" Congress used to describe their intent. Many types of units are used to recovery materials destined for reuse. Arkema operates a unit that uses alumina as a chemical catalyst. Rather than dispose of hundreds of tons per year of spent alumina in a Subtitle D solid waste landfill, Arkema regenerates the alumina in a roaster system, returns the regenerated catalyst to the production unit, and only disposes of material no longer meeting quality specifications. By deleting the existing source § 63.2555(h) exemption, EPA potentially improperly subjects this source to CISWI. Congress specifically instructed EPA not to regulate this type of equipment in any § 129 standard. Were EPA to want to regulate material recovery processes, it must designate such a process as a source category under its existing § 111 NSPS or § 112 MACT authority and promulgate appropriate source category standards. As no § 111 or § 112 standards exist for this process, owners and operators must assume that EPA has declined to regulate material recover units in its Clean Air Act authority. EPA has deferred regulating these sources to state or local air permitting authorities.

Not regulating materials recovery units is consistent with Congressional intent. In discussing an amendment offered by Senator Robert Dole to regulate municipal waste combustion units, Senator Quentin Burdick noted that regulating municipal waste combustion units in the proposed § 129 would reduce landfill demand, encourage responsible municipal waste incineration, and regulate hospital waste incineration. 136 Cong. Rec. S16895-01, October 27, 1990. Senator Max Baucus specifically noted in the § 129 debate:

"that some incinerators should not be regulated at all by these requirements. As such, the [§ 129] amendment exempts secondary materials recovery facilities from these requirements because their specific purpose is to recover valuable material – like palladium from used catalysts. These operations are exempt to encourage greater reuse and recovery of materials rather than discarding them in landfills."

136 Cong. Rec. S3748-01, April 3, 1990. EPA does not have the authority, either directly from § 129 or from Congressional intent, to remove existing § 60.2020(h) or § 63.2555(h). EPA should retain these provisions as statutorily necessary.

EPA has previously recognized that certain materials being recovered for reuse should not be regulated as a solid waste under the Resource Conservation and Recovery Act ("RCRA"). 40 CFR 261.4(a)(8) exempts from solid waste regulation secondary materials that are "reclaimed and returned to the original process" so long as controlled flame combustion of the material does not occur. 40 CFR 261.4(a)(13) exempts scrap metal being recycled from solid waste regulation. 40 CFR 261.4(a)(17) exempts certain spent materials from the primary minerals industries from solid waste regulation, so long as the material is treated as a valuable commodity and processing does not generate a listed hazardous waste. EPA appropriately distinguished valuable materials from solid wastes in these exemptions in a manner consistent with the Congressional mandate to

distinguish material recovery units from CISWI regulation. EPA should harmonize CISWI regulation in consistently with its prior practice in § 261.4(a).

Response: The final CISWI rule applies to solid waste incineration units. As the commenter notes, "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals" are not solid waste incineration units pursuant to section 129(g)(1)(A). The final CISWI rule retains the 2000 exemption for such units. The owner or operator must determine whether their facility is combusting solid waste for the primary purpose of recovering metals. If the combustion of solid waste is not for the primary purposed of recovering metals, the units may be subject to CISWI as an "incinerator", "energy recovery unit", "waste burning kiln", or "small-remote incinerator," and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. We maintain no change to the final CISWI rule is necessary in response to this comment.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 3

Comment: EPA needs to provide productive ways to address small or very small units and/or small or very small amounts of solid waste because the broad nature of the proposed rule could easily lead to the useless and unworkable regulation of units (large or small) that may burn minute amounts of solid waste, even if by accident.

As proposed, the CISWI requirements could be triggered by the mere combustion of a single molecule of solid waste. Dow believes that neither EPA nor the public would want to know or need to know about such inconsequential activities. Regulating such activities would lead to a useless waste of industrial and agency resources, as well as an enormous and unnecessary financial burden.

For example, Dow contends that EPA would not reasonably consider an industrial office building to be a CISWI. However, at any particular point in time, a building will contain at least some small amount of solid waste (e.g, dust, waste paper). A rigorous view of the CISWI

proposal could lead some to think that an office building would need a Title V permit because of the possibility of a future fire in which some of this small amount of solid waste could be combusted and result in emissions. If an employee within the building lit a cigarette within the confines of the industrial office building (even if contrary to building policy), that act could possibly be viewed as an unauthorized CISWI activity unless the building were permitted for such emissions. Such a view would only depend on the purpose of the building, since the same activities could occur at an institutional building or government building and not trigger any CISWI applicability. Dow believes that such an outcome would be ludicrous and outlandish and believes that EPA would agree, but Dow offers this example to illustrate the need to address this issue productively and to request allowances when the primary purpose of an activity is something other than incineration or combustion.

Dow offers more reasonable examples in our detailed comments about laboratory analysis units and burn-off ovens, but believes there may be other examples too. In the cases of these types of units, Dow believes it is absolutely necessary to provide relief in order to avoid useless and unworkable results. Dow believes that EPA has discretion to allow inconsequential combustion without triggering the CISWI requirements, especially when primary purpose of the activity is something other than combustion.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 4

Comment: HAZARDOUS WASTE COMBUSTION UNITS - Dow urges EPA:

* to retain the existing exemption for hazardous waste combustion units regulated under 40 CFR 63 Subpart EEE, or

* clarify that these units are not subject to the proposed rule and do not need the exemption.

By proposing to eliminate the exemption for hazardous waste combustion units in Section 60.2020 of Subpart CCCC and Section 60.2555 of Subpart DDDD, EPA potentially negatively affects the status of units that follow the RCRA approach under 40 CFR 270.62 (incinerators) or 40 CFR 270.66 (BIF's) and 40 CFR 270.235 to transition certain RCRA provisions from a

RCRA permit to a Title V permit. EPA did not explain the removal of this exemption. It is possible that this exemption is not needed in this circumstance since RCRA still retains some jurisdiction over such a unit, although with fewer specific RCRA requirements. Dow requests that EPA clarify that the exemption is not needed or that EPA retain the exemption if EPA determines it is needed.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Exemptions – Hazardous Waste Combustion Units.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 5

Comment: LABORATORY ANALYSIS UNITS - Dow urges EPA:

* to retain the existing exemption for laboratory analysis units, or

* at a minimum, to provide relief for laboratory units.

By proposing to eliminate the exemption for laboratory analysis units in Section 60.2020 of Subpart CCCC and Section 60.2555 of Subpart DDDD, EPA may be inadvertently increasing the applicability of these standards by a huge number. Dow believes this action by EPA will lead to useless results. Our description of the issues and potential solutions for these units follows.

1. EPA has underestimated the number of CISWI units because of flaws in the data collection activity which has also resulted in underestimating the economic impact of the proposed emission standards.

a. Existing description of laboratory analysis unit and the issue created with proposing to eliminate the exemption - The existing description of lab analysis units is in §60.2020(o) (Subpart CCCC) and §60.2555(o) (Subpart DDDD), "units that burn samples of materials for the purpose of chemical or physical analysis." However, the proposed rule removes this description which creates uncertainty as to what these units are and what EPA intends to regulate. The Preamble (75 FR 31959) does say these units "may be CISWI units under this proposed rule." Later on the same page with reference to laboratory analysis units and five other types of formerly exempted units, EPA states, "These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility." The existing description uses the term "materials," whereas the Preamble uses the term "solid waste." It is uncertain in this context if EPA is saying that the combustion of a material in a lab analysis unit implies that it is a solid waste or something else. Regardless, to subject a laboratory analysis unit to the suite of CISWI requirements is problematic whether or not EPA means that the combustion of a material implies it is solid waste. The fact that EPA formerly thought that these units needed an exemption causes a new concern that EPA fully believes that these units would now be regulated.

b. Need for laboratory analysis units - A number of laboratory methods involve combustion of some sort in order to generate analytical results (ash analyses, flame ionization detection, bomb

calorimetry, atomic absorption spectroscopy, total organic carbon), and the use of these technologies is certainly not restricted to commercial and industrial establishments. Indeed, these devices are used extensively in educational and governmental locations. If EPA is intends to regulate such devices, it would seem inappropriate to only be concerned about those located at commercial and industrial establishments, which Dow maintains is an inappropriately applied usage of the statutory language of Section 129 ("any" solid waste).

i. For example, a number of EPA regulations require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamber in the device may be no larger than 100 in3 (about the size of a large box of facial tissue). It is inconceivable that EPA be interested in emissions from such a small device. The number of these units alone at commercial and industrial establishments across the U.S. is most likely huge. As proposed in the rule, EPA would appear to only be interested in those units that by chance happen to be located in the wrong place, rather than in similar units located in university and governmental laboratories. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of stacks, very small vents that cannot accommodate stack sampling equipment), the use of the device at commercial and industrial establishments would most likely have to completely end. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to use university and governmental laboratories. Dow believes such a result would be ludicrous, if not also arbitrary and capricious. In addition, these types of units are also commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason.

ii. Other examples could be given for each type of laboratory device that employs combustion. In all cases, those examples would lead to similar absurd results as described for ashing ovens or furnaces. In addition, EPA's action would lead to conflicting results, since in many applications EPA would still demand analytical data that could no longer be generated by the current testing methodology. As mentioned earlier in this comment, such other devices include flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, and total organic carbon, to name a few. Again, EPA needs to realize that these devices can also be used to generate quality control data for product specifications and for research activities.

c. Data collection flaws - EPA may not know about the potential large number of these devices because they have previously been exempt from Subparts CCCC and DDDD. In addition, the 2008 CAA Section 114 ICR did not make clear that these units were included in the scope of the survey. It is highly likely that many or most respondents may have overlooked these units. Many respondents to the 2008 ICR understood is that it only applied to major sources under Section 112. Thus, there are most likely many units located at area sources that were not included in the ICR. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 179 existing CISWI's, Dow believes that EPA's data base for these units is woefully inadequate. In addition, proposing to eliminate the exemption for laboratory analysis units has the potential to cause a host of difficulties such as the sheer number, no regard for the size of many of these units, and difficulty in conducting performance testing.

d. Requested change - Dow questions whether these units should be included in this Section 129 program at all and presents comments to that effect later. However, should EPA include these units, EPA must conduct a more thorough analysis of them before proposing emission standards.

2. Lack of sampling ability – Laboratory analysis units could not accommodate sampling equipment. Indeed most, if not all, would not have stacks. It is unreasonable to employ test methods to sample devices that themselves are required by test methods. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units.

3. Other CISWI requirements – There are a number of other CISWI requirements that would be unworkable for these units or useless. CISWI operator certification requirements would seem useless, especially since the primary activity is operating a piece of analytical equipment, as opposed to operating a CISWI. Performance tests would likely be impossible due to the size of the devices and virtually non-existent emissions that could not be measured. SSM requirements do not seem to fit this type of activity. CPMS requirements and recordkeeping and recording requirements are unreasonable.

4. EPA admission of eliminating most of the units - In the Preamble to the proposal (75 FR 31956), with reference to the beyond-the-floor discussion, it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."

a. Dow does not believe that Congress purposely intended for rules triggered by Section 129 to eliminate a particular industry or the use of needed devices. It is inconceivable that EPA would propose regulations that would eliminate devices that serve useful purpose.

b. As proposed, the regulations disincentive facilities from analyzing samples or conducting research. Since many EPA programs require these methods to be used to generate compliance data, EPA's proposal to eliminate the exemption for laboratory analysis units is unworkable. Industry would be forced to send samples to other entities that are not commercial or industrial establishments, such as university or government institutions. That possibility seems arbitrary, if absurd.

5. Useless results - Dow believes regulating these devices would lead to useless results. EPA has discretion to avoid regulating devices when such regulation would be useless and would burden permitting agencies unnecessarily.

Summary of requested changes - For laboratory analysis units, Dow urges EPA to clarify in some fashion that these types of units are not included in the scope of CISWI applicability. Perhaps this clarification should be in the CISWI regulation or in the proposed Definition of Solid Waste. Possibly, EPA could include language in the proposed Definition of Solid Waste that combustion in such devices is not considered discard or that samples are not solid waste. Dow is submitting comments on the companion Definition of Solid Waste proposal suggesting that samples should be excluded from the definition of solid waste under RCRA subtitle D in the same manner that they have been excluded under the RCRA subtitle C definition of solid waste.

Dow believes EPA could clarify in both of these proposals that samples undergoing these various types of analytical methods are not being discarded.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators."

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 9

Comment: Laboratory Analysis Units are defined in the current Subpart CCCC and DDDD to be "units that burn samples of materials for the purpose of chemical or physical analysis" and are currently listed as being exempt from the subpart. In the proposed rule, EPA has removed this exemption in both subparts without detailed explanation or justification. EPA only notes that such units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility.

There are many tiny lab analysis units in place across many types of facilities combusting all kinds of materials. As a threshold matter, lab analysis units are used to analyze materials or products for a particular purpose, not to destroy wastes. EPA should realistically handle this issue by stating in the definition of solid waste rule that such materials for analysis are not solid waste.

EPA appears to have no data on such lab analysis devices or the feasibility of control application to those devices. These devices are obviously extremely small units and wholly inappropriate to apply emissions limits or emissions controls, or to even try to quantify emissions, or to test for emissions.

For the above reasons, we recommend that EPA retain the current exemption for lab analysis units.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: John Lyons

Commenter Affiliation: Kentucky Division of Air Quality
Document Control Number: EPA-HQ-OAR-2003-0119-2120.1
Comment Excerpt Number: 1

Comment: Several existing solid waste incinerator regulations (e. g., 40 CFR Part 60 Subpart Eb) include units which burn gasified solid waste as affected facilities. On June 30th, 2009, a letter was sent from Kentucky Energy and Environment Secretary Len Peters to EPA Administrator Lisa Jackson suggesting that those regulations be changed to exclude gasifiers from those regulations. Stephen Page, Director of the Office of Air Quality Planning and Standards, sent a response dated July 22nd 2009 concurring in general with that proposed change. Additionally, EPA recently issued a proposed rule on Identification of Non-Hazardous Secondary Materials That Are Solid Waste which specifically identifies gasification as an "Example of Adequate Processing" that can process non-waste fuel from solid waste (40 CFR Part 241). While the proposed New Source Performance Standards and Emission Guidelines for Commercial and Industrial Solid Waste Incineration Units does not include gasification the Division would like to see an explicit exclusion, whether in the preamble or the rule itself, exempting gasifiers of solid waste as affected facilities. The Division believes that such an exclusion is keeping with EPA's intent, but also believes that an explicit exclusion is desirable for clarity and to eliminate any possible questions.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. To the extent gasified solid waste is not a solid waste as defined in the Non-hazardous Solid Waste Definition Rulemaking, units burning such gas will not be solid waste incineration units.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 12

Comment: EPA should specifically list chemical recovery units burning pulping liquors (i.e., black liquor), and kilns burning lime mud as being exempt from the CISWI standard to maintain consistency with past waste determinations and avoid potential confusion.

Response: EPA is not including such an exemption. In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 1

Comment: Materials Combusted in Iron and Steelmaking Units Cannot Constitute Solid Waste Incineration

Section 129(g)(1)(A) of the CAA exempts from the definition of solid waste incineration unit "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals." See 42 U.S.C. §7429(g)(1)(A). Recognition of this exclusion is critically important to the steel industry's ongoing efforts to maximize metals recycling, minimize energy consumption and limit waste generation and pollution. Given the plain language of §129(g)(1)(A), application of this exemption does not turn on which materials are combusted. Rather, the exemption focuses on the purpose of the combusting facility. Thus, where a facility operates "for the primary purpose of recovering metals," combustion of any waste material cannot trigger incinerator status. The legislative history confirms that Congress was focused on excluding certain types of units from incinerator regulation categorically - not on a waste-by-waste basis. For example, during the 1990 CAA amendments debate, Senator Baucus explained:

the amendment also recognizes that some incinerators should not be regulated at all by these requirements. As such, the amendment exempts secondary materials recovery facilities from these requirements because their specific purpose is to recover valuable materials. . . . These operations are exempt to encourage greater reuse and recovery of materials rather than discarding them in landfills.

Legislative History of the Clean Air Act Amendments of 1990 7054 (Comm. Print 1991) (Sen. Baucus). As such, this exemption covers all materials combusted at blast furnaces, BOFs, EAFs, sinter plants and many related processes - all of which operate for the primary purpose of recovering metals and are not incinerators.

Response: The final CISWI rule applies to solid waste incineration units. As the commenter notes, "materials recovery facilities (including primary or secondary smelters) which combust

waste for the primary purpose of recovering metals" are not solid waste incineration units pursuant to section 129(g)(1)(A). The final CISWI rule retains the 2000 exemption for such units. The owner or operator must determine whether their facility is combusting solid waste for the primary purpose of recovering metals. If the combustion of solid waste is not for the primary purposed of recovering metals, the units may be subject to CISWI as an "incinerator", "energy recovery unit", "waste burning kiln", or "small-remote incinerator," and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. To the extent the commenter is requesting an applicability determination, the commenter should contact EPA's Office of Enforcement and Compliance Assurance.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 6

Comment: We believe that no impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units. Until the agency identifies the full population of sources impacted by the Proposed Rule, it will be impossible to promulgate appropriate standards based on representative sources.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units. Based on the scope of the final CISWI rule, we believe our impacts analysis is correct.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 41

Comment: EPA Should Retain the Exemption for Hazardous Waste Units under 40

CFR 63 Subpart EEE or Clarify that the Exemption is Not Needed

EPA proposes to eliminate the exemption for hazardous waste combustion units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD. ACC requests that EPA clarify that the exemption is not needed or that EPA retain the exemption if EPA determines it is needed. ACC is concerned about the status of units that follow the RCRA approach under 40 CFR 270.62 (incinerators) or 40 CFR 270.66 (BIF's) and 40 CFR 270.235 to transition certain RCRA provisions from a RCRA permit to a Title V permit. EPA did not explain the proposed removal of this exemption. It is possible that this exemption is not needed in this circumstance since RCRA still retains some jurisdiction over such a unit, although with fewer specific RCRA requirements.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Exemptions- Hazardous Waste Combustion Units.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 41

Comment: EEE sources

Certain EEE sources will follow the RCRA approach under 40 CFR 270.62 (incinerators) or 40 CFR 270.66 (BIF's) and 40 CFR 270.235 to transition certain RCRA provisions from a RCRA permit to a Title V permit. CRWI members are concerned that this transition may eliminate the exemption for hazardous waste combustion units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD. It is possible that this exemption is not needed in this circumstance since RCRA still retains some jurisdiction over such a unit,

although with fewer specific RCRA requirements. However, CRWI members are concerned that the uncertainty that removing the exemption may create and requests that EPA clarify that the exemption is not needed or that EPA retain the exemption if EPA determines it is needed.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Exemptions- Hazardous Waste Combustion Units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 42

Comment: EPA Should Not Regulate Laboratory Analysis Units under the CISWI Rule

By proposing to eliminate the exemption for laboratory analysis units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD, EPA may be inadvertently increasing the applicability of these standards to far more units than EPA intends. If laboratory analysis units are to be regulated as CISWI, EPA has underestimated the number of CISWI units due to flaws in the data collection activities and has therefore underestimated the economic impact of the proposed emission standards.

Existing description of laboratory analysis unit and the issue with proposing to eliminate the exemption

The scope of the proposed rule's coverage to laboratory units is unclear. EPA describes laboratory analysis units as those "...that burn samples of materials for the purpose of chemical or physical analysis." [Footnote: §60.2020(o) [Subpart CCCC] and §60.2555(o) [Subpart DDDD].]The preamble states these units "...may be CISWI units under this proposed rule."

[Footnote: 75 FR 31959.]Further EPA states, “These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility.” Id. The existing description uses the term “materials” whereas the preamble uses the term “solid waste.” It is uncertain in this context if EPA considers a material combusted in a laboratory analysis unit a solid waste. Regardless, ACC believes subjecting a laboratory analysis unit to the suite of CISWI requirements is problematic and unjustified.

Need for laboratory analysis units

A number of laboratory methods involve combustion of some sort to generate analytical results (ash analyses, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, etc.), and the use of these combustion devices is certainly not restricted to commercial and industrial establishments. Indeed, these devices are used extensively in educational and governmental locations. Does EPA intend for this rule to be applicable to all of these devices, or is EPA only singling out those at commercial and industrial facilities? EPA needs to clarify its intent and then justify it before finalizing this rule. We don‘t believe section 129 is intended to regulate these devices. For example, a number of EPA regulations (e.g., HWC MACT at 40 CFR 63 Subpart EEE, RCRA BIF rule at 40 CFR 266 Subpart H, and RCRA incinerator rule at 40 CFR 264 Subpart O) require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamber in the device may be no larger than 100 in3 (about the size of a large box of facial tissue). In addition, these types of units are commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of stacks, very small vents that cannot accommodate stack sampling equipment, etc.), the use of the device at commercial and industrial establishments would most likely cease. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to use university and governmental laboratories. This result would not be workable for many facilities that are not near such institutions and need sample results quickly that would have previously been analyzed onsite.

Other examples of devices that would also be affected by the proposal include flame ionization detection, bomb calorimetry, and atomic absorption spectroscopy.

Data collection flaws

EPA has underestimated the number of these laboratory devices because the Phase 1 ICR it was not clear that these units were included in the scope of the survey. Using the existing description of a laboratory analysis unit, ACC estimates a large number of these devices are located in virtually every facility or research lab that analyzes samples. It is likely ICR recipients did not include them in their ICR response since they were not clearly identified as within the scope of the ICR. Since EPA states in the “MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category” that there are only 179 existing CISWI‘s, ACC believes that EPA‘s data base does not adequately consider the multitude of these units and as such EPA cannot finalize this rule without gathering the data and reconsidering the impact on the industry.

Lack of sampling ability

Laboratory analysis units cannot accommodate sampling equipment. Indeed, most, if not all, would not have stacks. It seems ludicrous to employ test methods to sample devices that themselves are required by test methods. In essence, EPA is proposing emissions requirements that in many cases have no test methods to gather and analyze data to ensure compliance.

Other CISWI requirements

There are a number of other CISWI requirements that would be unworkable for these units. CISWI operator certification requirements would be inappropriate since the primary activity is operating a piece of analytical equipment, not a CISWI. Performance tests would likely be impossible due to the size of the devices and de minimis emissions that could not be measured. SSM requirements also do not seem relevant to this type of device.

EPA‘s acknowledgement that most of the units will cease to operate

It is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, “We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted.” [Footnote: 75 FR 31956.] We do not

believe that Congress intended EPA to promulgate emission standards under section 129 that do not reflect what is being “achieved” and result in the shutdown of useful units.

Samples are not solid waste

The analysis of samples has a definite purpose; it is completely separate from disposal of the sample material. The samples and the analytical procedure have a value or use, and the results of the analysis provide a useful function. The samples and their subsequent analysis do not constitute “discard” because there is a definite use involved. A number of analytical methods involve thermal destruction of the sample to generate the analytical result (ash analysis, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, to name a few). These actions are part of analytical methods, some of them prescribed by EPA in SW-846 and elsewhere.

Samples, or sample residues from subjecting samples to analytical methods, are not waste until the material is discarded. Often, samples and sample residue, such as ash from a combustion method, are retained until the source material the sample came from is managed.

EPA recognized the proper exclusion of samples long ago under when it promulgated the exclusion in 40 CFR 261.4(d). [Footnote: 46 FR 47426, September 25, 1981.]

Later, EPA also added exclusions for treatability samples and treatability studies in 40 CFR 261.4(e) and (f). Of note, in the preamble to this CISWI rule, EPA states, “... samples are excluded from the storage requirements until the decision is made to discard the sample.” [Footnote: 46 FR 47426.] It would seem obvious that if a sample is not being “discarded” during storage that it would not be “discarded” while it is being analyzed.

Samples and the analysis of samples involving combustion should be excluded from this rule as neither involves “discard.”

Summary of requested changes for laboratory analysis units

EPA should clarify that these types of units are not included in the scope of CISWI applicability. EPA should include language in the proposed Definition of Solid Waste that combustion in such units is not considered discard or that samples are not solid waste.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 44

Comment: The Rule Should Define Cyclonic Burn Barrels and Chemical Recovery Units

EPA has proposed to remove the exemptions for cyclonic burn barrels and chemical recovery units. We request that EPA provide a definition for cyclonic burn barrel and chemical recovery unit in the final rule so facilities can understand what units are now regulated under CISWI.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs) and rationale for subcategories. In addition, we have added a definition of "cyclonic burn barrel" and removed that term from the definition of incinerator in the final rule.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 45

Comment: By proposing to eliminate the exemption for laboratory analysis units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart. DDDD, EPA may be inadvertently increasing the applicability of these standards by a huge number. Our description of the issues and potential solutions for these units follows.

1) EPA has underestimated the number of CISWI units and the economic impact of the proposed standards because of flaws in the data collection activity

EPA is proposing to remove the existing description of lab analysis units (units that burn samples of materials for the purpose of chemical or physical analysis) is in §60.2020(o) [Subpart CCCC] and §60.2555(o) [Subpart DDDD]. This proposed removal creates uncertainty as to what these units are and what EPA

intends to, regulate. The Preamble (75 FR 31959) states that these units "may be CISWI units under this proposed rule." Later on the same page with reference to laboratory analysis units and five other types of formerly exempted units, EPA states, "These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility." The existing description uses the term, "materials," whereas the Preamble uses the term, "solid waste." It is uncertain in this context if EPA is saying that the combustion of a material in a lab analysis unit implies that it is a solid waste or something else. Regardless, to subject a laboratory analysis unit to the suite of

CISWI requirements is problematic whether or not EPA means that the combustion of a material implies it is solid waste. The fact that EPA formerly thought that these units needed an exemption causes a new concern that EPA fully believes that these units would now be regulated.

A number of laboratory methods involve combuStion of some sort in order to generate analytical results (ash analyses, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic'carbon, etc.). The use of these technologies is not restricted to commercial and industrial

establishments. Indeed, these devices are used extensively in educational and governmental locations. If EPA is intending to, regulate such devices, it would seem inappropriate to only be concerned about those located at commercial and industrial establishments.

For example, a number of EPA regulations require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamb6r in the device may be no,larger than 100 in3 (about the size of a large box of facial tissue). It is inconceivable that EPA would be interested in emissions from such a small

device. The number of these units alone at commercial and industrial establishments across the U.S. is hUge. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of stacks, very small vents that cannot accommodate stack sampling equipment, etc.), the use of the device at commercial and industrial establishments would most likely have to end. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to Use university and governmental laboratories. CRWI believes such a result would be ludicrous. In addition, these types of units are also commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason.

Other examples could be given for each type of laboratory device that employs combustion. In all cases, those examples would lead to similar absurd results as described for ashing ovens or

furnaces. In addition, EPA's action would lead to conflicting results, since in many applications EPA.would still demand analytical data that could no longer be generated by the current testing methodology.

EPA may not know about the potential large number of these devices because they have been previously exempt from Subparts CCCC and DDDD. In addition, the 2008 CAA Section 114 ICR did not make it clear that these units were included in the scope of the survey. In using the existing description of a laboratory analysis unit, one member estimates that they have a large number of these devices located in virtually every facility or research lab that analyzes samples, and none of those devices were included in the response to the 2008 ICR. This was because they had'no idea they may have been within scope. In addition, it is CRWI's understanding that the 2008 ICR was sent only to major sources under Section 112. There are most likely many of these units located at area sources that were not included in the ICR. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 179 existing CISWI's, CRWI believes that EPA's data base for these units is woefully inadequate. In addition, proposing to eliminate the exemption for laboratory analysis units has potential to cause a host of difficulties such as the sheer number of them, no regard for the size of many of these units, the difficulty in conducting performance testing on them, etc.

CRWI questions whether or not these units should be included in this Section 129 program at all and suggests that the exclusion be re-instated.. However should EPA believe that they must include these units, CRWI believes EPA must conduct a more thorough analysis of them before proposing emission standards.

2) Lack of sampling ability

Laboratory analysis units could not accommodate sampling equipment. Indeed, most, if not all, would not have stacks. It would seem ludicrous to employ test methods to sample devices that, themselves are required by test methods. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units.

3) Other CISWI requirements

There are a number of other CISWI requirements that would be unworkable for these units or useless. CISWI operator certification requirements would seem useless, especially since the primary activity is operating a piece of analytical equipment, as opposed to operating a CISWI. Performance tests would likely be impossible due to the size of the devices and virtually non-existent emissions that could not be measured. Startup, shutdown, and malfunction requirements do not seem to fit this type of activity. Continuous Parameter Monitoring System requirements would not make sense, as well as recordkeeping and recording requirements.

4) EPA admission of eliminating most of the units

In the Preamble (75 FR 31956), it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these, three subcategories will cease combusting waste if beyond-the-floor levels are, adopted." If the exclusion for laboratory instruments is removed, each of these units would potentially become an incinerator.

CRWI does not believe that Congress purposely intended for rules triggered by Section 129 to eliminate a particular industry or the use of needed devices. It is inconceivable that EPA would purposely regulate useful devices from existence with the full awareness that their action would do exactly that. Whether or not these units exist does not diminish their apparent useful purpose.

As proposed, there will actually be a disincentive to analyze samples or to conduct research. Since many EPA programs require these methods to be used to generate compliance data, EPA's proposal to eliminate the exemption for laboratory analysis units is unworkable. Industry would be forced to send samples to other entities that are not commercial or industrial establishments, such as university or government institutions. That possibility seems arbitrary, if not unethical.

Summary of requested changes - CRWI urges EPA to clarify in some fashion that these types of units are not included in the scope of CISWI applicability. We do not know if it would be better for this clarification to be in the CISWI regulation or in the proposed Definition of Solid Waste. Possibly, EPA could include

language in the proposed Definition of Solid Waste that combustion in such devices is not considered discard or that samples are not solid waste. There is a definition of discard in the current Subparts CCCC and DDDD that EPA could pOssibly modify to accomplish this need. CRWI believes EPA could clarify in those two places that samples undergoing these various types of analytical methods is not discard. At the most, if any discard were occurring, it would only be incidental to primary purpose of the analytical instrument and not worth regulating.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Lab Analysis Units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 65

Comment: EPA has removed the exemption for laboratory analysis units, but EPA has not provided any cost or impacts analysis for extending the rule to these units.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Lab Analysis Units. Based on the scope of the final rule, we conclude there will be no costs or impacts on laboratory analysis units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 76

Comment: By proposing to eliminate the exemption for laboratory analysis units in Section §60.2020 of Subpart CCCC and Section §60.2555 of Subpart DDDD, EPA may be inadvertently increasing the applicability of these standards by a large number of units. If laboratory analysis units are to be regulated as CISWI units, EPA has underestimated the number of CISWI units due to flaws in the data collection activities and has therefore grossly underestimated the economic impact of the proposed emission standards. 75 FR 31948, 31974, 31990.

Eliminating the exemption is problematic and unnecessary. EPA describes laboratory analysis units as those "...that burn samples of materials for the purpose of chemical or physical analysis."[Footnote: §60.2020(o) [Subpart CCCC] and §60.2555(o) [Subpart DDDD]]

The preamble states these units "...may be CISWI units under this proposed rule."[Footnote: 75 FR 31950] Further EPA states, "These six types of units would be regulated under the revised proposed CISWI standards if they burn solid waste at a commercial or industrial facility." Id The existing description uses the term, "materials," whereas the preamble uses the term, "solid waste." It is uncertain in this context if EPA considers a material combusted in a laboratory analysis unit as a solid waste. CIBO believes subjecting a laboratory analysis unit to the suite of CISWI requirements is problematic and ludicrous whether or not EPA means that the combustion of a material implies it is solid waste, as discussed below.

A number of laboratory methods involve combustion of some sort in order to generate analytical

results (ash analyses, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, etc.), and the use of these technologies is certainly not restricted to commercial and industrial establishments. Indeed, these devices are used extensively in educational and governmental locations. If EPA is intending to regulate such devices, it would seem inappropriate to only be concerned about those located at commercial and industrial establishments, which CIBO maintains is inappropriately applied usage of the statutory language of Section 129 ("any" solid waste).

For example, a number of EPA regulations require ash analysis. The standard method used is ASTM-482 in which a muffler furnace or microwave oven is employed to combust the sample in order to generate ash results. The sample size may be as small as 5 grams, and the combustion chamber in the device may be no larger than 100 in3 (about the size of a large box of facial tissue). In addition, these types of units are also commonly used in research activities and in manufacturing operations where product quality demands an ash analysis (combustion of product-grade material to obtain quality data for customers), and which use the same ASTM-482 method to generate the same type of data but for a different reason. Since it is physically impossible to comply with many CISWI requirements for most, if not all, of these units (lack of

stacks, very small vents that cannot accommodate stack sampling equipment, etc.), the use of the device at commercial and industrial establishments would most likely cease. Since the analyses would still be required by many EPA regulations, it seems the only alternative for generating compliance data would be to use university and governmental laboratories. This result would not be workable for many facilities that are not near such institutions and need sample results quickly.

Data collection flaws. EPA has underestimated the number of these devices because the 2008 CAA Section 114 ICR did not make it clear that these units were included in the scope of the survey. In using the existing description of a laboratory analysis unit, CIBO believes there are a large number of these devices located in virtually every facility or research lab that analyzes samples, and it is likely respondents did not include them in the response to the 2008 ICR since they had no idea they may have been within scope. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 179 existing CISWI's, CIBO believes that EPA's data base does not adequately consider the universe of these units and, therefore, EPA must not finalize this rule without reconsidering the impact on the industry.

Lack of sampling ability and other CISWI requirements. Laboratory analysis units could not accommodate sampling equipment. Indeed, most, if not all, would not have stacks. It would seem ludicrous to employ test methods to sample devices that, themselves are required by test methods. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units.

There are a number of other CISWI requirements that would be unworkable for these units or useless. CISWI operator certification requirements would seem useless, especially since the primary activity is operating a piece of analytical equipment, as opposed to operating a CISWI. Performance tests would likely be impossible due to the size of the devices and virtually nonexistent emissions that could not be measured.

EPA admits eliminating most of the units. In the Preamble to the proposal (75 FR 31956) with reference to the beyond-the-floor discussion, it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."[Footnote: 75 FR 31956] How lab analyses will be conducted is apparently not of interest to EPA, even when they require the analyses.

Samples are not solid waste. The analysis of samples has a definite purpose, completely separate from disposal of sample material. The samples, themselves, as well as the analytical procedure, have a value or use, and the results of the analysis provide a useful function. The samples and their subsequent analysis do not constitute discard because there is a definite use involved. A number of analytical methods involve thermal destruction of the sample to generate the analytical result (ash analysis, flame ionization detection, bomb calorimetry, atomic absorption spectroscopy, total organic carbon, to name a few). These actions are part of analytical methods, some of them prescribed by EPA in SW-846 and elsewhere.

Samples or any sample residues from subjecting samples to analytical methods is not waste until the material is discarded. Often, samples and sample residue, such as ash from a combustion method, is retained until the source material the sample came from is managed.

EPA recognized the value of excluding samples long ago under Subtitle C (46 FR 47426; September 25, 1981 exclusion for samples) when they promulgated the exclusion in 40 CFR 261.4(d). Later, EPA also added exclusions for treatability samples and treatability studies [40 CFR 261.4(e) and (f)]. Of note in the preamble to the sample exclusion with reference to storage requirements, EPA states (46 FR 47426, third column), "... samples are excluded from the storage requirements until the decision is made to discard the sample." It would seem obvious that if a sample is not being discarded during storage that it would not be discarded while it is being analyzed either.

It is imperative that samples be excluded from regulation as solid waste, by either excluding the samples themselves, clarifying that analytical procedures which involve combustion do not involve discard, or by using some other mechanism.

Summary of requested changes for laboratory analysis units. EPA should clarify that these types of units are not CISWI untits.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Lab Analysis Units.

In addition, we note that in Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 3

Comment: Amended exemption provisions: EPA has proposed to revise the existing exemption provisions for several source categories in the proposed rule (75 FR 31948, 75 FR 31959). DEC submits the following specific comments on these proposed changes:

Removal of the laboratory analysis unit exemption: The DEC is concerned that the removal of this exemption has the potential to create a large number of facilities that are subject to the CISWI rule. The DEC is aware of several types of laboratory analysis units that employ

combustion as a part of their analysis. These generally process extremely small amounts of material, grams per day in some cases, and do not vent directly to the outdoor air. These units are typically used for specific laboratory operations with no apparent alternative, should the cost of compliance be too great.

These units are typically operated at facilities otherwise exempt from regulation that fall outside the DEC's purview. A significant effort would need to be undertaken to locate each affected unit and ensure that it complied with the final standards.

The DEC requests that EPA provide a clear definition of what constitutes a laboratory analysis unit in the final rule, and set a reasonable minimum size applicability threshold. The DEC also requests guidance as to which of the proposed subcategories laboratory analysis units belong, an explanation of how they are typically controlled, and a listing of affected units.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Lab Analysis Units. We have included a definition of laboratory analysis unit in the final rule.

Also, we note that in Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 4

Comment: Amended exemption provisions: EPA has proposed to revise the existing exemption provisions for several source categories in the proposed rule (75 FR 31948, 75 FR 31959). DEC submits the following specific comments on these proposed changes:

Removal of the chemical recovery unit exemption: The proposal states that the exemption for chemical recovery units included in the original CISWI rule is also removed by the revisions. The DEC requests clarification on which subcategory applies to chemical recovery units and whether the only affected units are those listed in the original exemption language. The DEC also requests that EPA clearly define the universe of affected units in the final rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs). See also responses above concerning chemical recovery units.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 9

Comment: Amended exemption provisions: EPA requested comment on the removal of units which are statutorily exempt from the definition of solid waste incineration unit under Section 129 from the exemption provisions of this proposal (75 FR31960). The DEC anticipates that the removal of this language will create confusion when an entity is attempting to determine whether or not the proposed rule is applicable to their operations. As such, language referencing statutorily exempt units should be retained in the final rule.

Response: The final CISWI rule retains express exemptions for units that are not solid waste incineration units pursuant to section 129(g)(1).

3.5 Legal/Applicability: EGU Questions

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 14

Comment: A lot of the speakers talk about biomass. We recently had a large biomass plant apply to our energy commission here in California for permits. And their estimated emissions limits were higher than if they were going to burn coal. And actually there was a major report released yesterday on biomass burning and how many of the states back east are meeting their

portfolio standards by cutting down their forests and burning wood. So the whole concept of biomass burning and whether it's really a good idea or not bears some scrutiny.

Response: We thank the commenter for the comment.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 83

Comment: A new Agency, the Las Brisas Energy Center is proposing to build a toxic waste incinerator in downtown Corpus Christi to burn petroleum . TCEQ, Texas Commission on Environmental Quality, will consider are the air permit, permit number 85- -- is it 85013 -- at its June 30th meeting in Austin next week at the Las Brisas Energy Center application -- air permit application, and we intend to attend that meeting . I should tell you that in Oasis County, San Patricio County, and Nueces County medical societies have all come out against Las Brisas. I believe that it's going to be harmful to the community's health, already concerned by the absorbently high asthma rates in Corpus Christi and surrounding areas and birth defects in the area, as well. They're especially concerned about current emissions already -- very high emissions of SO2 in the communality, particulate matter, as well, and very high rates of emissions coming from this new proposed plant . There are 28,000 schoolchildren who will live -- who will go to school within five miles of this proposed plant. Currently, the Las Brisas Energy Center is claim/arguing that the MACT analysis is not needed because petroleum coke is not defined such as energy or as a waste product. We would ask that -- that some clarification be provided for that.

Response: If the identified facility is combusting solid waste, it may be subject to CISWI.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 2

Comment: Michigan has three wood-fired sources that are subject to the Clean Air Interstate Rules (CAIR) because they meet the definition of "fossil fuel-fired electric generating unit" under that rule, but there is no exemption for fossil fuel-fired utility generating units under this proposed CISWI rule. We request clarification as to whether a source could meet the definition of fossil fuel-fired utility unit and also be subject to CISWI. These Michigan facilities are in the state budget program for both annual and ozone seasonal NOx emissions and have invested in the 40 CFR Part 75 compliant continuous emission rate monitoring systems to meet those requirements. If these facilities were to be classified as an incinerator based on the fuels they use, they will be exempt from CAIR rules (CISWI units firing less than 20% fossil fuel, see 40 CFR 72.6(b)(7)).

Response: CISWI units include energy recovery units (e.g., units that would be boilers if they did not burn solid waste) that combust solid waste materials. A boiler combusting both fossil fuel and solid waste would be subject to CISWI, providing it does not meet any of the exemptions to the rule, which includes exemptions for qualifying small power producers, and cogeneration facilities. Incinerators, including energy recovery units, are exempted from the acid rain program if more than 80 percent (on a Btu basis) of the annual fuel consumed at such incinerator is other than fossil fuels. As such a unit could be subject to both CISWI and the acid rain program if it combusted solid waste at less than 80 percent of the annual fuel consumption rate, on a Btu basis.

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 5

Comment: Several utility boilers in South Carolina have the potential to combust materials that could be considered solid waste under the proposed RCRA definition. These are utility boilers that do not meet the exemption under CAA Section 129 (g)(1)(B) for qualifying small power production facilities or qualifying cogeneration facilities. The EPA should clarify that utility boilers not meeting the definition of §129 (g)(1)(B) would be subject as an "energy recovery unit" in the CISWI Rule. In other words, a utility not meeting the 129 exemption and that burns a solid waste would be subject to CISWI. South Carolina is also seeking clarification on how the regulatory transition between CAA Section 112 [Footnote: The deadline for EPA to propose the "Utility MACT" is March 2011] and 129 would be implemented for utility boilers.

Response: As stated in the preamble to the proposed rule, CISWI units include energy recovery units (e.g., units that would be boilers if they did not burn solid wastes) that combust solid waste materials. EPA agrees with the comment that boilers burning solid waste would be subject to CISWI unless they met one of the exemptions in the rule, which includes exemptions for qualifying small power production facilities or qualifying cogeneration facilities.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 6

Comment: Comments Prepared by the

California Bioenergy Interagency Working Group

1. If implemented as proposed, the MACT regulations will have a significant impact on the ability of biomass-to-energy facilities to continue to operate in the State and the State's ability to meet its 33 percent renewable energy goals by 2020.

2. Development of biomass as an energy source is very important to the State of California. The State, through Governor Schwarzenegger's Executive Order S-06-06, establishes a 20 percent target for biomass within its established State goals for renewable generation for 2010 and 2020. Currently, generation from biopower resources provides about 20 percent of California's renewable energy or an estimated 2.8 percent of California's total in-state power generation.

3. In order to support biomass facilities and other renewable energy resources, California imposes a public goods charge to provide incentives and financial support to make them economically viable. More than 70 percent of California's biopower generation from solid-fuel biomass facilities in the State receives funding from this program.

4. Despite State subsidies, the total generating capacity from solid fuel biomass has decreased from 994 megawatts (MW) in the 1990s to 667 MW today, despite a potential to generate 3,421 MW from biomass resources. Only one new facility has been developed since 2000.

5. The power plants also have existing power purchase agreements and would not be able to pass the cost of the retrofit on to utility ratepayers. The Energy Commission's analysis indicates that the existing biomass power plants would not be able to fund the retrofit needed to meet the MACT Rule and would discontinue operation.

6. The California Air Resources Board indicates that the proposed rule will not necessarily improve the air quality, and we agree that it will have unintended consequences. Specifically, the Bioenergy Interagency Working Group believes the proposed rule will have negative environmental impacts by increasing the amount of opening burning of agricultural and forest waste, there will be higher risks of wildfires, and more greenhouse gas from landfills.

7. Continued operation of the biomass-to-energy facilities supports state and federal healthy forest initiatives, helps our agricultural sector, assists solid waste disposal, and enables utilities to meet renewable energy mandates.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. If a unit is not combusting solid waste, it is not subject to CISWI, and clean biomass is not a solid waste as defined in the concurrent rulemaking.

Commenter Name: David P. Tenny
Commenter Affiliation: National Alliance of Forest Owners (NAFO)
Document Control Number: EPA-HQ-OAR-2003-0119-1945.1
Comment Excerpt Number: 1

Comment: Forest biomass is an important renewable fuel source leading to

lower GHG lifecycle emissions than conventional fuels.

Wood from sustainably managed forests provides a renewable, low-carbon energy source as an alternative to fossil fuels. According to U.S. Energy Information Administration ("EIA") data, biomass already supplies over 50% of the nation's renewable energy [Footnote: See EIA, U. S. Energy Consumption by Energy Source (July 2009), available at http://www.eia.doe.gov/cneaf/alternate/page/renew energy consump/table1.html.] Forests can provide ample, sustainable, domestic supplies of biomass to produce liquid transportation fuels, electricity, thermal energy (heat and power for manufacturing and other industrial uses), and synthetic natural gas. See NAFO, Carbon Neutrality of Energy from Forest Biomass, available at

http://nafoalliance.org/carbon-neutrality-of-energy-from-forest-biomass/ .

In evaluating the GHG emissions associated with fuels, a lifecycle analysis incorporates all steps in a "product system" to evaluate broader environmental impacts of products and processes. Using forest biomass as a renewable fuel source has significant carbon benefits because it has a more favorable lifecycle analysis than petroleum and other fuels. The Department of Energy ("DOE") has estimated that "[c]ellulosic ethanol use could reduce GHGs by as much as 86%." See U.S. Department of Energy, Ethanol Benefits, available at http://www.afdc.energy.gov/afdc/ethanol/benefits.html (last visited on May 4, 2010). EPA, in its final rulemaking adopting changes to the Renewable Fuel Standard Program, also recognized the GHG emissions reductions of greater than 60% that would result from the use of cellulosic biofuels compared to petroleum. Using the "displacement index" approach, EPA determined that every BTU of gasoline replaced by cellulosic ethanol will produce lifecycle GHG emission reductions of 92.7 percent [Footnote: See EPA, EPA420-D-06-008, Renewable Fuel Standard Program: Draft Regulatory Impact Analysis at 191 (September 2006).]

Recent studies have also documented the GHG benefits of electricity produced from forest biomass. One study released by the Green Power Institute, which is the renewable energy program of the Pacific Institute, has found that biomass energy production in California over the last 30 years has provided two kinds of greenhouse gas benefits. See Gregory Morris, Ph.D., Bioenergy and Greenhouse Gasses (2008). First, it has avoided the GHG emissions associated with the production of fossil fuels. Second, biomass energy production has avoided the biogenic greenhouse gas emissions (mainly methane) of the various alternative disposal fates of biomass residues, replacing them with the lower potency greenhouse gas emissions of energy production. Id. at 4. The prevailing science thus acknowledges the significant carbon benefits of energy produced using renewable biomass from managed forests.

B. The combustion of forest biomass is part of the ongoing carbon cycle.

The prevailing view in the science community is that carbon emissions from forest biomass are offset by the prior absorption of carbon through photosynthesis that created the biomass. In other words, the carbon that enters the atmosphere when forest biomass is combusted was previously absorbed from the atmosphere by the forest biomass and will be reabsorbed when new biomass is grown.

As the EPA has concluded, there is "[s]cientific consensus . . . that the CO_2 emitted from burning biomass will not increase total atmospheric CO_2 if this consumption is done on a sustainable

basis." [Footnote: Environmental Protection Agency Combined Heat and Power Partnership, Biomass Combined Heat and Power Catalog of Technologies, 96 (Sept. 2007), available at www.epa.gov/chp/documents/biomass chp catalog.pdf.] Consistent with this conclusion, in its most recent Inventory, EPA did not include emissions from the combustion of wood biomass in its national emissions totals because it "assumed that the carbon . . . released during the consumption of biomass is recycled as U.S. forests and crops regenerate, causing no net addition of CO_2 to the atmosphere." EPA 2010 Inventory at 3-10. In addition, EPA's Mandatory Greenhouse Gas Reporting Rule does not include biogenic CO_2, such as the carbon contained in wood and wood residues, in its reporting threshold. See generally 74 Fed. Reg. 56260 (Oct. 30, 2009). DOE's Voluntary Reporting of Greenhouse Gases Program, authorized by Section 1605(b) of the Energy Policy Act of 1992, also provides for exclusion of combustion of biomass fuels [Footnote: See DOE, Technical Guidelines: Voluntary Reporting of Greenhouse Gases (1605(b)) Program (January 2007) at 77 ("Reporters that operate vehicles using pure biofuels within their entity should not add the carbon dioxide emissions from those fuels to their inventory of mobile source emissions because such emissions are considered biogenic and the recycling of the carbon is not credited elsewhere.")] The international GHG accounting methods developed by the IPCC also recognize that biogenic carbon is part of the natural carbon balance and will not add to atmospheric concentrations of carbon dioxide. Thus, a strong consensus exists that treating combustion of biomass as "carbon neutral" is scientifically sound.

C. The promotion of renewable energy is a national policy that EPA

must follow.

As described above, forests can play an important role in reducing and managing greenhouse gas emissions. Expanding the sources of renewable energy is a central feature of both national and international policy to reduce reliance on fossil fuels.

The EPA, in considering approaches toward addressing climate change, has

long recognized that responsibly managed forests are considered one of five key "groups of strategies that could substantially reduce emissions between now and 2030." See Regulating Greenhouse Gas Emissions Under the CAA, 73 Fed. Reg. 44,354, 44,405 (July 30, 2008). Similarly, the United Nation's Intergovernmental Panel on Climate Change ("IPCC") report on mitigation technologies highlights forest management as a primary tool to reduce GHG emissions. Id. at 44,405-06; see also NAFO, Carbon Mitigation Benefits of Working Forests (identifying trading platforms and registries that recognize forest management), available at http://nafoalliance.org/mitigation-benefits-working-forests/.

President Obama has emphasized that renewable energy derived from feedstocks such as forest biomass hold the key to transitioning the nation to a "sustainable, low carbon energy future." See Letter from President Barack Obama to Governors John Hoeven and Chet Culver (May 27, 2009), available at http://www.governorsbiofuelscoalition.org/assets/files/President%20Obama's%20Respo nse5-27-09.pdf; see also President Barack Obama, Memorandum for the Secretary of Agriculture, the Secretary of Energy, and the Administrator of the Environmental Protection Agency, 74 Fed. Reg. 21531-32 (May 5, 2009).

With Presidential endorsement, if not direction, of national renewable energy policy and the role of biomass in that policy, EPA must conduct its programs in a manner consistent with that

policy. In light of this policy, EPA must not adopt any mandatory environmental controls, such as those set forth in the proposed rulemaking, that will require large expenditures of time and resources by industry, but are not necessary to protect human health and the environment. Similarly, to act consistently with this nation's renewable energy policy, EPA must not impose restrictions on biomass boilers that are not legally required and that stand to disadvantage the use of biomass as a fuel source. The proposed rule lacks any justification for its departure from this policy and, as explained below, is thus arbitrary and capricious.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. If a unit is not combusting solid waste, it is not subject to CISWI, and clean biomass is not a solid waste as defined in the concurrent rulemaking.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 1

Comment: We have a number of specific recommendations regarding these three inter-related rulemakings, which appear below. Before addressing the rule, however, it is critically important for EPA to understand both the gravity of the problem created by what has been proposed and the impact these rules will cause to a larger effort underway in this country to fight climate change, strengthen the health of our forests and agricultural lands, and grow the green jobs economy—each a critically

important policy initiative in the Congress, at the White House, and for the 46 states and territories who have adopted renewable portfolio standards that include support for biomass.

To place biomass energy in the context of the larger push for renewable energy, consider the current and potential significance of biomass power. DOE estimates that biomass generates 45 billion kilowatt-hours of electricity from biomass, or 1.2 percent of total electric energy sales. If on-site power is considered along with thermal, the actual contribution from biomass is four times that estimate. In any event, biomass provides over 50% of the Nation's renewable energy supply, and DOE believes that potential biomass could supply as much as 14 percent of the Nation's power needs by 2030. Without biomass, it is uniformly believed—from members of Congress to members of the Cabinet—that the Nation will be unable to meet increased renewable energy goals.

Unlike wind or solar, biomass energy is baseload generation, available 24/7, and does not require expensive new transmission infrastructure. And unlike many other renewable sources, biomass is a "jobs creating machine" for rural America. A recent study authored by Navigant Consulting estimated that the build out of biomass in just five southeastern states could double the Nation's biomass capacity and create 60,000 new jobs.

Biomass is not just an untapped source of renewable energy; it's also an enormous environmental challenge that poses significant ecological risks. Consider the recent call for help by the Western Governors Association for the federal government to adopt a "cohesive federal policy on the use of biomass for energy production" to combat pine bark beetle infestations that have decimated 21 million acres, creating ecological and safety risks to rural communities. As expressed by the WGA, "biomass utilization represents one of the most viable new means available to address this ecological crisis, while decreasing fossil fuel usage and stabilizing a depressed lumber and forest-product market." See August 10, Press Release, "Increased Use of Biomass Energy, Improved Forest Health Requires Cohesive Federal Policy" (at www.wga.org)

You will hear from individual BPA members and others in related industries that as proposed, these rules are unachievable and could cause the closure of existing biomass energy plants and certainly frustrate the growth of this industry. If that were to happen, virtually every major renewable energy policy at the federal and state level would come to an abrupt halt

The Administration's support of biomass has been unwavering and involves almost every member of the Cabinet-

The White House. In a series of seven Executive Orders, involving Presidents Clinton, Bush, and Obama, the federal government is mandated to "lead by example" and

purchase 50% renewable power, including biomass. (13101 of September 14, 1998; 13123 of June 3, 1999, 13134 of August 12, 1999, 13148 of April 21, 2000, 13149 of

April 21, 2000, 13514 of October 5, 2009). A Presidential Directive, signed by the President on May 5, 2010, directed the acceleration of investment in, and production of, various biofuels including biomass.

USDA. The Agency launched an unprecedented effort through the Biomass Crop Assistance Program, to accelerate the industry and, according to Secretary Vilsack, "stimulate biomass production...that will benefit producers and provide materials necessary to generate clean energy and reduce carbon pollution." To date, BCAP is responsible for over $200 million in support for bioenergy. Other USDA programs include the Biorefinery Assistance Program (Section 9003 of the Farm Bill), the Rural Energy for America Program, and grants under the American Recovery and Reinvestment Act to enhance woody biomass utilization, totaling nearly $55 million in 14 states.

DOE. Secretary Chu has supported grants for wood-to-energy and forest utilization projects designed to "create jobs, promote our energy independence, and cut our carbon emissions by unlocking the enormous potential for renewable energy in the Western United States."

Interior. Secretary Salazar has created a federal task force to boost investment in biomass.

Council on Environmental Quality. The Chair of the White House Council on Environmental Quality, Nancy Sutley has declared that biomass is among "the issues we are also focused on at the White House under the leadership of President Obama." Indeed, CEQ recently proposed to

exclude biofuel and biomass combustion from the federal government's greenhouse gas accounting and reporting guidance because they are biogenic emissions in contrast to carbon from fossil fuels that "represents a net increase in atmospheric carbon...")See 75 Fed Reg.49913 (August 16, 2010)

EPA. EPA has encouraged the use of biomass at coal plants fined for violating federal emission standards. A recently announced settlement with Ohio Edison involved the requirement that the utility increase biomass combustion to decrease its carbon emissions. EPA declared that "Today's settlement improves air quality for the local community and reduces greenhouse emissions by requiring the use of a renewable, carbon-neutral fuel to generate electricity." Joint EPA/DOJ Press Release dated August 12, 2009.

DOJ. The Department of Justice has extolled the use of biomass to improve air quality at coal plants, commenting on the same settlement that "We are pleased that Ohio Edison has chosen to significantly reduce greenhouse gases and other pollutants ...and hope that [it] will become the standard-bearer for other companies considering conversion to renewable biomass fuels ..."

Treasury. The Department of Treasury has awarded millions in so-called 1603 Grants to support new biomass to electricity facilities.

Commerce. Finally, the Department of Commerce, through its International Trade Administration, has encouraged and supported US companies in the export of technology relating to biomass.

In Congress, biomass has been included in every single piece of renewable energy legislation beginning with the Public Utility Policy Act of 1978. Support for biomass is universal, bi-partisan, and spans the scope of virtually every major energy policy enacted by the Congress.

Support for biomass receiving tax incentives like other renewables began in 1992

with passage of the National Energy Policy Act and has been continuous and unwavering.

Biomass utilization has been supported through Congressional farm policy, most recently in Title IX of the Food, Conservation and Energy Act of 2008

Most importantly, biomass is a cornerstone of Waxman Markey (HR 2454) and Bingaman (S.1462) , and is included in every major proposed effort by Congress to adopt a federal renewable energy standard—a goal that President Obama has voiced long-standing support for.

Finally, biomass plays a critically important role in the efforts by states to achieve renewable goals. Forty six states and US territories have some form of a renewable portfolio standard; virtually all of these states include biomass, which is considered critical in meeting state goals. For example, in Massachusetts, it is estimated that in 2008, biomass provided nearly 40% of the Commonwealth's supply. See MA RPS Compliance Report for 2008 at page 10. In the Southeast, the potential for biomass is enormous. The Southern Alliance for Clean Energy to recently estimated that the resource in that region could provide up to 25% of its power needs by 2025.

Internationally, the support for biomass is widespread. The United Kingdom recently announced that it would remove an obstacle to financing biomass power plants by supporting the industry through obligations on utilities to use biomass power for the next 20 years. Bloomberg, July 27, 2010. And recently, the European Commission declared that biomass has a "large potential as a source of renewable energy and greenhouse gas reductions. In fact, the EU predicts that biomass

could reduce carbon dioxide 55 to 98 percent but only with a "concerted effort by companies and public institutions to remove a number of significant growth barriers." "Biomass for Heat and Power," European Climate Foundation.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. If a unit is not combusting solid waste, it is not subject to CISWI, and clean biomass is not a solid waste as defined in the concurrent rulemaking..

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 2

Comment: The CAA directs EPA to distinguish in its regulation of hazardous air pollutant ("HAP") emissions between solid waste incineration units and fossil fuel-fired EGUs. Section 129 expressly states that the term, "solid waste incineration unit" shall not include utility units regulated under the Title IV acid rain provisions of the statute. Consistent with the foregoing, coal refuse constitutes a fossil fuel, and therefore sources combusting coal refuse for purposes of electricity generation and sale would constitute regulated acid rain utility units, subject to certain exemptions. The intended distinction between fossil fuel-fired EGUs and solid waste incineration units is clearly reflected by Section 129 of the CAA.. Accordingly, the statute itself dictates that the combustion of coal refuse (long regulated by EPA as a fossil fuel) for energy production subjects the source to regulation under Section 112, rather than Section 129, of the statute. For all these reasons, the emission standards imposed under Section 129, and therefore the Proposed Rule, should not apply to ARIPPA's coal refuse-fired electric utility steam generating units ("EGUs").

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at

commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. The commenter should consult the preamble to the Non-hazardous Solid Waste Definition Rulemaking for the discussion of coal refuse.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 19

Comment: Further, the language of Section 129 expressly distinguishes between solid waste incineration units and fossil-fired EGUs by clarifying that solid waste incineration units do not include utility units regulated under the Acid Rain program. Because coal refuse constitutes a fossil fuel pursuant to EPA's regulatory definitions under the CAA, and therefore sources combusting coal refuse for purposes of electricity generation and sale would generally constitute acid rain utility units, Section 129 itself dictates that the combustion of coal refuse for energy production subjects the source to regulation under CAA Section 112, rather than Section 129. For these reasons, the Proposed Rule should not apply to ARIPPA's coal refuse-fired EGUs.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. The commenter should consult the preamble to the Non-hazardous Solid Waste Definition Rulemaking for the discussion of coal refuse.

3.6 Legal/Applicability: Secondary materials or waste-burning boilers (exempt from 129)

Commenter Name: Joseph K. Knapik
Commenter Affiliation: International Paper Products Corporation (IPPC)
Document Control Number: EPA-HQ-OAR-2003-0119-0883.1
Comment Excerpt Number: 1

Comment: International Paper Products Corporation (IPPC) is pleased to make this submittal to the referenced docket in the interest of improving the US Environmental Protection Agency's (USEPA) awareness of current commercial technologies which should meet the rule's exemption for homogeneous wastes burned in qualifying small power facilities especially where such materials or their constituents may fail non-waste criteria as discussed in the final rule process for "Identification of Non-Hazardous Secondary Materials that are Solid Wastes". IPPC manufactures a low cost, biomass alternative energy fuel product, Enviro-Fuelcubes® (EFC) from non-recyclable, non-halogenated combustible cellulose based materials (CBM) and packaging materials (PM) and clean polymers which are diverted at their sources from disposal or incineration. This fuel meets a market specification and is sold into process and power generation markets now. IPPC's fuel has been tested or is used as an alternative to coal, oil and wood in Energy Intensive Industries (EII). This submittal provides the distinction between a manufactured fuel product and its components which have homogenous attributes and refuse derived fuel for the purpose of replacement of fossil fuels. Should this type of product or its components of this product be determined to be a waste as a result of the Secondary Materials rule making process, there is ample justification to allow its exemption under the proposed rule.

The exemption for qualifying small power facilities allows non-traditional waste materials with good thermal properties to be used in existing technology infrastructure. Among the justifications for this would be consistency in formulation (waste tires) and a controlling specification (used oil). Note that both these material streams may be considered fuels under the "Identification of Non-Hazardous Secondary Materials that are Solid Wastes" rule (depending on processing for tires and contaminant concentration for oil). In either case, the exemption allowed use of materials whose origins and fuel properties were known. In the case of tires and used oil, the fuel material could also contain hazardous components (zinc in tires, halogens and heavy metals in waste oil) within acceptable concentrations.

At the time the original rule was formulated, the concept of waste to energy recovery was evolving from simple incineration to an engineered, tightly controlled technology capable of managing a broad spectrum of mixed materials with varying fuel properties and hazardous components. But, because tires or used oil had defined origins and predictable chemical/physical attributes, these materials were viewed as homogenous and thus met an exemption criteria.

With specific regard to the notion of homogeneity, IPPC urges the USEPA to recognize there is a paradigm shift occurring in urbanized societies regarding the nature of non-recyclable waste materials and their potential for a variety of end-of-life uses. Many materials, especially those which can be categorized as CBM, PM and clean polymers have fundamental, homogenous properties, much the same as waste tires or used oil.

Specifically, and in IPPC's business model, these materials are sourced from "pre-consumer/post-industrial/commercial" sectors; they are comprised of clearly identified, traceable fiber and polymer components with very low concentrations of hazardous materials; they can be used as an energy source separately and be viewed as homogenous; or they can be intentionally processed to yield a consistent fuel product whose properties are the of the homogenous raw materials.

Further supporting the notion of homogeneity, most CBM, PM and clean polymers are non-hazardous and non-toxic materials. These materials can be discreetly identified and their chemical compositions are well known and highly consistent. CBM, PM and clean polymer

streams with less desirable characteristics are also well known (halogenated polymer blends are an excellent example) and easily excluded from an acquisition process.

The rule making process, "Identification of Non-Hazardous Secondary Materials that are Solid Wastes" by USEPA to resolve whether some secondary materials can be viewed as "not solid waste" when used for energy provides a good basis for this argument. The materials characterization papers for Biomass – Forest Derived Biomass and Pulp and Paper Residues (http://epa.gov/epawaste/nonhaz/define/pdfs/biomass-wood.pdf); Resinated Wood Products http://epa.gov/epawaste/nonhaz/define/pdfs/res-wood.pdf); and Scrap Plastics (http://epa.gov/epawaste/nonhaz/define/pdfs/plastics.pdf) all illustrate the basic, consistent nature of these materials and document contaminant and combustion properties. In short, these materials can be seen as homogeneous from the standpoint of fuel properties and low concentrations of hazardous materials. With regard to the "homogeneity" of waste tires or used oil as proposed for exemption in this rule, there is no further delineation between synthetic or natural rubber; incorporation of plasticizers; concentration of zinc; presence of wear enhancing additives; synthetic versus non-synthetic oils; hydraulic versus gear oil versus mineral oil; or anything which might be a proprietary additive. Rather the definitions are reduced simply to tires and specification used oil.

Based on this, the definition of homogenous is linked more to certainties of origin and fuel properties. In both these regards, manufactured EFC meets this criterion. Further, with regard to contaminant constituencies, waste tires contain over 10% zinc by weight. EFC manufactured from conforming CBM and PM has virtually no likelihood of containing that amount of zinc.

Co-benefits of recognizing that EFC and similar fuels are homogeneous under this rule would include avoidance of fossil fuels and reduced fossilized carbon greenhouse gas emissions. Additionally, recognizing EFC and similar fuels as a manufactured product for use in Energy Intensive Industries provides a sound means to better utilize certain materials at the end of their useful lives and should be seen as superior to incineration or landfilling.

It is also helpful to look to other jurisdictions for guidance. In the case of Europe, there are well defined standards and definitions separating waste fuel materials for use in EII. The concept of "co-firing" a manufactured, solid recovered fuel (SRF) in existing facilities is an established practice. Various European standards and directives provide the regulatory framework to manage this type of fuel product. The important distinction is that a solid recovered fuel is in no way a refuse derived fuel (RDF).

It is recognized that SRF is a homogenous fuel which can be traded like a commodity; it can be stored and used like a solid fuel; it has a high energy value as a fuel in electricity, cement, or lime production, and that it contributes to European Union strategy for energy security and assists with achievement of Kyoto targets.

The European Committee for Standardization (CEN) Technical Committee (TC) 343 has a series of published standards for Solid Recovered Fuels, among which are CEN/TS 15359:2006 Solid recovered fuels - Specifications and classes and CEN/TS 15358:2006 Solid recovered fuels - Quality management systems - Particular requirements for their application to the production of solid recovered fuels. Further, third party entities such as the German Institute for Quality Assurance and Certification (RAL) have published a quality assurance standard for Solid Recovered Fuels, RAL-GZ 724.

As acknowledged in the rulemaking process for "Identification of Non-Hazardous Secondary Materials that are Solid Wastes", many states have developed standards and policies by which materials could be "de-wasted" when used for fuel through Beneficial Use Determination or similar processes. These processes evaluate a proposed secondary product from its point of raw material origin; its hazardous components; its intended market; its desirability as a fuel product; its compatibility with permitted facility technology and permits; and impact on the environment and public health. They require comprehensive assessments; quality control; quality assurance; and include multiple control points. In short, the process is designed to establish a baseline for homogeneity.

In conclusion, the market currently exists for manufacturing and using a consistent, high quality, low contaminant biomass based alternative fuel in permitted EII. At a minimum, this recognition should support including EFC and fuels like it within the qualifying small power facilities exemption of the proposed rule. Combustion characteristics and emissions for manufactured fuels made from CBM, PM and clean polymers can be compatible with many existing facilities in this category. Newer facilities or those in design stage are often engineered to Best Available Control Technology (BACT) specifications in order to meet renewable portfolio energy standard eligibility in many jurisdictions. It makes good policy sense to endorse a responsible use of non-recyclable, non-hazardous materials which can be made into a consistent fuel product by including it as a homogenous material within this exemption.

Thank you for your consideration in this matter.

Response: EPA appreciates the information supplied by the commenter and agrees that factors affecting homogeneity of fuels include whether a material has consistency in formulation, a controlling specification, defined origins, and predictable chemical and physical attributes. EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. As such, mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Whether a waste is homogeneous is a case-by-case determination. As such, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 43

Comment: It is my understanding that loopholes can be found, and it appears that this particular proposal creates loopholes for the burning -- local burning of all these different substances; tires, plastics, et cetera, and, you know, having -- having grown up next to the refineries and, you know, most likely being affected by the air standards there, I can say that this is most likely going to lead to more -- more substances in the air and more particulate matter, carbon monoxide, and the different substances that help form the ozone. But I would just like to say that -- please reconsider these loopholes . Please reconsider defining more carefully, and regulating more carefully these different proposed fuels, and do that with consideration to those that really have no control over -- personally have no control over what is happening in these plants, and in these boilers and incinerators because, you know, all we can do is vote and speak out such as at this hearing.

Response: As the commenter has not identified specific issues with the proposed CISWI rule, we cannot respond to the comment.

Commenter Name: Alan Muller
Commenter Affiliation: Green Delaware
Document Control Number: EPA-HQ-OAR-2003-0119-1147
Comment Excerpt Number: 1

Comment: Green Delaware's background in this involves controversies over various incinerator and "biomass" projects in Delaware, Florida, Minnesota, Massachusetts, North Carolina, and other locations.

Almost without exception, the promoters of these projects claim they are "clean" and "green" without regard to the actual high emission factors from these types of facility. For an example of a 20-25 MW proposed in Minneapolis [See DCN:EPA-HQ-OAR-2003-0119-1147.1 for example provided by commenter.]

Many times, air regulators come under substantial political and other pressures to issue permits for these facilities without adequate inquiry and without adequately stringent emission limits. For example, the "Fibrominn" poultry waste burner in Benson, Minnesota, was permitted although the applicant's own data modelled PM-10 levels several times the NAAQS. [See submittal for the attached letter to Steve Gorg of the Minnesota Pollution Control Agency with his responses.]

These facilities are often promoted and /or supported by "renewable energy" advocates, utility regulatory bodies, "economic development" entities, and so on, under the mistaken impression that they are "clean."

If these facilities proliferate without better control of air emissions, significant damage to public health and quality of life will result.

Therefore, action by the EPA is urgently needed to establish broad definitions of "solid waste" to include crop residues, "wood waste" including residues from timber harvesting, etc.

Burners must not be allowed to escape significant regulation as "area sources."

Stringent health-based and technology-based (MACT) requirments are urgently needed.

Many existing facilities have high emissions and cause local air quality problems. One example of this is the "Fibrominn" poultry waste burner in Benson, Minnesota, identified in an EPA data base as a "significant chronic violator" and a target of state enforcement actions.

Therefore, at a bare minimum, the EPA should adopt the most stringent alternatives offered in the Federal Register notices for the subject dockets.

Response: Commenter seems to be addressing the comments primarily at units that are either energy recovery units subject to the final CISWI or area or major source boilers under section 112 standards that are also being finalized today. All of these standards will reduce pollutants from combustion units that recovery energy, whether the units combust solid waste or traditional fuel. In addition, EPA is finalizing the Non-hazardous Solid Waste Definition Rulemaking. Pursuant to that rule, the Fibroman facility will be subject to standards issued under section 112 and applicable to area or major source boilers, and not to the final CISWI rule as initially proposed.

Commenter Name: Joe O'Rourke
Commenter Affiliation: F. H. Stoltze Land and Lumber Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1467.1
Comment Excerpt Number: 2

Comment: Our goal of becoming a producer of clean green power would be unachievable under the CISWI rule (EPA-HQ-OAR-2003-0119). That rule, as formulated, would force us to re-classify our boilers as incinerators if we introduce woody biomass fuel from sources that are outside our internal production process. Timothy Hunt, Senior Director of American Forest and Paper Association (AF&PA), stated at an EPA hearing that was held on June 15, 2010; "The solid waste definitions EPA sets have the potential to seriously restrict which types of biomass may be burned for their carbon-neutral energy and which may be pushed into the waste stream." Today woody material that is left in the forest after logging operations, either is consumed in planned burns, or is left in the woods to decompose. With a cogeneration system, this fuel will be brought in from the forest, processed, and burned in the boiler, to produce heat and energy. The energy that will be produced will offset energy that is now generated by burning fossil fuels. That clean, green energy would contribute to the state and national goal for a greater use of electrical power generated from renewable fuels.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit

will be subject to the final standards issued today. If a unit is not combusting solid waste, it is not subject to CISWI, and clean biomass is not a solid waste as defined in the concurrent rulemaking.

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 2

Comment: Commercial biomass combustion power plants should be subject to CISWI

Response: Energy recovery units combusting solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking are subject to CISWI. Some biomass units combust solid waste and are subject to this final rule.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 1

Comment: We believe many wood-fired power plants may be exempt from being classified as an incinerator under Section 129 of the Clean Air Act (CAA), either under g.1 as qualifying small power producers under the Federal Power Act, or under h.4 as "utility units" defined under Title IV of the CAA for facilities that fire less than 20% fossil fuels on an annual basis. In fact, two Michigan wood-fired facilities have received confirmation of the g.1 exemption with regard to a June 2009 request for data by the EPA under Sec. 114 of the CAA to obtain stack test data. In July 2009 the EPA withdrew that request because "...the unit is a qualifying small power producer burning homogenous waste, and, therefore, qualifies for a statutory exemption from section 129..." However, this is not clear in all cases and clarification of this exemption is needed, particularly with respect to what constitutes "homogenous waste" as it pertains to the small power production facility exemption from CISWI. EPA should clarify in its final rule that this exclusion continues to apply and such qualified units are not subject to the CISWI rule.

The term "homogenous" is not defined in the CAA, although refuse-derived fuel (RDF) is presented as an example of a non-homogeneous waste in Section 129. We urge EPA to clarify the definition so facilities that burn a blend of secondary material qualify for this exclusion as long as the mixture is consistent and therefore "homogenous."

Blending acceptable secondary materials is a common practice in our industry. We believe even if this fuel mixture contains a material that meets the definition of "waste," the fuel supply should still meet the definition of homogeneous based on the fact that the fuel is metered in predictable, consistent proportions within the constraints of existing permits. This is especially true in the case of blending TDF with wood. Under proposed EPA rules on NHSM, TDF with wire may be classified as "waste," yet is currently defined in many states as a commodity and is

being used successfully blended with wood fuel. Again, EPA interprets this fuel blend as "homogenous." If EPA reverses this interpretation [See submittal for attachment A (Letter from Philip Lewis - Grayling Generating Station Responsible Official to Brian Shrager at EPA) and attachment B (Letter from Thomas Vine - Viking Energy of McBain, Inc. to Brian Shrager at EPA) submitted by the commenter] it should create a subcategory for these fuel blends and set achievable limits for these units.

Response: EPA's decision as to what facilities to test for purposes of gathering emission data should not be construed to be an applicability determination as to what constitutes homogeneous waste. EPA has not issued a formal applicability determination on whether mixing TDF with wood is in all cases considered homogeneous. We agree with the commenter that a mixture of fuel needs to be consistent to be homogeneous, and as such a mixture of fuels could only be homogeneous if they are mixed in constant proporation and are conditioned or processed to such an extent that the mixture has consistent physical and chemical characteristics throughout. EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. As such, mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Whether a waste is homogeneous is a case-by-case determination. Therefore, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 6

Comment: In section 60.2020 (e), small power production facilities which qualify under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) are exempt from CISWI if they burn homogeneous waste to produce electricity. EPA should provide more detail regarding the definition of "homogeneous" and clarify that if a unit is not subject to the CISWI standard as a result of this exemption it will be subject to the either the Area or Major Source Boiler MACT.

Response: A unit which is exempt from CISWI due to the small power production facility exemption should be reviewed for applicability under the Area or Major Source Boiler MACT.

EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. As such, mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Commenter Name: Dell Majure
Commenter Affiliation: Kimberly-Clark Corporation (K-C)
Document Control Number: EPA-HQ-OAR-2003-0119-1954.1
Comment Excerpt Number: 1

Comment: EPA must reaffirm that the exclusion for qualifying small power production and cogen facilities under Section 129(g)(1)(B) applies to units burning mixtures of fuels/waste. In addition, that this exlusion applies to coal from legacy piles.

Section 129 of the Clean Air Act (CAA) provides that the term "solid waste incineration units" does not include:

"qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C.796(18)(B)), which burn homogenous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogenous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes"

We urge EPA to reaffirm in its final rule that this exclusion continues to apply, so that units that qualified for it would not be subject to the CISWI rule. We also urge EPA to reaffirm its existing policy that facilities that burn different types of waste in combination qualify for this exclusion as long as the mixture of wastes burned is within a predictable range over time and therefore "homogenous", as detailed in the attached correspondence [Footnote: Letter, Lewis, Grayling Generation, to Schrager, EPA, July 9, 2009; letter, Schrager to Lewis, July 16, 2009.]

We also urge EPA to clarify that coal from legacy piles is eligible for the exclusion in the event that EPA ultimately determines that coal from legacy piles is a waste as part of the proposed rule on non-hazardous secondary materials.

Utilizing coal from legacy piles for energy production has been a very successful state regulated program that has reclaimed vast mining areas and it is a cost-effective source of electicity to its users because minimal processing produces relatively uniform fuel.

Most if not all boilers that combust coal from legacy piles are qualified facilities and their viability is uncertain if they become subject to the burden of complying with CISWI, which in its proposed form may not be technically achievable or will require emission control upgrades that

are not economically viable. This outcome is supported by EPA's assessment that it expects no new CISWI units [Footnote: 75 FR 31966.]

Response: The exemption for cogeneration facilities at §60.2020(f) and §60.2555(f) promulgated in the 2000 CISWI regulations are not proposed to be removed.

EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. As such, mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

The Non-hazardous Solid Waste Definition Rulemaking preamble discusses the status of legacy piles of coal refuse and concludes that if sufficiently processed such coal refuse is not a solid waste. If the coal refuse combusted at a facility is solid waste, it may be homogenous. EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

Commenter Name: David Mickey
Commenter Affiliation: Blue Ridge Environmental Defense League
Document Control Number: EPA-HQ-OAR-2003-0119-1966.1
Comment Excerpt Number: 3

Comment: There is already a long list of permitted renewable energy resources, many of which fit the definition of solid waste, certified in North Carolina. As we have previously commented on the solid waste rule, that list includes tires, construction and demolition wastes, pelletized paper, railroad ties, particle board, paper mill sludge, sewage sludge, poultry litter, pulping liquor and refuse derived fuel. These are not the "homogeneous wastes" cited in the rule and perhaps the statutory definition of homogeneous waste needs clarification. Combustion of such wastes should not be exempted, regardless of a facility's size.

Response: EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. What is a homogeneous waste is a case-by-case determination.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1

Comment Excerpt Number: 11

Comment: FSI requests that EPA clarify the term "burn homogenous waste". The FSI boilers all burn bagasse, which is a co-product of the raw sugar processing operations. Some of the FSI boilers may burn from time to time other biomass materials that originate from various activities, such as clean wood from yards, clippings, hurricane debris, wood recyclers, construction and demolition debris, and biomass materials separation processes. Although these materials can vary somewhat in size, moisture content, heating value, etc., they are all "clean biomass" materials and they are mixed in the fuel yard prior to delivery to the boilers. EPA should clarify that burning biomass of any type is considered to be a "homogenous" material stream. It should also be clarified that burning biomass of any type in conjunction with fossil fuel, as part of normal operations (including startup, shutdown and malfunction), still constitutes a "homogenous" stream of materials that would be exempt from Subpart CCCC.

Response: EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. Mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Biomass that is solid waste may be considered homogenous; however, the components of biomass, including the chemical and combustion characteristics of biomass can vary substantially. Biomass that is solid waste may or may not be considered homogeneous depending on the particular components of the biomass. As such, EPA could not categorically state that all mixtures of biomass are homoegeneous. The decision of whether an individual unit is burning homogeneuos waste requires case-by-case review and determination.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 12

Comment: Units that fit into the categories outlined in § 129(g)(1), such as qualifying small power producers and cogeneration units, continue to be exempted in accordance with the statute.

Response: Consistent with the statutory exemption for small power producers and cogeneration units, the regulatory exemption for small power producers and cogeneration facilities at §60.2020(f) and §60.2555(f) promulgated in the 2000 CISWI regulations are not proposed to be removed.

Commenter Name: Paul Noe

Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 78

Comment: EPA Should Re-affirm that the Cogeneration Facilities that Burn Homogenous Waste Exclusion Still Applies

Section 129 of the Clean Air Act (CAA) provides that the term "solid waste incineration units" does not include

qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)), or

qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C.796(18)(B)), which burn homogenous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogenous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes

AF&PA urges EPA to reaffirm in its final rule that this exclusion continues to apply, so that units that qualified for it would not be subject to the CISWI rule.

AF&PA also urges EPA to reaffirm its existing policy that facilities that burn different types of secondary material [Footnote: AF&PA believes that fuels used in the forest products industry are not wastes and has filed comments on the EPA's proposed Identification of Non-Hazardous Secondary Materials that are Solid Wastes, 75 Fed. Reg. 31844 (June 4, 2010). However, if EPA instead classifies these fuels as wastes, it must at a minimum continue to recognize the statutory exemption for qualifying cogeneration facilities.] in combination qualify for this exclusion as long as the mixture of secondary material that is burned is stable and therefore "homogenous", as detailed in the correspondence. Letter, Lewis, Grayling Generation, to Schrager, EPA, July 9, 2009; letter, Schrager to Lewis, July 16, 2009. This practice is common in the forest products industry. In this industry boilers are designed and permitted to receive fuel mixtures, such as tire derived fuel and wood.

If EPA reverses its prior interpretations and does not consider the typical fuel mixtures used by the forest products industry to be "homogenous," then EPA must create a subcategory that takes into account these mixtures to establish limits that can be achieved by units that burn these fuel mixtures.

Response: The exemption for cogeneration facilities at §60.2020(f) and §60.2555(f) promulgated in the 2000 CISWI regulations are not proposed to be removed. EPA considers homogeneuous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. As such, mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in

part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Commenter Name: Christopher S. Bond
Commenter Affiliation: United States Senate
Document Control Number: EPA-HQ-OAR-2003-0119-2127.1
Comment Excerpt Number: 2

Comment: Woody biomass is not only an affordable fuel, it is also a renewable fuel that is lower in greenhouse gas emissions than alternative energy sources like coal-fired electricity or propane fired boilers.

EPA proposes cumbersome and costly regulations for these clean biomass burning forest-product facilities that are more appropriate for boilers at industrial and chemical manufacturers or refiners. Similarly, EPA proposes regulations appropriate for incinerators burning scrap tires, plastics and solvents to apply also to forest-product producers using woody biomass byproduct to fuel their operations. In most all cases, EPA proposed emissions levels far exceed what is necessary to protect human health from biomass energy operations. Of course, we cannot compromise our goal of protecting human health. Therefore, the more common-sense solution is to use a health-based standard and allow facilities to show they are not endangering human health. That, after all, is the true goal of the Clean Air Act and is specifically authorized by that Act in section 112(d)(4).

Response: Biomass may be a solid waste under the Non-hazardous Solid Waste Definition Rulemaking. Sources that combust biomass that is a solid waste are solid waste incineration units and may be subject to the final CISWI standards. EPA is not authorized under section 129 to set health-based standards. Pursuant to 129(a)(4), EPA must establish numerical emission standards for nine identified pollutants.

Commenter Name: Michael I. Holzman
Commenter Affiliation: M.I. Holzman & Associates, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2102.1
Comment Excerpt Number: 2

Comment: Eligibility of such units for the small power production facility exemption becomes very important. Unfortunately, a key term required in making a determination under this exemption provision is not defined anywhere in the regulations. For example, a power plant that combusts as its primary energy source biomass not classified as clean biomass and/or waste and has an electric generation capacity less than 80 MW would be a small power production facility, as defined in section 3(17)(C) of the Federal Power Act. However, it is unclear whether mixtures of clean biomass with painted or treated wood residuals or resinated wood products would be considered “homogenous waste”, which is also pertinent to this exemption from the CISWI Rule. I have discussed this issue with representatives of several potentially regulated entities and their

response is generally that they believe the exemption to apply to their operation. However, in the absence of a regulatory definition of “homogenous waste” or apparent lack of precedence from a previous determination, the uncertainty is unacceptable. Therefore, EPA needs to define the meaning of the terms “homogenous waste” or at least clarify its position, with examples, on the eligibility for the exemption.

Response: The commenter is asking for clarification on what would be considered "homogeneous waste," specifically whether a mixture of clean biomass and painted or treated wood residuals or resinated wood products is homogenous. EPA has provided examples in the regulatory text of materials that would be considered homogeneous waste: tires, or used oil, but not refuse-derived fuel. A homogeneous waste should be homogeneous in physical as well as chemical characteristics, such that the combustion and emission characteristics of the waste is consistent. Mixed fuels would not be homogeneous unless they are mixed in constant proportion, are from known origin, are each individually determined to be homogeneous, and are conditioned or processed to such an extent that they have consistent physical and chemical characteristics, as evidenced, in part, by uniform combustion and emission characteristics throughout, such as occurs in the gasification of the wastes.

Given the large variety of materials that may constitute solid waste, the determination of whether an individual unit is burning homogeneuos waste will be reviewed on a case-by-case review basis.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 11

Comment: EPA should re-confirm that cogeneration units are specifically exempt and ensure that the definition is consistent with CAIR and Acid Rain programs.

Response: The exemption for cogeneration facilities at §60.2020(f) and §60.2555(f) promulgated in the 2000 CISWI regulations were not proposed to be removed or modified. This particular exemption is specific to Section 129 rules.

Commenter Name: Brad Cooley
Commenter Affiliation: GDF SUEZ Energy Generation North America, Inc. (GSEGNA)
Document Control Number: EPA-HQ-OAR-2003-0119-2216.1
Comment Excerpt Number: 1

Comment: CLEAN AIR ACT SECTION 129 EXEMPTION: Section 129 of the Clean Air Act specifically exempts qualifying small power producers (as defined in the Federal Powers Act) that burn homogenous waste from the definition of solid waste incineration unit. The Agency should clarify that this exclusion continues to apply and that qualified units are not subject to this rule. At least one of GSEGNA’s facilities has received confirmation of this exemption in written correspondence from the Agency.

Response: Consistent with the statutory exemption for small power producers and cogeneration units, the regulatory exemption for small power producers and cogeneration facilities at §60.2020(f) and §60.2555(f) promulgated in the 2000 CISWI regulations were not proposed to be removed, and continue to apply.

Decisions made about what facilities to test in gathering data for development of the standard are not formal applicability determinations on what constitutes homogeneous fuel.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 3

Comment: If, in the face of clear and convincing statutory and regulatory evidence to the contrary, as well as contrary to strong public policy considerations, EPA nonetheless determines to regulate the combustion of coal refuse for energy production as the incineration of solid waste, and therefore potentially subject to CISWI standards, Section 129 would still mandate that the CISWI requirements cannot apply to ARIPPA's coal-refuse-fired independent power production facilities. Section 129 specifically dictates that qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste for the production of electric energy, or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy which are used for industrial, commercial, heating or cooling purposes, are not solid waste incinerators. The ARIPPA facilities qualify for this statutory exemption from regulation under Section 129. In order to clarify the applicability of this intended exemption, EPA should revise the Proposed Rule to clarify that coal refuse is properly characterized as a "homogeneous" material. The necessary variability of coal refuse mined from different sites, or even from within the same mine site, results in reasonable variability in the characteristics of the coal refuse material. However, this degree of variability is inherent in the natural source of the material itself; as long as the fuel combusted in a combustion unit is properly characterized as coal refuse, such fuel should be considered a homogeneous material, regardless of variability in characteristics or the originating mine source. To the extent that EPA proceeds with the regulation of coal refuse-fired EGUs under CISWI, the Proposed Rule should be modified to identify coal refuse as an example of the types of material properly classified as homogeneous for purposes of the statutory exemption from classification as a solid waste incineration unit.

Response: EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. Rather than exempting entire source categories from the Section 129 regulations, EPA believes it is appropriate and necessary to take a case-by-case review of the particular waste material which a source believes is homogeneous. As such, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a

homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

In addition, commenter should review the discussion of coal refuse in the preamble to the final Non-hazardous Solid Waste Definition Rulemaking. If the source determines that its coal refuse is a solid waste, the source can seek a determination that the coal refuse is homogenous.

Commenter Name: James C. Jackson
Commenter Affiliation: Boise Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2150.1
Comment Excerpt Number: 5

Comment: To assure that startup, shutdown, and malfunction are appropriately accommodated, EPA must either assure that the data on which the standard is based include representative data from such periods, or alternatively, set a separate work practice standard to properly accommodate startup, shutdown, and malfunction. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean

distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate

fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown

occurs. I,7

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize Boise biomass boilers which could become energy recovery units under CISWI. Solid biomass fuels are introduced during the start-up process and continue to combust during the shutdown process. Given the stringent limits and the potential that control systems may not be operating for some periods of the start-up /shutdown process, EPA presumption is not well founded for biomass boilers which could become CISWI energy recovery units. Further, even for the best performing CISWI units, control system malfunctions occur and the CISWI standards have not accounted for such events.

Response: See preamble for a discussion of startup, shutdown, and malfunction requirements in the final rule.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 7

Comment: As noted in the proposed rule and memorialized in the Clean Air Act, qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes are not solid waste incinerators.

While most of this definition is clear, the term "homogeneous waste" has never been defined in any EPA air quality regulation. Of course we have the examples; both embodied in the Act and repeated in the preamble, of tires or used oil, as homogenous waste.

The majority of ARIPPA members plants received QF status from FERC and all of the plants meet the energy output part of the definition, but we would like confirmation that EPA also agrees that coal refuse meets the homogeneous waste part of the definition. To that end, we request that EPA identify coal refuse as another example of a homogenous waste in the regulation

Coal refuse clearly should be classified by EPA as homogeneous for purposes of CISWI regulations. In the absence of a specific regulatory definition, homogeneous has generally been defined in common usage as reflecting "the same or a similar kind or nature." Although all coal refuse is not identical in terms of specific characteristics, all coal refuse can accurately be described as of a similar kind or nature. For example, coal refuse can vary from one mining site to the next, or even from within the single mining site, but such variability is similar to the variability in the characteristics of any coal or other mined natural resource.

In discussing the concept of homogeneity within the Proposed Rule, EPA identifies waste tires and used oil as specific examples of homogeneous secondary materials. Coal refuse compares very favorably to these secondary materials with respect to inherent variability based on specific circumstances of generation. EPA itself recognizes in its discussion within the preamble to the Proposed Rule that used tires may exhibit different characteristics based upon the manufacturer, but that ultimately, for purposes of management and combustion, the similarities of this source category substantially outweigh these differences.

Likewise, used oil, by definition, exhibits specific characteristics based on the circumstances under which the used oil had been generated. The constituents present in used oil can vary substantially from one generating source to the next. Nonetheless, EPA appropriately characterizes used oil, whether on- spec or off-spec, to qualify as a homogeneous source of fuel.

In all relevant respects, coal refuse is comparable to these materials. Analyses of coal refuse exhibit variability in constituents depending upon the specific mine location, or even the precise location form within the mine site. These variations arise from the natural variability of these sources, and some differentiation in process can contribute to this variability. Nonetheless, at least to the same extent as is true for used oil and waste tires, recognition of these characteristics does not define differences, but rather similarities, in the coal refuse source. For all these reasons, the variability inherent in characteristics of coal refuse based upon specific mining locations is consistent with the variability in other secondary materials identified by EPA as homogeneous for purposes of the Proposed Rule [Footnote: This conclusion should not be undermined in any way by the combustion in EGUs of alternatives fuels for startup, shutdown or

bed stabilization. As recognized by EPA under numerous regulatory schemes, and by the Federal Energy Regulatory Commission, use of alternative fuels for specific purposes, such as startup, shutdown or bed stabilization, does not result in reclassification of the fuel combusted in such energy production units as non-homogeneous. Therefore, coal refuse–fired CFBs that use alternative fuels for these limited purposes should be characterized as combusting homogeneous fuels.]

EPA also attempts to distinguish, in the context of its proposed rulemaking governing the identification of solid waste, between coal refuse originating from historic mining activities -- so-called "legacy" sites -- from coal refuse generated in the context of current mining activities. As more fully addressed in ARIPPA's comments concerning EPA's proposed rulemaking governing the identification of solid waste, EPA's purported distinction between "legacy" coal refuse and currently-generated coal refuse is arbitrary and capricious, and not based upon any relevant distinguishing characteristic. The lack of material distinction between legacy coal refuse and currently-generated coal refuse is particularly relevant to EPA's analysis of homogeneous materials for purposes of the Proposed Rule. Specifically, there is no material distinction in the classification or characteristics of coal refuse based upon whether the associated mining activity occurred more recently.

Therefore, upon determining to specifically identify coal refuse as an example of homogeneous material for purposes of the Proposed Rule, EPA should acknowledge that such classification is in no way dependent upon whether the coal refuse is otherwise characterized as associated with "legacy" or more recent mining sites.

Response: EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. Rather than exempting entire source categories from the Section 129 regulations, EPA believes it is appropriate and necessary to take a case-by-case review of the particular waste material which a source believes is homogeneous. As such, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 11

Comment: Exemption for Small Power Generation Units Burning Homogeneous Waste

The proposed rule provides a statutory exemption for small power generating facilities that burn a homogeneous fuel, but the exemption lacks specificity. As such, NESCAUM has concerns with the exemption. The three most critical issues are: 1) determining what is a homogeneous

fuel, 2) identifying appropriate emission limits if the exemption applies, and 3) proper notification of regulatory authorities.

Homogeneous Fuel

Significant questions arise about determining what constitutes a homogeneous fuel. NESCAUM provides the following examples of facilities that could potentially use this exemption:

* Waste tire-fired incinerators/boilers: In Connecticut, there is a facility that has three reciprocating grates, rated at 181 mmBtu/hr. Each boiler fires No. 2 fuel oil, propane, and shredded or whole tires. The facility processes and incinerates approximately 10 million tires per year. The recovered heat energy is used to generate a maximum of 26 MWh of electricity.

* Construction and demolition debris (CDD): Several facilities in the region burn CDD wood for power generation. These facilities have requirements for fuel specifications and chip management procedures in place.

NESCAUM recommends that EPA provide clear guidance as to whether or not the above facility types will qualify for the exemption from the CISWI rule.

Emission Limits

If a facility can use the section 129 exemption, NESCAUM believes that the proposed rule does not provide clear language that would ensure that "129 exempt" facilities would still be subject to CAA section 112 requirements. NESCAUM recommends that EPA clearly articulate that a facility using the section 129 exemption is subject to emission limits under section 112. Additionally, NESCAUM recommends that EPA develop a fuel bin for this source category under the section 112 rulemaking because the proposed rule contains no emission limits for the source category.

Notification

NESCAUM recommends that EPA require facilities to notify appropriate regulatory agencies once they have determined that they comply with the requirements of the exemption. Notifications should include information on how the determination of a homogenous fuel was made, and what methods will be employed to ensure that the fuel used will continue to comply with the "homogeneous" requirements. Clear recordkeeping and reporting requirements must be put in place to ensure that enforcement staff can determine compliance status.

Response:

EPA agrees that more guidance on what is a homogeneous fuel would be useful. EPA is clarifying that homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. EPA also agrees that proper notification of regulatory authorities is necessary. The decision as to whether a specific fuel or waste is homogeneous is a case-specific determination. As such, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous. Whether a given application for construction and demolition debris constitutes homogeneous fuel needs to be reviewed on a case-by-case basis.

Consistent with the existing CISWI regulations and the statutory exemption for small power producers, tires are considered a homogeneous fuel.

The exemption for small power production and cogeneration facilities in the CISWI rule does not apply to Section 112 rules. As such any facility exempt from CISWI under these provisions may be subject to the Boiler MACT or the Area Source Rule for Boilers.

The existing CISWI rule already contains a notification requirement at §60.2555(e) & (f) for sources who meet the requirements for the small power producer or cogeneration facility. However, based on public comments received, we have amended the notification provisions to also require that owner/operators make a demonstration of why the fuels combusted are homogeneous. This notification is not required for tires or used oil.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 20

Comment: If EPA nonetheless determines to regulate the combustion of coal refuse for energy production as the incineration of solid waste, and therefore potentially subject to CISWI standards, Section 129 still requires that the CISWI standards cannot apply to ARIPPA's coal refuse-fired independent power production facilities, because these facilities qualify for a statutory exception from regulation under Section 129. This exemption provides that qualifying small power production facilities and cogeneration facilities are not solid waste incinerators, to the extent that such facilities burn homogeneous waste. Coal refuse clearly qualifies as homogeneous material, both as an absolute matter and by comparison to materials otherwise identified by EPA as homogeneous secondary materials.

To clarify the applicability of this intended exemption, EPA should revise the Proposed Rule to expressly provide that coal refuse is properly characterized as a homogeneous material, irrespective of any inherent variability in the characteristics of the coal refuse material resulting from the original mine source. Indeed, EPA has identified within the Proposed Rule specific examples of secondary materials, such as used tires and oil, that exhibit inherent variability based on specific circumstances of generation and that should be considered to be homogeneous. Coal refuse compares vary favorably to these types of materials and should, therefore, likewise be considered homogeneous.

Response: EPA considers homogeneous fuels to be those that are similar or identical in physical and chemical characteristics. Homogeneous wastes are stable, consistent in formulation, have known fuel properties, have a defined origin, have predictable chemical and physical attributes, and result in consistent combustion characteristics and have a consistent emissions profile. Rather than exempting entire source categories from the Section 129 regulations, EPA believes it is appropriate and necessary to take a case-by-case review of the particular waste material which a source believes is homogeneous. As such, EPA has added provisions to the CISWI rule that requires source owners or operators seeking the exemption to submit a request for a homogeneous fuel determination to EPA, and that they support their request with information describing the materials to be combusted and why they believe the waste is homogeneous.

In addition, commenter should review the discussion of coal refuse in the preamble to the final Non-hazardous Solid Waste Definition Rulemaking. If the source determines that its coal refuse is a solid waste, the source can seek a determination that the coal refuse is homogenous.

3.7 Legal/Applicability: Applicability between 112 and 129 standards

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 20

Comment: EPA Should Allow Units to Switch between CISWI and Boiler MACT

Combustion units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning waste. However, a more flexible approach would be to allow units to be regulated under either CISWI or Boiler MACT based on the materials being burned at the time. A provision similar to that provided in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)) is needed in the CISWI rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. EPA also notes that the approach adopted in the final rule has similarities to that in the hazardous waste combustion NESHAP noted by the commenter (sources are able to comply with standards other than CISWI upon cessation of solid waste combustion (a defined term). In addition, under both rules, the source is required to elect to change regulatory status and provide notification of its intent to the permitting authority.

Commenter Name: Trina L. Vielhauer
Commenter Affiliation: Division of Air Resource Management, FL DEP
Document Control Number: EPA-HQ-OAR-2003-0119-1526.1
Comment Excerpt Number: 2

Comment: EPA's final action on the Secondary Proposed Rule for Identification of Non-Hazardous Secondary Materials That Are Solid Waste will impact which sources are subject to this proposed rule versus rules promulgated under Section 112 of the Clean Air Act. I would encourage EPA to closely compare Section 112 emission standards with those proposed in the CISWI rule to ensure adequate and comparably stringent emission limits. For example, if an existing cement kiln becomes regulated under the CISWI rule instead of Section 112, dioxin,

particulate matter (new kilns) and HC1 limits would be more stringent; however, the emission limits for mercury and particulate matter (existing kilns) are more stringent under the Section 112 emission standards.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

Commenter Name: Craig T. Kenworthy
Commenter Affiliation: Puget Sound Clean Air Agency
Document Control Number: EPA-HQ-OAR-2003-0119-1844.1
Comment Excerpt Number: 2

Comment: The proposal identifies waste burning kilns as a subcategory and discusses the EPA view regarding Portland Cement kiln operations with respect to this rule and the corresponding NESHAP (40 CFR 63, Subpart LLL). This proposal clearly states that the EPA would consider a kiln burning solid waste subject to the CISWI provision. At the same time, the definition of materials that would be considered a solid waste is not final at this time.

We would suggest that the EPA reconsider this part of the proposal and revise the proposal to provide the existing (and recently amended) Portland Cement manufacturing regulations are the appropriate rule and program to limit these emissions. Otherwise, regulating cement kilns

separately under the CISWI rule could undercut the recent Portland Cement rulemaking.

Alternatively, we suggest the final record clarify the applicability of the CISWI provisions for cement kilns. In other words, clarify whether the CISWI rule would apply to any kiln that is actually using a solid waste in its feed materials and/or would it apply to any kiln authorized to do so (e.g., approved under a major or minor New Source Review action) even if they do not actually use that material all the time. This is an issue because some sources use materials which may eventually be classified as solid waste but do so variably based on production and pricing circumstances. It is desirable to avoid a circumstance where alternative operation scenarios were possible and either rule could apply based on material being used by a source on a particular day.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Catharine Fitzsimons
Commenter Affiliation: Iowa Department of Natural Resources (IDNR)
Document Control Number: EPA-HQ-OAR-2003-0119-1837.1
Comment Excerpt Number: 3

Comment: NACAA submitted comments regarding EPA's solid waste proposal that expressed concern regarding the disparity between the standards set under Sections 129 and 112. IDNR

concurs with the following NACAA comments, and believes they are directly relevant to EPA's proposed CISWI amendments:

"Because of the statutory reliance on the term "discard" in the RCRA definition of "waste" and the variation in the calculation of the performance of relatively small numbers of sources, there are occasions where sources that combust materials with exactly the same properties in identical combustion units may be subject to widely different MACT floors... We believe it will prove difficult for EPA to conclude that a level of emission performance in the section 112 group is "infeasible" where EPA concludes that such a level of performance has been achieved by similar units in the section 129 group (or vice-versa). Where it is feasible and reasonable to do so, EPA should reduce this disparate impact on similarly situated units and satisfy its obligation to set emission limits based on application of maximum achievable technology, not merely promulgate a set of MACT floors." [NOTE: The footnotes that NACAA included with their comments are omitted here]

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 4

Comment: There must be an avenue and a timetable by which a source can stop accepting a given fuel if the fuel is classified as a solid waste, thus subjecting the source to the CISWI rules. This would allow the source to make an economic decision and allow them to stay within the boiler rules that have always applied. In theory, it may be possible for a source to switch between the boiler and CISWI rules at different times, depending on which fuels are fired. However, there is such a drastic disconnect between the emission limits in the proposed CISWI rule and boiler MACT rule that this scenario is unlikely.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 4

Comment: The EPA has stated that combustion units at commercial and industrial facilities would become subject to CISWI if they combust any material that would be defined as "solid

waste" under the proposed RCRA definition and therefore would no longer be subject to CAA Section 112. Nowhere in this proposed rule making has the EPA discussed the regulatory logistics on how this would be implemented. South Carolina is requesting the EPA add language to the final rule on the transition process.

Listed below are specific issues that should be addressed in the process.

1. How the "once-in-always-in" policy applies to sources subject to the Section 112 Portland Cement Manufacturing Industry MACT Rule (Subpart LLL) and/or Hazardous Waste Combustors MACT Rule (Subpart EEE) that either continue or begin combusting a solid waste.

2. How would the aforementioned transition apply to a facility that combusts both hazardous waste and materials meeting the "solid waste" definition simultaneously? Clarification is needed as to how the facility would demonstrate compliance with CAA Section 112 versus Section 129 and how this facility would have to comply with the regulations. The Hazardous Waste Combustor MACT allows a facility to be subject to both sections 112 and 129 per §63.1206(b)(1)(ii). That section states, "When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and you have documented in the operating record that you are complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR part 63, subparts LLL, DDDDD, and NNNNN) or 129 of the Clean Air Act in lieu of the emission standards under 5563.1203, 63.1204, 63.1205, 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221. . .". Specifically, if a Portland cement kiln burns both hazardous waste and solid waste, sometimes simultaneously but sometimes separately (no hazardous waste in the combustion chamber), would that kiln ever be subject to Section 129 or would it always be subject to Section 112? Would the facility have the option of choosing to remain subject to Section 112 at all times, even if this option allows less stringent emission limitations? If the facility would be subject to Section 129 at times, would the facility also be subject to §266 Subpart H - Subpart H--Hazardous Waste Burned In Boilers And Industrial Furnaces?

3. For Portland Cement facilities currently subject to 112 requirements that continue combusting a solid waste and will be required to demonstrate compliance with the CISWI Rule, what regulations will apply during the transition period from when the revised CISWI rule becomes effective (6 months after the publication of the final rule in the federal register) and the compliance date (five years after publication of the final rule in the federal register or 3 years after the effective date of state plan approval, whichever is earlier)? For example, for an existing Portland Cement facility that is currently subject to 40CFR63 Subpart LLL and is burning RCRA defined solid waste at the promulgation date of this revised CISWI rule, does this source continue to comply with the Portland Cement MACT Rule (40CFR63 Subpart LLL) until compliance is demonstrated for the CISWI Rule? With a final rule for 40CFR63 Subpart LLL (Portland Cement MACT) recently issued and becoming effective three years after publication of this final rule in the federal register, would this Portland Cement facility comply with the existing Portland Cement MACT for approximately the next three years, then comply with the recently issued Portland Cement MACT for approximately two years after that and then finally comply with CISWI? An example of emission limit changes would be as follows: Allowable PM emissions for this existing cement kiln burning RCRA defined solid waste would be 0.30 pounds per ton of feed (dry basis) to the kiln for approximately the first three years while the kiln is subject to the current Portland Cement MACT, then 0.04 pounds per ton of clinker during

normal operation and 0.004 gr/dscf during startup and shutdown for approximately the next two years once compliance with the recently issued Portland Cement MACT is required, and finally 60 mg/dscm approximately after five years once compliance with CISWI is required.

4. With differences in emission limit units and averaging times, it is difficult to compare the stringency between CISWI, 40CFR63 Subpart LLL, and 40CFR63 Subpart EEE (as shown in the above example with PM emissions). We ask that EPA provide an analysis that clearly shows which emission limitation is more stringent.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 6

Comment: The differences in the existing source CISWI compliance date and the existing source Boiler MACT Rule compliance date could result in delayed compliance. For example, a facility with an existing boiler is permitted to burn a RCRA defined solid waste at the Boiler MACT Rule compliance date, thus making it subject to CISWI, not Boiler MACT. Prior to the CISWI compliance date, the facility opts to cease burning the RCRA defined solid waste, now making them subject to Boiler MACT. Has compliance with the Boiler MACT Rule been delayed by two years?

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures.

Commenter Name: Steven B. Smith
Commenter Affiliation: Verallia (formerly Saint-Gobain)
Document Control Number: EPA-HQ-OAR-2003-0119-1965.1
Comment Excerpt Number: 1

Comment: Glass Manufacturing Is Already Covered By A Section 112 NESHAP.

Section 129(h)(2) of the Clean Air Act ("CAA") provides that no waste incineration unit subject to performance standards under CAA §129 shall be subject to standards under CAA §112(d). 42 U.S.C. §7429(h)(2). As explained below, although a glass melting furnace is not a waste incineration unit, it is relevant nevertheless to note that some glass melting furnaces are already subject to several standards issued under CAA §112, specifically, Part 63, Subpart SSSSSS—National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources, and Part 61, Subpart N---National Emission Standard for Inorganic Arsenic Emission from Glass Manufacturing Plants. Other industries already covered by a CAA §112(d) standard have similarly commented that they should not be subject to the proposed rule [Footnote: See

Comments submitted on behalf of the Specialty Steel Industry of North America ("SSINA"), EPA-HQ-RCRA-2008-0329-0384.1111.] We urge EPA to confirm in the Preamble to the final rule that glass melting furnaces are not subject to regulation under CAA §129.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 3

Comment: The proposal falls short and fails to address several critical issues for implementation. A prime example is the relationship between CAA § 112 and CAA § 129 coverage. How and when would cement kilns already subject to CAA § 112 become subject to CAA § 129 standards if they are combusting materials EPA has defined as solid waste? This issue becomes even more complex and significant in light of the newly-issued (August 6, 2010) CAA § 112 standards. There are several widely-varying plausible resolutions to these issues, and the impacts on regulated entities could be dramatic depending upon the way these issues are resolved. Yet EPA's proposal offers little in acknowledging the issues exist and how they may be resolved.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 4

Comment: In a parallel but separate rule promulgated at the same time as the current proposed rule, "Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources; Commercial and Industrial Solid Waste Incineration Units, the EPA has also published the proposed rule, "NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters." For some emissions, the two rules apply to similar equipment burning similar fuels for similar purposes, but the emission limits are clearly different. An effort should be made by the EPA either to explain the differences or to develop more consistent limits in the two regulations.

Equipment with similar design and operating characteristics, that is classified as a boiler under the proposed NESHAP, is defined as an energy recovery unit under the NSPS for CISWI. Despite differences in the criteria for determining the appropriate emission limits under prevention of significant deterioration best available control technology (PSD BACT), nonattainment new source review (NSR) lowest achievable emission rate (LAER), NSPS and emission guidance (EG) for new and existing sources, and maximum achievable control technology (MACT) as in the proposed NESHAP, it is a fact that the cost of emission control for similar boilers or energy recovery units will be comparable. There is no apparent reason for differences such as lower PM or CO limits for boilers under the NESHAP than for energy recovery units under the NSPS for CISWI.

Within the NSPS for CISWI there are puzzling differences between limits for energy recovery units and incinerators. For existing CISWI units, PM and mercury limits are lower for energy recovery units than for incinerators. For new CISWI units, the PM emission limit for energy recovery units is higher than that for incinerators by a factor of 500. We recommend that the EPA should re-evaluate the various proposed limits, both between the proposed NESHAP for boilers and NSPS for CISWI, within the proposed CISWI rule, and in relation to existing BACT

and LAER determinations to bring more order and consistency to the various emission limits. In short, please harmonize the regulations.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between other applicable NESHAP limits.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 4

Comment: The CAA dictates that a source subject to §112 that is burning solid waste is 'subject to' §129. For kilns currently utilizing solid wastes, CEMEX questions the timing of the changeover from §112 to § 129.

1. The newly issued and more stringent §112 standards for Portland cement kilns at 40 CFR Part 63, Subpart LLL, would become effective and enforceable by August or September of 2013 (depending on the Federal Register publication date). EPA has committed to issuing final 129 standards by December 2010, which will become effective by December 2015. CEMEX would

like clarification regarding at what time does a non-hazardous waste burning Portland cement kiln stop being subject to §112 standards?

2. If kilns used to set the floor in the newly revised Subpart LLL were found to be subject to §129, how does this impact the newly revised Subpart LLL?

3. Would EPA consider allowing kilns currently utilizing solid waste to continue to operate under the existing Subpart LLL standards without having to put into place controls for compliance with a standard (revised Subpart LLL) that would only potentially be applicable from 2013 to 2015?

4. If a Portland cement kiln discontinues use of a solid waste for a period of time, is it then subject to §112? CEMEX respectfully requests an explanation regarding how EPA will choose to regulate sources that may, intermittently, discontinue utilizing solid wastes.

5. EPA should clarify the means for `opting in' and 'opting out' of the CISWI program. In particular, CEMEX respectfully requests an explanation of how a source that is not now combusting solid waste, and in fact has never combusted such solid waste, decides that it wants to combust sold waste and be regulated under CISWI what is the process for 'opting in'? Likewise, for a source that is currently combusting a solid waste, and decides to stop combusting solid waste before the regulations become effective, what is the procedure for 'opting out'?

6. The Proposal under §129 includes the provision at 60.2550(b) which states that: "If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after June 1, 2001, the CISWI unit becomes subject to subpart CCCC of this part and the State plan no longer applies to that unit." This implies that non-hazardous waste burning kilns that have made modifications since 2001 would be subject to the new CISWI standards. CEMEX would to urge EPA to reconsider this highly inappropriate language in the final rule.

A clear explanation of the above interpretation issues is needed in the final rule and EPA should again solicit comments regarding these implementation issues.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 7

Comment: The proposal utterly fails to address several critical issues for implementation. One prime example is the many complex issues on the relationship between CAA § 112 and CAA § 129 coverage. How and when would cement kilns already subject to CAA § 112 become subject to CAA § 129 standards if they are combusting materials EPA has defined as solid waste? This issue becomes even more complex and significant in light of the newly-issued Pre-publication Portland Cement NESHAP CAA § 112 and NSPS standards. There are several widely-varying

plausible resolutions to these issues, and the impacts on regulated entities could be dramatic depending upon the way these issues are resolved. Yet, EPA's proposal offers not a word about these issues and how they may be resolved.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 9

Comment: EPA SHOULD ALLOW UNITS TO SWITCH BETWEEN CISWI AND BOILER MACT.

Combustion units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning solid waste. However, a more flexible approach would be to allow units to be regulated under either CISWI or Boiler MACT based on the materials being burned at the time. A provision similar to that provided in the Hazardous Waste Combustor MACT [see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)] is needed in the CISWI rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 16

Comment: EPA Should Allow Units to Switch between CISWI and Boiler MACT

Combustion units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning waste. However, a more flexible approach would be to allow units to be regulated under either CISWI or Boiler MACT based on the materials being burned at the time.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 32

Comment: EPA Has Failed to Address Certain Critical Implementation Issues and Inadequately Clarified Others

We maintain that the Proposed CISWI Rule is so insufficient and defective that the only responsible and legally defensible course for EPA to follow is to develop a re-proposal. In addition to numerous defects involving data inadequacy, the proposal fails to address several critically important implementation issues relating to portland cement kilns. EPA could not cure this defect by crafting its final regulations in a manner that resolves these issues, because PCA and other interested parties would have had no opportunity to comment on them, in contravention of CAA § 307(d) and well-established case law. Moreover, even though we offer suggestions below on how certain issues might be addressed, this does not cure the fundamental APA problem that EPA has totally failed to identify the issues and propose resolutions for public comment.

We should note that we recognize that as both the Proposed CISWI Rule and the Proposed RCRA Rules are currently written, we have maintained that few, if any, portland cement kilns would elect to be covered by CAA § 129 and would simply stop utilizing nonhazardous secondary materials. We are discussing these implementation points below to reinforce our points that the current proposal is so seriously lacking that a re-proposal is necessary. In addition, in the event EPA might eventually develop more reasonable CISWI emission limitations, there is a possibility that some portland cement kilns might elect to be regulated under CAA § 129 in the future. These implementation issues would need to be clearly resolved in such an event.

A. How Will CISWI Kilns Be Regulated Under CAA § 129?

1. The Basic Issue

CAA § 129(h)(2) provides that "no solid waste incineration unit subject to performance standards under this section and section 111 of this Act shall be subject to standards under section 112(d) of this Act."

As a preliminary matter, EPA should clarify in its preamble to the Proposed CISWI Rule that if an affected unit is subject to the requirements of the Proposed CISWI Rule, that same source would not be subject to NSPS Subpart F. The structure of § 111 and Part 60 is clear that only one NSPS applies to each affected facility. EPA must clarify this point in this rulemaking. If EPA agrees with this interpretation, EPA should identify it as such so the public will know EPA's intent.

There are several questions on the timing of changeover from § 112 controls to § 129 controls for solid waste-burning kilns. These issues are particularly critical in light of the facts that: (i) all 40 CFR Part 63, Subpart LLL kilns are now subject to currently effective § 112 standards; (ii) EPA just recently (August 6, 2010) issued more stringent § 112 standards, which,

if upheld on judicial review, would become effective and enforceable by August or September of 2013 (depending upon the Federal Register publication date); and (iii) EPA has committed to issuing final § 129 standards applicable to solid waste-burning kilns by December, 2010, which will become effective and enforceable by December, 2015.

So at what point, under this scenario, would a solid waste-burning kiln no longer be subject to § 112 standards? Even though this is a fundamentally critical issue for subject facilities, the interested public, EPA, and the States, EPA has totally failed to address this and related issues in its Proposed CISWI Rule. Perhaps this is another reflection of EPA's "rush to judgment" based on a "court-ordered deadline" it has cited that does not even apply to CISWI regulations.

2. Plain Language of the CAA

The plain language of the CAA dictates that a source subject to § 112 that is burning solid waste is "subject to" § 129 standards. Therefore, even right now, a kiln burning solid waste cannot be regulated by § 112 standards.

EPA has stated its interpretation in prior CAA § 129 rulemakings, stretching the plain reading and unambiguous language of the CAA when addressing the interplay between §§ 112 and 129.

Here is what EPA said in the 1998 proposed rule preamble:

If EPA elects to cover emissions under section 129, those emissions must be excluded from regulation under section 112. For example, if a cement kiln combusts only fossil fuels, it would have to comply with the regulations being proposed today. If the kiln combusts a mixture of 50% coal and 50% nonhazardous solid waste, it would continue to comply with the regulations being proposed today until EPA promulgates regulations applicable to such kilns under section 129 of the Act. At that time, if the kiln is burning the 50% coal and 50% solid waste mixture, it would have to comply with the section 129 regulations as long as it continued to combust solid waste material.

63 Fed. Reg. 14186 (March 24, 1998) (emphasis added.)

This discussion drew several comments and questions during the comment period, and EPA responded as follows in the 1999 final rule preamble:

Currently, cement kilns which combust municipal solid waste, medical waste, or other waste materials (other than HW) are subject to today's rule. Since these devices currently are not subject to section 129 standards, EPA is including them in this rule to avoid a situation where they aren't regulated at all. This measure, however, is potentially an interim step. EPA could determine that cement kilns combusting solid waste materials should be regulated under section 129 of the Clean Air Act, and if so, EPA would revise the applicability section of these regulations accordingly at the time section 129 regulations applicable to cement kilns are promulgated.

64 Fed. Reg. 31900 (June 14, 1999) (emphasis added.) Note that under EPA's approach, kilns would be unregulated for 5 years after EPA promulgates a final CISWI rule.

PCA believes that it would be inconsistent with the CAA for CISWI kilns planning to be regulated under § 129 to continue to comply with the current LLL standards. Furthermore, it would be extremely burdensome, disruptive, and illegal for such kilns to be forced into compliance with the new LLL standards in August 2013 for a period of barely two years, and then forced to turn around and abandon those standards for the totally different set of § 129

standards that will kick in some time in 2015. PCA also believes that the Pre-Publication Portland Cement NESHAP standard will not survive legal challenge if EPA finds MACT floor units of the NESHAP to be subject to § 129.

B. After CISWI Rules Take Full Effect, to What Extent Might CAA § 112 Standards

Apply During Periods When CISWI Kilns Might Not Be Combusting Solid Waste?

EPA has for years administered CAA NESHAP rules for portland cement kilns in two distinct categories. First, kilns that burn hazardous waste fuel (HWF) as a partial fuel substitute are regulated by MACT standards codified at 40 C.F.R. part 63, Subpart EEE. These kilns will be referred to as "EEE kilns." Second, kilns that do not burn HWF are regulated by MACT standards codified at 40 C.F.R. part 63, Subpart LLL. These kilns will be referred to as "LLL kilns."

It is clear under both sets of regulations that no kiln will ever be subject to both sets of standards at the same point of time. EPA has taken care in both its EEE and LLL regulations to specify in detail how the two sets of standards may or may not apply depending upon whether a kiln is burning HWF at any particular point of time. For just a few examples, EPA addresses this issue in the EEE regulations in Table 1 to § 63.1200, as well as § 63.1206(b)(1)(ii) and § 63.1209(q). EPA addresses this issue in the LLL regulations at § 63.1340(b).

EPA has also explained in some detail in both EEE and LLL preambles how kilns that are regulated under EEE may or may not be regulated under LLL during periods when the EEE kilns happen not to be burning HWF. See, e.g., 64 Fed. Reg. 52904 , 64 Fed. Reg. 31898, 31900, 74 Fed. Reg. 21183, and 74 Fed. Reg. 21139.

The general approach is that a kiln that burns HWF and elects to be regulated under EEE will continue to be subject to EEE standards during periods when the kiln may not be burning HWF, unless the kiln files documentation affirmatively electing to convert to a different "mode of operation" and be subject to the LLL provisions rather than the EEE provisions. (See the regulations and preamble statements cited immediately above.)

Nowhere in the preamble to the Proposed CISWI Rule does EPA address this critical issue. As shown in Part A above, no kiln that is subject to CAA § 129 standards can be subject to CAA § 112 standards. But one could argue that a kiln that combusts solid waste and has elected to be regulated as a CISWI kiln might not be "subject to" CAA § 129 standards during a minute, hour, day, or other time period that the kiln does not happen to be feeding solid waste to the combustion chapter. We urge EPA to develop rules (for further public comment) on this critical issue.

C. After CISWI Rules Are Promulgated, What Processes Will Be Provided for Kilns to Elect In or Out of CAA § 129 Coverage?

Once EPA finalizes CISWI standards applicable to portland cement kilns, "new" CISWI sources will have 6 months to come into compliance with the CISWI standards and "existing" CISWI sources will have approximately 5 years. In what manner will kiln owners and operators be given time to "elect in" or "elect out" of CISWI coverage?

This is an extremely critical issue, for it is obvious that the CISWI standards will be vastly different than the LLL standards. What if a facility that is not now combusting solid waste (as defined in upcoming 40 C.F.R. part 241), and in fact has never combusted such solid waste,

decides that it wants to combust solid waste and be regulated as a CISWI source? Will any process be established to allow such a source to "elect in?"

What about facilities that are combusting solid waste (as defined in the upcoming 40 C.F.R. part 241 regulations) now, or as of the date EPA issues final CISWI rules, but may wish to stop combusting solid waste before the regulations might actually apply to them (approximately five years in the case of existing sources)? Will any process be established to allow such a source to "elect out?" What if an existing source elects to stop utilizing solid waste? It would seem logical that this source could elect to be regulated under the Pre-Publication Portland Cement NESHAP (again, as an existing source). We urge EPA to affirm this point and take public comment on its proposed approach.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures.

Further, the commenter is correct that if a device is defined as a solid waste incinerator (i.e. is burning solid waste as defined in the newly-adopted Part 241 rules), then it is not regulated under a section 112 standard so long as it continues to burn solid waste (and see section V.A.1 of the preamble to the final rule for a discussion of circumstances regarding potential changes in regulatory status for sources that stop burning solid waste).

A kiln cannot be "subject" to §129 standards until EPA finalizes the NHSM and the CISWI rules. Further, it is the regulatory definition of solid waste (the NHSM rule) that determines if a cement kiln (or other source) is burning solid waste and hence a commercial and industrial solid waste incinerator. Before issuance of the definition, however, cement kilns burning alternative fuels or recycling other non-hazardous secondary materials could not be so classified and were subject to regulation under section 112. See 74 FR at 21138.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 62

Comment: Units that burn solid waste under Section 129 should be allowed to opt back into regulation under the Boiler MACT rule

EPA draws a bright line distinction in its proposed rules between units that burn solid waste, which will be regulated under the CISWI rule, and those that do not, which will be regulated under the Boiler MACT rule. But the proposed rules provide little guidance for units capable of burning both solid waste and fuels that would theoretically cause them to be regulated under the Boiler MACT rule. Instead, EPA seeks "comment on whether" a unit that burns solid waste, and is thus subject to regulation under the CISWI rule, "could ... opt back into regulation under [the Boiler MACT rule] by taking a federally enforceable restriction precluding the future combustion of any solid waste material."

AF&PA believes units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning waste. However, a more flexible approach would be to allow units to be regulated under either CISWI

or Boiler MACT based on the materials being burned at the time. A provision similar to that provided in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)) is needed in the CISWI rule. For example, SO2 and NOx emissions may be lower when co-firing waste with fuel than when burning fuel alone. Section 129 of the Clean Air Act requires EPA to set emission standards for sulfur dioxide and NOx under CISWI and such standards are not required under the Boiler and Process Heater MACT. Depending on the stringency of the CISWI NOx emission standard, it may not be possible to comply with the NOx standard while operating in the coal-only mode without installing costly emission controls that are not otherwise required under the Clean Air Act. There will likely be other situations where burning solid waste results in lower emissions than burning 100 percent fuel and facilities should not be penalized for these circumstances.

Allowing a co-fired unit to opt out of the CISWI rule and into the Boiler MACT rule will provide a beneficial measure of flexibility to operators of such units who, for a variety of reasons, may in the future no longer burn solid waste. And, under National Mining Association v. EPA, 59 F.3d 1351, 1361-62 (D.C. Cir. 1995), any restrictions that a source takes to ensure that it not combust solid waste need only be practically and legally enforceable (for example, under state or local law), and not necessarily "federally" enforceable. As a policy matter, requiring operators to remain regulated under the CISWI standard should the unit no longer burn solid waste would needlessly penalize them with little to no benefit gained. Lastly, no law or regulation prevents EPA from allowing a unit to opt out of the CISWI rule and into the Boiler MACT rule.

Indeed, the only basis that might arguably prevent opting out of CISWI and into Boiler MACT is EPA's "once in always in" policy ("OIAI Policy"). Under the OIAI Policy, which was intended to be interim guidance until EPA could undertake rulemaking, if a facility is a major source for hazardous air pollutants ("HAPs") on its first compliance date, it is required to comply permanently with the MACT standard in question [Footnote: See "Potential to Emit for MACT Standards--Guidance on Timing Issues" Memorandum from John Seitz, Director, Office of Air Quality Planning and Standards to EPA Regional Air Division Directors, May 16, 1995.]

. EPA promulgated the Policy in 1995 for facilities seeking to comply with the then-new MACT standards on the belief that without such a policy, facilities would "backslide" from MACT control levels by (1) installing MACT required controls; (2) arguing that with those controls, the facility was then emitting below major source thresholds, and therefore no longer subject to the MACT standard; and (3) subsequently increasing emissions to major source thresholds or above.

But in practice the OIAI Policy has created an arbitrary distinction between major and area sources based solely on a facility's Potential to Emit (PTE) at its first compliance date. The CAA does not compel this result; indeed, no such temporal limitation exists in the CAA. Further, the temporal distinction serves as a disincentive for sources to reduce HAP emissions beyond the levels required by an applicable MACT standard because the source gains no benefit from doing so (e.g., no reduced monitoring, recordkeeping, or reporting for becoming an area source). And because there is no opportunity under the OIAI Policy for major sources to become area sources, major sources have no incentive to explore different control techniques or new and emerging technologies that would result in lower emissions. For these reasons, AF&PA has consistently opposed the OIAI Policy, and EPA should abandon it [Footnote: EPA itself proposed abandoning the Policy in January, 2007. See National Emission

Standards for Hazardous Air Pollutants: General Provisions, Proposed Rule, 72 Fed.Reg. 69 (Jan. 3, 2007).]

Even if EPA does not abandon it, the OIAI Policy should not apply to the CISWI and Boiler MACT rules. By its terms, the Policy applies solely to circumstances where a facility seeks to limit its PTE to below major source thresholds in order to avoid compliance with major source MACT standards. As such, the guidance was limited and EPA did not intend to apply it on a broader basis. Indeed, EPA confirmed this when it decided not to apply the Policy to sources regulated under the new mandatory

Greenhouse Gas ("GHG") reporting rule. See, e.g., Mandatory Reporting of Greenhouse Gases, Final Rule, 74 Fed. Reg. 56260, 56300 (Oct. 30, 2009) (removing an OIAI provision from its proposed reporting rule to provide facilities with a greater incentive to reduce GHG emissions). EPA should do the same here for the CISWI/Boiler MACT rules where there is no concern over "backsliding." And the Policy makes little sense where a unit, by virtue of its design and the type of fuel available, would have to comply with either the CISWI or the Boiler MACT rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 3

Comment: New and modified sources subject to section 165 must install "the best available control technology" (BACT) for a number of criteria pollutants regulated under the CAA, including as relevant here CO, SO2, NOx and mercury. In the proposed rules EPA is setting limits for certain pollutants based on the application of "the maximum achievable control technology" – MACT. There is nothing in the plain text of the CAA or its legislative history that suggests that Congress intended MACT, which applies to emissions of highly toxic and carcinogenic pollutants, to be less stringent than BACT, which applies to criteria pollutants. Indeed, for new sources it is clear that Congress intended MACT [Footnote: The MACT floor definition is essentially the same as the definition of LAER, which applies to new and modified sources in non-attainment areas] to be at least as stringent as the lowest achievable emission rate (LAER), which is generally recognized as being more stringent than BACT.

Regulatory authorities are to consider cost when establishing both BACT and MACT limitations that are more stringent than the MACT floor. There is nothing in the CAA that speaks to how EPA and permitting authorities must weigh cost against other considerations in establishing BACT. However, there has been a substantial body of precedent that speaks to this issue. In contrast, in establishing a requirement for a MACT floor, Congress effectively set a floor on what should be considered reasonable costs for MACT control technologies. Since MACT may be no less stringent than the performance level of the best-performing 12 percent, the cost to those sources of achieving that level of performance (including the worst-performing unit within a subcategory) must be within what was considered to be appropriate for MACT sources in that

subcategory. This is of particular relevance to the set of rules under consideration, where the cost of control for similarly situated units is essentially the same but the calculated MACT floors are substantially different.

In its MACT determinations EPA needs to explain how an emission limit imposed for a unit subject to section 129 (and therefore presumably meeting the reasonable cost test for MACT) is not reasonable for an identical unit subject to section 112. Under EPA's proposal those units will be regulated as energy recovery units (under section 129). The PM emission limits for new energy recovery units under section 129 are 500 times higher (less stringent) than those for new incinerators under section 129. EPA should explain why this is the case for its proposed MACT standards. NACAA understands EPA's MACT floor calculation process, but EPA is proposing a MACT standard, not merely calculating a MACT floor. Given this difference in emission limits few sources will elect to be a new "incinerator" of solid waste if they can be classified as some other type of unit (even though the design and operating characteristics of the unit may be unchanged).

PM and mercury limits for existing units are more strict for energy recovery units than for incinerators (50 percent more stringent for PM and a factor of three for mercury). HCl limits are also more stringent for energy recovery units (by a factor of 20), while CO levels are more stringent for incinerators (by a factor of 70). In addition, PM emission limits for new ICI boilers (under section 112) are more stringent than for new energy recovery units (under section 129) (0.001 vs 0.003 lb/MMBtu). For existing coal-fired units the CO limits are also higher under section 129 than under 112 (150/290 ppm vs 30-90 ppm). For oil-fired units the CO difference is even greater (150 ppm vs 1 ppm). In each of these examples, significant differences in EPA's proposed MACT standards exist and EPA offers no technical justification for its proposal that these limits in fact represent application of the "maximum achievable" control technologies.

If the PM and mercury limits remain roughly as proposed for existing sources, [Footnote: NOx and SO2 limitations under section 129 may also discourage combustion of solid waste. This issue can be addressed by EPA when it adopts emission limitations for large industrial units under Phase II of its Transport Rules] few sources will want to be regulated under section 129. Most sources will want to argue that they get a "meaningful" contribution to the overall combustion process from what they burn. This will increase the level of disagreement over whether a material is a waste and may result in fewer sources burning waste materials. Some sources (with low CO levels) might find it in their interests to assert that they are incinerators rather than energy recovery units. Thus, the definitions of "solid waste" and "incinerator" may matter to a number of sources.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between other applicable NESHAP limits.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 22

Comment: A provision should be added that allows a facility to elect to either (1) comply with CISWI at all times or (2) comply with CISWI while burning solid waste but comply with otherwise applicable standards under section 112 of the Clean Air Act while not burning solid waste.

A provision similar to that provided in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)) is needed in the CISWI rule. For example, Eastman operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. Section 129 of the Clean Air Act requires EPA to set emission standards for sulfur dioxide and NOx under CISWI and such standards are not required under the Boiler and Process Heater MACT. Depending on the stringency of the CISWI NOx emission standard, it may not be possible to comply with the NOx standard while operating in the coal-only mode without installing emission controls that are not otherwise authorized under the Clean Air Act. There will likely be other situations where burning solid waste results in lower emissions than burning 100 percent fuel and facilities should not be penalized for these circumstances. Another complication is that many units do not fire solid waste until the unit is started up and at steady state. Facilities can easily document which mode of operation they are in (by tracking solid waste feed rates) and readily show compliance with the applicable standard.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 5

Comment: This switch of categories presents not only the technical compliance challenges but creates untenable timeframes in which to accommodate the necessary analysis and strategic planning needed to implement major equipment changes and/or secure alternate fuel supplies. In addition, EPA in the draft CISWI rules points out that it expects no new source CISWI units to be built. Yet, a switch in fuels on a unit can trigger new source review.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 2

Comment: NESCAUM is concerned by the widely varying proposed emission limits across this rule and the rules for boilers for similar units under section 112 of the Clean Air Act. In the past, where large differences in cost and protectiveness were associated with definitions in the regulations, litigation has resulted, as well as uncertainty over the meaning and application of those

definitions in specific circumstances. Sections 112 and 129 of the Clean Air Act mandate that the emission limitation for covered units be "the maximum degree of reduction that is achievable," and not merely the MACT "floor." Accordingly, where feasible, EPA should adopt

MACT limitations of similar stringency for similar units, irrespective of whether the source is

regulated as an industrial, commercial, and institutional (ICI) boiler under CAA section 112 or a CISWI unit under section 129.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 3

Comment: Sources Subject to Existing MACT Standards Should Not Become Incinerators

As CAA §129(h)(2) provides, "[n]o solid waste incineration unit subject to performance standards under this section and section 7411 of this title shall be subject to standards under section 7412(d) of this title." 42 U.S.C. §7429(h)(2). Thus, regulation under sections 112 and 129 are mutually exclusive. See Natural Resources Defense Council v. EPA, 489 F.3d 1250, 1256 (D.C. Cir. 2007) ("[t]he Congress made section 129's standards and section 112's standards mutually exclusive by directing that `no solid waste incineration unit subject to performance standards under this section and [42 U.S.C. §7411] shall be subject to standards under 7412(d)."'); see also id. at 1260-61 ("We perceive no such gap in [§129(h)(2)], which simply directs EPA in plain terms to subject a solid waste combustion facility exclusively to section 129 standards, and not to section 112, if the facility fits section 129's clear definition of `solid waste incineration unit."').

Of course, steel mills are currently subject to HAP standards under Section 112(d) of the Act (42 U.S.C. §7412(d)). See 72 Fed. Reg. 74,088 (Dec. 28, 2007) (National Emissions Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities; Final Rule); 68 Fed. Reg. 27,686 (May 20, 2003) (National Emissions Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing; Final Rule); and 40 CFR Part 63, Subpart L (National Emission Standards for Coke Oven Batteries).

Maintaining that clear division is critical to both the legality and practicality of the Proposed Rules. It is unclear how EPA reconciles section 129(h)(2) and the relevant case law with facilities like steel mills (EAFs and Integrated) and the lime plants, sinter plants, and coke plants

operated by the iron and steel industry that currently are regulated under CAA section 112 and subject to section 112(d) emission limits. Indeed, in the context of cement kilns, the Proposed Rules suggest it may blur the clear line

Congress drew between incinerators and sources subject to MACT standards. See 75 Fed. Reg. 31,877 ("Under today's proposal, cement kilns that burn whole tires would be subject to the CAA section 129 requirements, unless the tires were processed to produce TDF or a non-waste determination was issued by EPA regarding the burning of whole tires.")

That approach would (perhaps unintentionally) wreak havoc on many industries, including the steel industry, that have invested vast sums to achieve MACT compliance. Despite those efforts, they would risk suddenly being swept out of §112 and into a totally different regulatory regime with different emissions standards - possibly because of the inadvertent, periodic or de minimus recycling of secondary materials. That prospect threatens significant business disruption with no corresponding environmental benefit. Facilities "subject to standards under §112(d)" have, by definition, already made the "maximum achievable" progress in reducing HAP emissions. Further, those standards (unlike the standards in §129) are adjusted over time to address any residual risks later identified. See CAA §112(f)(residual risk review requirements for MACT source categories).

Rather than blurring CAA §129(h)(2)'s plain instruction that incinerator and MACT regulation are mutually exclusive, EPA should take this opportunity to confirm and clarify that logical result. While the text of §129(h) plainly establishes that MACT and incinerator regulation are mutually exclusive, it is either ambiguous or silent regarding how to accomplish that result. It does not, for example, expressly state that §129 automatically subsumes §112 or vice versa. As such, EPA is entitled to make a reasoned interpretation of that language to establish how mutual exclusivity of §129 and §112 can be achieved. The best such resolution is a "first in time" approach: sources initially subject to §112 standards remain under that provision, while sources initially subject to §129 remain there. That straight-forward resolution of the ambiguity in §129(h)(2) would prevent "standard shopping," enable MACT controls to accomplish their intended environmental benefit, and prevent unnecessary economic disruption.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule.

Commenter Name: Jeff A. McNelly

Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 9

Comment: The fact that EPA has simultaneously proposed three very similar combustion rules, with an alternative proposal which gives four possible permit limits for what is essentially the same universe of sources from an engineering perspective, results in a set of hugely varying limits that have no reasonable correspondence to one another.

As an example, one would think that CISWI standards would be more stringent than boiler standards. Yet under the proposed rules, if waste coal is classified as a non-waste fuel, as ARIPPA is advocating, an ARIPPA plant, if it were a new major source or a new source located at a major source of HAPs, would be subject to a dioxin TEQ of 3E-05 ng/dscm. If however, coal refuse remains a waste fuel and an ARIPPA plant is subject to CISWI, the plant would have a TEQ emission limit of 2.7E-03 ng/dscm, a factor of 90 times higher for the Section 129 plant.

The situation is not improved when existing plants are evaluated. As a plant burning a non waste coal under major source Boiler MACT, an ARIPPA plant would be subject to a dioxin TEQ limit of 2E-03 ng/dscm. However, burning the same fuel but now classified as a waste, under Section129 limits, the same plant would be subject to a dioxin TEQ limit of 5.9E-02 ng/dscm, nearly thirty times higher. [See submittal for relationships of dioxin limits for coal-fired CFB's under various regulatory proposals provided by commenter.]

As shown above, an existing boiler is subject to a more stringent standard than a new CISWI unit, which again seems to defy any rationale attempt at explanation. While not shown in the graph above due to the huge scale difference, if EPA chooses to implement the alternative waste determination in the waste rule, an existing CISWI plant burning a waste coal would be allowed to emit a dioxin TEQ of 7.5 ng/dscm, or over 3,700 times more dioxin than a Section 112 plant.

Clearly these results fail to demonstrate any internal consistency or logic. Additionally many of the limits proposed are so low that they are simply not attainable. CO limits of 3 PPM for new CISWI energy recovery units are unattainable. A CO limit of 30 PPM for new major source CFB boilers is an extremely aggressive limit, but the same limit (30 PPM) it is not attainable on existing units.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between other applicable NESHAP limits.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial

facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 11

Comment: There are scores of examples in these three rules (CISWI, Boiler MACT, and Area Boiler MACT) that defy all attempts at logic and engineering understanding. From an engineering standpoint, energy recovery CISWI units and non-waste fired boilers of the same technology burning the same fuels should be subject to essentially the same emission limits. The CAA implications of Section 129 should only extend to how the units are characterized and the additional provisions above Section 112 MACT that apply to Section 129 sources.

These analyses can be conducted in accordance with sound engineering practices without running afoul of the CAA provisions and the associated case law. We urge EPA to go back to the drawing board on the emission limits and re-propose achievable limits that are based on sound technical judgment principles of combustion engineering and air pollution control.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste. Further, see preamble Section V. for the response on Consistency between section 129 and section 112 standards.

In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 13

Comment: Holcim (US) operates twelve cement manufacturing plants with fifteen kilns; all of these plants have used at least one type of NHSM as a fuel or ingredient. Among our fifteen kilns, two units are regulated under the NESHAP for Hazardous Waste Combustors (HWC) [40 CFR part 63 subpart EH], while the other thirteen will be subject to the recently issued CAA section 112 NESHAP Standards for the Portland Cement Manufacturing industry [40 CFR Part

63 subpart EEE} (August 6, 2010). The new NESHAP standards will become effective and enforceable in August or September of 2013, depending on their actual publication date in the Federal Register. Meanwhile, EPA has made a commitment to issue the final CISWI standards for cement kilns using solid waste by December 2010, which will become effective and enforceable by 2015.

EPA failed to address this obvious implementation scheme conflict. At what point will one of our ten cement plants using NHSM no longer be subject to CAA 112 standards?

Holcim (US), along with other industry peers, cannot be expected to operate under such an ambiguous and burdensome scenario in which our facilities must comply with NESHAP standards under CAA 112 in 2013 only to be confronted with an alternative regulatory regime of CISWI standards under CAA 129 only two years later.

NHSM are typically not continuously utilized throughout the year, as their utilization is affected by numerous factors, including market dynamics (e.g. material availability and the price of conventional fuels). Alternatively, a cement plant may decide to temporarily cease the utilization of certain NHSM due to the type of product in demand at a particular time. As a result, there will be periods throughout the year when cement plants will not be using these materials. It is unclear whether a cement kiln will revert to regulation under CAA Section 112 during a period of non-utilization of NHSM. EPA failed to address this issue in this rule.

Additionally, EPA failed to develop policies and procedures for a cement kiln that elects in or out of the CAA section 129 coverage. It is unclear whether a cement kiln not utilizing alternative fuels or ingredients but that elects into regulation under CAA Section 129 will be considered a "new" or "modified" CISWI source.

We recommend that EPA makes a determination that no cement kiln will ever be subject to more than one standard at the same time, allowing cement kilns to elect or convert to a different mode by a specific petition process.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 16

Comment: Combustion units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning waste. However, a more flexible approach would be to allow units to be regulated under either CISWI or Boiler MACT based on the materials being burned at the time. A provision similar to that provided in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)) is needed in the CISWI rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 17

Comment: EPA Has Failed to Address Certain Critical Implementation Issues and Inadequately Clarified Others.

We maintain that the current proposal is so insufficient and defective that the only responsible and legally defensible course for EPA to follow is to develop a re-proposal. In addition to numerous defects involving data inadequacy, the proposal fails to address several critically important implementation issues relating to Portland cement kilns. EPA could not cure this defect by crafting its final regulations in a manner that resolves these issues, because Lafarge and other interested parties would have had no opportunity to comment on them, in contravention of §307(d) and well-established case law. Moreover, even though we offer suggestions below on how certain issues might be addressed, this does not cure the fundamental APA problem that EPA has totally failed to identify the issue and propose resolutions for public comment.

We should note that we recognize that as the CISWI and the NHSM rules are currently proposed, we have maintained that few, if any, Portland cement kilns would elect to be covered by §129 and would simply stop utilizing non-hazardous secondary materials. We are discussing these implementation points below to reinforce our points that the current proposal is so seriously lacking that a re-proposal is necessary. In addition, in the event EPA might eventually develop more reasonable CISWI emission limitations, there is a possibility that some Portland cement kilns might elect to be regulated under §129 in the future. These implementation issues would need to be clearly resolved in such an event.

A. How Will CISWI Kilns Be Regulated Under CAA § 112? 1. The Basic Issue

Section 129(h)(2) provides that "no solid waste incineration unit subject to performance standards under this section and section 111 of this Act shall be subject to standards under section 112(d) of this Act."

There are several questions on the timing of changeover from §112 to §129 for solid waste-burning kilns. These issues are particularly critical in light of the facts that:

(i) all NESHAP Subpart LLL kilns are now subject to pre-August 6, 2010 §112 standards;

(ii) On August 6, 2010 EPA issued more stringent §112 standards, which, if upheld on judicial review, would become effective and enforceable by August or September of 2013 (depending upon the Federal Register publication date); and (iii) EPA has committed to issuing final §129 standards applicable to solid waste-burning kilns by December 2010, which will become effective and enforceable by approximately December 2015.

So at what point, under this scenario, would a solid waste-burning kiln no longer

be subject to §112 standards? Even though this is a fundamentally critical issue for subject facilities, the interested public, and EPA and the States, EPA has totally failed

even to address this and related issues in its proposed rule. Perhaps this is another reflection of EPA's "rush to judgment" based on a "court-ordered deadline" it has cited that does not even apply to CISWI regulations.

2. Several Plausible Interpretations

Under the words of the statute, there are several plausible interpretations of this language. For purposes of discussion, here are the most basic options:

(1) A kiln that is currently burning solid waste is "subject to" §129 standards even if there are not yet any standards that have been promulgated. Therefore, even right now, a kiln burning solid waste cannot be regulated by §112 standards.

(2) A kiln cannot be "subject" to §129 standards until EPA finalizes the NHSM and the CISWI rules. Therefore, a solid waste-burning kiln is not exempt from §112 unless and until EPA issues the final NHSM and CISWI rules and a kiln is determined to be subject to the §129 standards.

(3) A kiln is not really "subject" to §129 standards until the kiln is determined to be combusting "solid waste" (as defined in the final NSHM rule) and promulgated CISWI standards actually take effect and are enforceable against the kiln. Therefore, a solid waste-burning kiln is not exempt from §112 unless and until EPA issues a final NHSM rule, the kiln is determined to be combusting one or more solid wastes, §129 standards are applicable to the kiln, and those standards are actually enforceable (probably 5 years or more after the standards are promulgated).

Option (1) above does not seem appropriate or likely because it would mean that even now, and for the last several years, any kiln that is or was using NHSMs that EPA now deems to be solid wastes would be exempt from §112, even in the absence of any §129 standards applicable to kilns. This would mean that most of the kilns in the U.S. have been complying unnecessarily with the §112 standards and could stop complying at any time.

Option (2) above does seem reasonable and seems to be supported by EPA's position in other §129 rulemakings, despite EPA's failure to address this issue in its currently-pending proposal. Based upon what EPA has said in the past, it appears EPA might believe that Option (2) above applies (a CISWI kiln will be exempt from §112 once EPA promulgates final CISWI standards applicable to kilns).

Here is what EPA said in the 1998 Portland Cement NESHAP proposed rule preamble:

If EPA elects to cover emissions under section 129, those emissions must be excluded from regulation under section 112. For example, if a cement kiln combusts only fossil fuels, it would have to comply with the regulations being proposed today. If the

kiln combusts a mixture of 50% coal and 50% non-hazardous solid waste, it would continue to comply with the regulations being proposed today until EPA promulgates regulations applicable to such kilns under section 129 of the Act. At that time, if the kiln is burning the 50% coal and 50% solid waste mixture, it would have to comply with the section 129 regulations as long as it continued to combust solid waste material.

63 FR 14186 (March 24, 1998), emphasis added.

This discussion drew several comments and questions during the rulemaking's comment period, and EPA responded as follows in the 1999 final Portland Cement NESHAP rule preamble:

Currently, cement kilns which combust municipal solid waste, medical waste, or other waste materials (other than HW) are subject to today's rule. Since these devices currently are not subject to section 129 standards, EPA is including them in this rule to avoid a situation where they aren't regulated at all. This measure, however, is potentially an interim step. EPA could determine that cement kilns combusting solid waste materials should be regulated under section 129 of the Clean Air Act, and if so, EPA would revise the applicability section of these regulations accordingly at the time section 129 regulations applicable to cement kilns are promulgated.

64 FR 31900 (June 14, 1999), emphasis added.

We realize that following this approach literally would result in a situation that

starting with the date EPA promulgates final CISWI standards applicable to waste-burning kilns, existing kilns that combust one or more solid waste (as defined in the NHSM rule which would be finalized prior to the CISWI rule) would not be required to comply with any emission standards under §112 or §129 for a period of approximately five years (until the CISWI standards were effective and enforceable).

Option (3) suggests that a kiln that combusts solid waste (as defined by the proposed NHSM rule) would be required to continue to comply with the pre-August 6,

2010 NESHAP Subpart LLL standards until August or September 2013 (or longer pending possible judicial review and delay), then comply with the new NESHAP Subpart LLL standards for a period of time (likely less than 2-3 years), then comply with the §129 standards if the source continues to combusts solid waste (as defined by the NHSM rule). This implementation scheme would be extremely burdensome and unfair, in that kilns would potentially have to install expensive control systems to comply with one or more standard for a period of only 2-3 years, then not have to use these controls if they opt to be regulated under the §129 standards. For example, if a kiln needed to install an activated carbon injection (ACI) system to control total hydrocarbons (THC) under the new §112 standards by August 2013, but continued to be a CISWI source, then in December 2015 (or whenever the CISWI standards took effect), it would no longer have to comply with the §112 THC limit and could discontinue use of the ACI system. Installing a multi-million dollar control system for a period of 2-3 years would be an unreasonable consequence of poor implementation planning between the two rules.

3. Recommendation

Lafarge recommends to EPA that the responsible course here would be to follow a "hybrid" approach. Under such an approach, kilns electing CISWI status after the rule is finalized would remain subject to the pre-August 6, 2010 NESHAP Subpart LLL standards until the §129 standards were enforceable. We believe this is a sensible alternative to options in which CISWI kilns would be deemed exempt from §112 for five years or more following promulgation of the CISWI standards (which is apparently the position EPA has articulated in the past), yet, it also avoids the extremely harsh consequences if CISWI kilns were forced to implement controls to comply with the August 6, 2010 NESHAP standards and then shortly thereafter abandon some of these controls for alternative controls to comply the CISWI standards.

B. After CISWI Rules Take Full Effect, to What Extent Might CAA §112 Standards Apply During Periods When CISWI Kilns Might Not Be Combusting Solid Waste?

EPA has for years administered §112 for Portland cement kilns in two distinct categories. First, kilns that burn hazardous waste fuel (HWF) as a partial fuel substitute are regulated by §112 standards codified at 40 CFR Part 63, Subpart EEE. These kilns will be referred to as "EEE kilns." Second, kilns that do not burn HWF are regulated by §112 standards codified at 40 CFR Part 63, Subpart LLL. These kilns will be referred to as "LLL kilns."

It is clear under both sets of regulations that no kiln will ever be subject to both sets of standards at the same point of time. And EPA has taken care in both its NESHAP EEE and LLL regulations to specify in detail how the two sets of standards may apply or not apply depending upon whether a kiln is burning HWF at any particular point of time. For just a few examples, EPA addresses this issue in the EEE regulations in Table 1 to §63.1200, as well as §63.1206(b)(1)(ii) and §63.1209(q). EPA addresses this issue in the LLL regulations at §63.1340(b).

EPA has also explained in some detail in both EEE and LLL preambles how kilns that are regulated under EEE may or may not be regulated under LLL during periods when the EEE kilns happen not to be burning HWF. See, e.g., 64 FR 52904 , 64 FR 31898, 31900 (June 14, 1999), 74 FR 21183, and 74 FR 21139.

The general approach is that a kiln that burns HWF and elects to be regulated under EEE will continue to be subject to EEE standards during periods when the kiln may not be burning HWF, unless the kiln files documentation affirmatively electing to convert to a different "mode of operation" and be subject to the LLL provisions rather than the EEE provisions. (See the regulations and preamble statements cited immediately above.)

Nowhere in the preamble to the CISWI rule does EPA address this critical issue. As shown in Part A of this section above, no kiln that is subject to §129 standards can be subject to §112 standards. But one could argue that a kiln that combusts solid waste and has elected to be regulated as a CISWI kiln might not be "subject to" §129 standards during a minute, hour, day, or other time period that the kiln does not happen to be combusting solid waste.

We strongly urge EPA to develop rules (for further public comment) on this critical issue. We believe the most rational and workable approach is to follow the lead of the regime EPA has long worked out for the EEE/LLL dichotomy, and provide in its regulations that kilns electing CISWI status will continue to be regulated under §129 standards during periods when solid waste is not being combusted unless the kiln affirmatively elects to convert to a §112 operating mode.

C. After CISWI Rules Are Promulgated, What Processes Will Be Provided for Kilns to Elect In or Out of CAA §129 Coverage?

Once EPA finalizes CISWI standards applicable to waste-burning kilns, "new" CISWI sources will have six months to come into compliance with the CISWI standards and "existing" CISWI sources will have approximately five years. In what manner will kiln owners and operators be given time to "elect in" or "elect out" of CISWI coverage?

This is an extremely critical issue, for it is obvious that the CISWI standards will be vastly different than the MACT standards. What if a facility that is not now combusting solid waste (as defined in the proposed NHSM rule), and in fact has never combusted such solid waste, decides

that it wants to combust solid waste and be regulated as a CISWI source? Will any process be established to allow such a source to "elect in?"

Another issue regards facilities that are combusting solid waste (as defined in the proposed NHSM rule) now, or as of the date EPA issues final CISWI rules, but may wish

to stop combusting solid waste before the regulations might actually apply to them (approximately five years in the case of existing sources)? Will any process be established to allow such a source to "elect out?"

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures.

Further, the commenter is substantially correct that a kiln cannot be "subject" to §129 standards until EPA finalizes the NHSM and the CISWI rules. Further, it is the regulatory definition of solid waste (the NHSM rule) that determines if a cement kiln (or other source) that combusts secondary materials is burning "solid waste" and hence is a commercial and industrial solid waste incinerator. Before issuance of the definition, however, cement kilns burning alternative fuels or other non-hazardous secondary materials could not be so classified and were subject to regulation under section 112. See 74 FR at 21138.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 18

Comment: EPA should allow a co-fired unit to opt out of the CISWI rule and into the Boiler

MACT Rule if it stops burning solid waste

EPA draws a bright line distinction in its proposed rules between units that burn solid waste, which will be regulated under the CISWI rule, and those that do not, which will be regulated under the Boiler MACT rule. See, e.g., Proposed Boiler MACT Rule Preamble at 29; Proposed CISWI Rule Preamble at 24. But the proposed rules provide little guidance for units capable of burning both solid waste and fuels that would theoretically cause them to be regulated under the Boiler MACT rule. Instead, EPA seeks "comment on whether" a unit that burns solid waste, and is thus subject to regulation under the CISWI rule, "could ... opt back into regulation under [the Boiler MACT rule] by taking a federally enforceable restriction precluding the future combustion of any solid waste material." Proposed Boiler MACT Rule Preamble at 29-30. For the reasons discussed below, EPA should allow a co-fired unit to opt out of the CISWI rule and into the Boiler MACT rule if it stops burning solid waste.

Allowing a co-fired unit to opt out of the CISWI rule and into the Boiler MACT rule will provide a beneficial measure of flexibility to operators of such units who, for a variety of reasons, may in the future no longer want to burn solid waste. And, under National Mining Association v. EPA, 59 F.3d 1351, 1361-62 (D.C. Cir. 1995), any restrictions that a source takes to ensure that it not combust solid waste need only be practically and legally enforceable (for example, under state or local law), and not necessarily "federally" enforceable. As a policy matter, forcing operators to remain regulated under the CISWI standard should the unit no longer burn solid waste would

needlessly penalize them with little to no benefit gained. Lastly, no law or regulation prevents EPA from allowing a unit to opt out of the CISWI rule and into the Boiler MACT rule.

Indeed, the only basis that might arguably stand in the way of opting out of CISWI and into Boiler MACT is EPA's "once in always in" policy ("OIAI Policy"). Under the OIAI Policy, which was intended to be interim guidance until EPA could undertake rulemaking, if a facility is a major source for hazardous air pollutants ("HAPs") on its first compliance date, it is required to comply permanently with the MACT standard in question [Footnote: See "Potential to Emit for MACT Standards--Guidance on Timing Issues" Memorandum from John Seitz, Director, Office of Air Quality Planning and Standards to EPA Regional Air Division Directors, May 16, 1995.] EPA promulgated the Policy in 1995 for facilities seeking to comply with the then-new MACT standards on the belief that without such a policy, facilities would "backslide" from MACT control levels by (1) installing MACT required controls; (2) arguing that with those controls, the facility was then emitting below major source thresholds, and therefore no longer subject to the MACT standard; and (3) subsequently increasing emissions to major source thresholds or above.

But in practice the OIAI Policy has created an arbitrary distinction between major and area sources based solely on a facility's PTE at its first compliance date. The CAA does not compel this result; indeed, no such temporal limitation exists in the CAA. Further, the temporal distinction serves as a disincentive for sources to reduce HAP emissions beyond the levels required by an applicable MACT standard because the source gains no benefit from doing so (e.g., no reduced monitoring, recordkeeping, or reporting). And because there is no opportunity under the Policy for major sources to become area sources, major sources have no incentive to explore different control techniques or new and emerging technologies that would result in lower emissions. For these reasons, Manufacturers have consistently opposed the OIAI Policy, and EPA should abandon it, which the Agency proposed to do in 2007 [Footnote: See National Emission Standards for Hazardous Air Pollutants: General Provisions, Proposed Rule, 72 Fed. Reg. 69 (Jan. 3, 2007).]

Even if EPA does not abandon it, the OIAI Policy should not apply to the CISWI and Boiler MACT rules. By its terms, the Policy applies solely to circumstances where a facility seeks to limit its PTE to below major source thresholds in order to avoid having to comply with major source MACT standards. As such, the guidance was limited and EPA did not intend to apply it on a broader basis. Indeed, EPA confirmed this when it decided not to apply the Policy to sources regulated under the new mandatory Greenhouse Gas ("GHG") reporting rule. See, e.g., Mandatory Reporting of Greenhouse Gases, Final Rule, 74 Fed. Reg. 56260, 56300 (Oct. 30, 2009) (removing an OIAI provision from its proposed reporting rule to provide facilities with a greater incentive to reduce GHG emissions). EPA should do the same here for the CISWI/Boiler MACT rules where there is no concern over "backsliding." And the Policy makes little sense here where a unit, by virtue of its design and the type of fuel available, would have to comply with either the CISWI or the Boiler MACT rule.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)

Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 40

Comment: Affected Sources And Exemptions

Units that Burn Solid Waste under Section 129 Should Be Allowed to Opt

Back into Regulation under the Boiler MACT Rule

EPA draws a bright line distinction in its proposed rules between units that burn solid waste, which will be regulated under the CISWI rule, and those that do not, which will be regulated under the Boiler MACT rule. [Footnote: 75 FR 31942.] But the proposed rules provide little guidance for units capable of burning both solid waste and fuels that would theoretically cause them to be regulated under the Boiler MACT rule. Instead, EPA seeks "comment on whether" a unit that burns solid waste,

and is thus subject to regulation under the CISWI rule, "could ... opt back into regulation under [the Boiler MACT rule] by taking a federally enforceable restriction precluding the future combustion of any solid waste material." [Footnote: 75 FR 32011.] ACC believes units need to be able to move between the Section 129 and Section 112 standards based on the materials being burned. At a minimum, units initially regulated under CISWI should be able to "opt back into" the Boiler MACT regulation if they stop burning waste. However, a more flexible approach would be to allow units to be regulated under either CISWI or Boiler MACT based on the materials being burned at any point in time. A provision similar to that provided in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii) and 63.1209(q)) is needed in the CISWI rule. For example, an ACC member operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. Section 129 of the Clean Air Act requires EPA to set emission standards for sulfur dioxide and NOx under CISWI and such standards are not required under the Boiler and Process Heater MACT. Depending on the stringency of the CISWI NOx emission standard, it may not be possible to comply with the NOx standard while operating in the coal-only mode without installing costly emission controls that are not otherwise required under the Clean Air Act. There will likely be other situations where burning solid waste results in lower emissions than burning 100 percent fuel and facilities should not be penalized for these circumstances.

Allowing a co-fired unit to opt out of the CISWI rule and into the Boiler MACT rule will provide a beneficial measure of flexibility to operators of such units who, for a variety of reasons, may in the future no longer burn solid waste. And, under National Mining Association v. EPA, 59 F.3d 1351, 1361-62 (D.C. Cir. 1995), any restrictions that a source takes to ensure that it not combust solid waste need only be practically and legally enforceable (for example, under state or local law), and not necessarily "federally" enforceable. As a policy matter, requiring operators to remain regulated under the CISWI standard should the unit no longer burn solid waste would needlessly penalize them with little to no benefit gained. Lastly, no law or regulation prevents EPA from allowing a unit to opt out of the CISWI rule and into the Boiler MACT rule.

Indeed, the only basis that might arguably prevent opting out of CISWI and into Boiler MACT is EPA's "once in always in" policy ("OIAI Policy"). Under the OIAI Policy, which was intended to be interim guidance until EPA could undertake rulemaking, if a facility is a major source for

hazardous air pollutants ("HAPs") on its first compliance date, it is required to comply permanently with the MACT standard in question. [Footnote: See "Potential to Emit for MACT Standards--Guidance on Timing Issues" Memorandum from John Seitz, Director, Office of Air Quality Planning and Standards to EPA Regional Air Division Directors, May 16, 1995.] EPA promulgated the Policy in 1995 for facilities seeking to comply with the then-new MACT standards on the belief that without such a policy, facilities would "backslide" from MACT control levels by (1) installing MACT required controls; (2) arguing that with those controls, the facility was then emitting below major source thresholds, and therefore no longer subject to the MACT standard; and (3) subsequently increasing emissions to major source thresholds or above.

But in practice the OIAI Policy has created an arbitrary distinction between major and area sources based solely on a facility's Potential to Emit (PTE) at its first compliance date. The

CAA does not compel this result; indeed, no such temporal limitation exists in the CAA. Further, the temporal distinction serves as a disincentive for sources to reduce HAP emissions beyond the levels required by an applicable MACT standard because the source gains no benefit from doing so (e.g., no reduced monitoring, recordkeeping, or reporting for becoming an area

source). And because there is no opportunity under the OIAI Policy for major sources to become area sources, major sources have no incentive to explore different control techniques or new and emerging technologies that would result in lower emissions. For these reasons, ACC has consistently opposed the OIAI Policy, and EPA should abandon it, which the Agency proposed to do in 2007. [Footnote: EPA itself proposed abandoning the Policy in January, 2007. See National Emission Standards for Hazardous Air Pollutants: General Provisions, Proposed Rule, 72 FR 69 (Jan. 3, 2007).]

Even if EPA does not abandon it, the OIAI Policy should not apply to the CISWI and Boiler MACT rules. By its terms, the Policy applies solely to circumstances where a facility seeks to limit its PTE to below major source thresholds in order to avoid compliance with major source MACT standards. As such, the guidance is limited and EPA did not intend to apply it on a broader basis. Indeed, EPA confirmed this when it decided not to apply the Policy to sources regulated under the new mandatory Greenhouse Gas ("GHG") reporting rule. See, e.g., Mandatory Reporting of Greenhouse Gases, Final Rule, 74 FR 56260, 56300 (Oct. 30, 2009) (removing an OIAI provision from its proposed reporting rule to provide facilities with a greater incentive to reduce GHG emissions). EPA should do the same here for the CISWI/Boiler MACT rules where there is no concern over "backsliding." And the Policy makes little sense where a unit, by virtue of its design and the type of fuel available, would have to comply with either the CISWI or the Boiler MACT rule.

Moreover, we question EPA's authority under section 129 to continue to regulate units that no longer burn solid waste. By its terms, section 129 is specifically limited to "solid waste incineration units" defined in pertinent part as a unit "...which combusts any solid waste material..." See §129(g)(1) (emphasis added). Note that the statutory definition is in the present tense, and does not say "which used to combust any solid waste material."

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 75

Comment: It is very important for a CISWI unit to be able to move between regulations based on CAA § 129 when burning, and § 112 when not burning solid waste. Switching between fuels is a common occurrence among CISWI units, many of which only burn solid waste part-time. Having the appropriate regulations for the unit based on the fuel helps the unit be more cost efficient, and ensures that the relevant environmental concerns are being addressed. The preferred approach would be to allow units to select whether to be regulated by CISWI or Boiler MACT based on the materials being burned at any given time. EPA has taken this approach in the Hazardous Waste Combustor MACT (see 40 CFR 63.1206(b)(1)(ii)). It is a reasonable approach which has work well with HWC units and is needed in the CISWI final rule. For those units, requirements for incinerators under Subpart EEE apply except when hazardous waste is not in the combustion chamber. The unit then must comply with application requirements under § 112. 40 CFR § 63.1206(b)(1)(ii)). With this established procedure, EPA should likewise allow units that burn solid waste part-time to switch modes of operation between Boiler MACT and CISWI.

Another important scenario that EPA needs to account for in the rule is to permit sources to discontinue reliance on materials and thereby remain boilers or be re-categorized as boilers. Where a unit has in the past burned materials that EPA now or in the future determines to be solid waste, the unit must be permitted to be categorized as a §112 boiler if it discontinues using the materials as fuel. Because any time in the future EPA could make a determination that a material is a waste and not a fuel, a source needs to determine whether compliance with section §129 standards is feasible. If the source decides it is infeasible, then there is no legal barrier -- nor is there a legal reason for EPA to erect one -- to the source ceasing use of that fuel material, and complying with §112 standards.

As units switch from solid waste to other fuels, forbidding them from switching to regulation under Boiler MACT unfairly punishes them, and discourages switching to cleaner fuels. There would be no environmental benefit from requiring them to continue to comply with §129 rather than §112. For example, a unit currently operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. This should be regulated in accordance to the potential for which emissions would be released, and can be easily documented by the facilities based on which mode of operation they are in.

In the proposal, EPA recognizes that energy recovery units such as boilers differ fundamentally from incinerators and that "differences can result in emission profiles for energy recovery units that are different from incinerators but similar to boilers." 75 FR 31951. EPA recognizes that if a unit stops burning solid waste, it would no longer be subject to §129. 75 FR 31942. This reflects the statutory scheme. Congress expressly made §112 and §129 mutually exclusive, keeping the source categories separate and ensuring that only one set of emission standards applies to the source at one time. Therefore, the only question is the frequency with which a source switches

from solid waste to other fuels. The final rule should ensure that sources may use alternative fuels as available, and comply with the corresponding standard.

When this occurs, and a unit switches from solid waste to another fuel, the applicability definitions of both § 112 and § 129 of the CAA should be interpreted to ensure that the unit would be classified as an existing (not new) source under the regulations. This will avoid unfair punishment for a unit making such a switch, and help to encourage the burning of cleaner fuels.

Allowing for this flexibility in the selection of regulations would be able to work with no major problems in practice. The unit's permit would have simply have two sets of standards which would be applicable at different times based on the fuel being burned. This would be easily be monitored by tracking solid waste feed rates and units would readily be able to show compliance with the applicable standard. In terms of other regulatory provisions of the regulations, such as certified technicians and monitoring requirements, units should follow the regulation of the fuel which they burn the majority of the time. This would help to minimize the confusion of following two separate regulations, while ensuring that units are still adequately regulated.

Allowing for maximum fuel diversity is important, including alternate and opportunity fuels. EPA is proposing a definition of a CISWI unit, however CIBO believes it to be inappropriate to apply RCRA hazardous waste approaches to non-hazardous materials, because the nonhazardous materials do not present the inherent risks associated with hazardous materials. Energy recovery from non-hazardous materials is in the overall best interest of the US and any resulting air emissions will be well controlled under § 112 standards. CIBO has filed [see DCN: EPA-HQ-OAR-2003-0119-1834.5 for more expansive comments on this topic in response to the Solid Waste Definition Rule and hereby incorporates those comments by reference]. This is especially important if EPA intends to finalize provisions that require sources regulated under §112 to conduct an energy assessment, which includes identifying ways to increase plant energy efficiency.

EPA has simultaneously proposed this rule, standards for boilers, area sources and the solid waste definition. However, based on the final rule determining what is or is not a solid waste, sources will likely adjust their plan for use of alternative fuels that may be redefined as wastes in the final rule.

CIBO members are concerned that the true composition of the source categories for floor setting in the standards rules will not be known until the solid waste definition is finalized. At that point, CIBO members view it as an unavoidable outcome that EPA will need to recalculate floors for the air emission standards rules. If that should happen, then the compliance deadlines for those rules, and the effectiveness date for this rule, will be in question. EPA should make clear in the final rule what those dates will be and how it expects the rules to interrelate from a

compliance perspective. Facilities need to know when a material they currently burn as a fuel must be discontinued if they decide that the hurdle to showing it is a fuel rather than a waste is too high despite its fuel value. That date should be the compliance date of the air emissions standard rule for the source.

A provision should be added that allows a facility to elect to either (1) comply with CISWI at all times or (2) comply with CISWI while burning solid waste but comply with otherwise applicable standards under §112 while not burning solid waste. For example, a CIBO member operates coal-fired boilers that periodically run in an operating mode where a wastewater treatment sludge

is co-fired with the coal. During this mode of operation, NOx emissions drop significantly. §129 requires EPA to set emission standards for sulfur dioxide and NOx under CISWI and such standards are not required under the Boiler and Process Heater MACT. Depending on the stringency of the CISWI NOx emission standard, it may not be possible to comply with the NOx standard while operating in the coal-only mode without installing emission controls that are not otherwise authorized under the Clean Air Act. There will likely be other situations where burning solid waste results in lower emissions than burning 100 percent fuel and facilities should not be penalized for these circumstances. Facilities can easily document which mode of operation they are in (by tracking solid waste feed rates) and readily show compliance with the applicable standard.

Response: See preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures- Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

3.8 Legal/Applicability: De-Minimus Size Thresholds

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 4

Comment: The EPA should identify a lower threshold below which the rule does not apply.

With new rules it is a common occurrence that once adopted new sources are found that meet the definition, but were not expected or not considered. They typically escape notice during the rulemaking process because of their relatively small size. However, they technically become regulated and in this case would become subject to Title V permitting. The amount of resources required to implement these requirements for the smaller sources would certainly be substantial, and the associated benefit would be negligible.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: David M. Kiser

Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 10

Comment: EPA should appropriately identify Regulated and Exempt units and establish a de-minimis threshold.

EPA must confirm that boilers and incinerators that serve as control devices for reducing

emissions from pulp mill and condensate stripping systems would not be subject to CISWI incinerator standards. While these process streams are gaseous at elevated temperatures, some components will condense into a liquid at standard temperature and pressure. Although we believe that the solid waste definition rule will only define as wastes those materials commonly understood to be "solid", the amount of discussion given to used oil in the preamble and RCRA hazardous waste interpretations is clear indication that boundaries around solid wastes have not yet been drawn. EPA should establish a de minimis threshold to exempt units that derive less than 1% of their annual heat energy from secondary solid materials. This provision will prevent a boiler from being classified as a CISWI in the event that incidental quantities of waste materials are identified in the fuel stream.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Renee Lesjak Bashel
Commenter Affiliation: Small Business Ombudsman and Small Business Environmental Assistance Programs (SBO/SBEAP)
Document Control Number: EPA-HQ-OAR-2003-0119-2254.1
Comment Excerpt Number: 1

Comment: Recommendation: Provide an exemption level for very small units that will have limited impact on emissions. We suggest providing a lower limit of 1 million BTU per hour (MMBTU/hr) on applicability of the regulations.

The proposed changes to this reguLation do not have a Lower fLoor. Even very smaLL units that produce very LittLe poLLution wiLL be required to meet emission Limits. In generaL, this couLd impact very smaLL companies and produce minimaL reduction in poLLution.

What the SBO/SBEAPs have Learned in impLementation of an Area Source RuLe (subpart HHHHHH, specificaLLy with respect to autobody refinishing shops) is that there are many who operate at such Low LeveLs (5 gaLLons of paint per year or Less in many one-man shops) that even a new spray gun can be cost prohibitive to the LeveL of cash fLow for the business. Every ruLe shouLd have some Lower LeveL where any reguLation is cLearLy unreasonabLe and offers negLigibLe environmentaL benefit.

If the goaL of this ruLe is to target many units that average around 1 MMBTU/hr, there shouLd stiLL be some consideration of a de minimus LeveL at which the requirements appLy. A de minimus LeveL couLd be appLied at 1 MMBTU/hr each for a unit with primary and secondary burner or at 1 MMBTU/hr totaL if that seems too high.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Melissa Mullarkey
Commenter Affiliation: Recycled Energy Development, LLC (RED)
Document Control Number: EPA-HQ-OAR-2003-0119-2213.1
Comment Excerpt Number: 1

Comment: The proposed CISWI MACT rule declares that "all units burning solid waste as defined by RCRA are to be covered by regulations under CAA Section 129" (p. 31948). This restriction means that a unit burning even a de minimums amount of solid waste as defined by RCRA will fall under the CISWI rule. At the extreme, this restriction would force a facility to be treated under the CISWI rule if its biomass fuel included a single plastic bag, perhaps inadvertently dropped from a worker's lunch box. More realistically, it might restrict a small amount of construction debris. Rather than impose a total restriction, EPA should create a minimum threshold for non-wood waste material at a biomass-power facility. California, for instance, allows existing biomass power to be considered a renewable resource even if up to 25 percent of its fuel mix is such non-wood waste materials.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and

commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Charles Lim
Commenter Affiliation: Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright)
Document Control Number: EPA-HQ-OAR-2003-0119-2405
Comment Excerpt Number: 2

Comment: We request that EPA consider the addition of a de minimis emission limit, de minimis amount of material "discarded" at the burn-off oven, or a limitation to the hours of operation that a source such as ours can operate without triggering CISWI rule applicability. Not all burn-off ovens are operated for the same reasons nor in the same manner. EPA should consider this in development of the final rule for minor source and batch operations.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Brad Cooley
Commenter Affiliation: GDF SUEZ Energy Generation North America, Inc. (GSEGNA)
Document Control Number: EPA-HQ-OAR-2003-0119-2216.1
Comment Excerpt Number: 3

Comment: DE MINIMIS LEVELS OF SOLID WASTE: A de minimis level of solid waste should be established that allows sources to burn small amounts of solid waste without being classified as an incinerator. GSEGNA supports the comments of Michigan Biomass, as well as American Forest and Paper Association's comments on the Advanced Notice of Proposed Rulemaking on this issue.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the

incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 8

Comment: Facilities in New York State that combust used oil often have insignificant emissions, and therefore fall outside DEC's purview. EPA should consider an approach that sets a minimum size applicability threshold such that it would capture only the larger facilities combusting off-spec used oil.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

3.9 Legal/Applicability: Previous Court Decisions

Commenter Name: Richard Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-0095.1
Comment Excerpt Number: 1

Comment: EPA published four proposals in the June 4, 2010 Federal Register, one under the Resource Conservation and Recovery Act (RCRA) and three under the Clean Air Act (CAA):

(1) the RCRA proposal would define “solid waste” under RCRA Subtitle D (non-hazardous waste program) for purposes of determining which facilities might be regulated under CAA §129 (75 FR 31844);

(2) the Commercial and Industrial Solid Waste Incineration Units (“CISWI”) proposal includes proposed emission limits under CAA §129 for units that combust non-hazardous solid waste as will be defined by the new RCRA rule; several types of facilities, including Portland

BOSTON

JACKSONVILLE

MILWAUKEE

SAN DIEGO

SILICON VALLEY

BRUSSELS

LOS ANGELES

NEW YORK

SAN DIEGO/DEL MAR

TALLAHASSEE

CHICAGO

MADI SON

ORLANDO

SAN FRANCISCO

TAMPA

DETROIT

MIAMI

SACRAM ENTO

SHANGHAI

TOKYO

WASHINGTON, D.C.

cement kilns and utility and industry boilers would be regulated by the CISWI standards if they combust such waste (75 FR 31938);

(3) another proposal would impose new CAA § 112 hazardous air pollutant (HAP) limits on “major source” boilers (75 FR 32006); and

(4) the last proposal would impose new CAA § 112 HAP limits on “area source” boilers (75 FR 31896).

There are two separate and unrelated judicial proceedings in the background of these four proposals. First, in NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007), the D.C. Circuit vacated EPA's CAA §129 rule on the grounds that EPA had improperly excluded from its coverage facilities that combusted certain types of solid waste. The first two proposals listed above constitute EPA's response to that Court vacatur. Importantly, there is no deadline – court order, settlement agreement, or otherwise – for EPA to issue these two rules.

Second, in Sierra Club v. Jackson, 1 :01CV01537 (D.D.C. 2006), Judge Friedman has entered orders that, among other things, compel EPA to issue CAA §112 "HAP" standards for both major source and area source boilers. Under the most recently amended version of this order [See DCN:EPA-HQ-OAR-2003-0119-0095.2 for a copy of the referenced order], the judicial deadline for final rules is December 16, 2010. This deadline applies to the third and fourth proposals outlined above, but not the first and second.

Response: This is an accurate recitation and no further response is required.

Commenter Name: Richard Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-0095.1
Comment Excerpt Number: 4

Comment: If acceding to our requests were to mean that the CISWI final rule would be "split" so that a final rule for Portland cement kilns were to follow a final rule for other CISWI units, there is no legal impediment whatever to this result. EPA has many times over the course of its history followed just such a path and finalized certain portions of a proposed rule later than other portions.

Response: EPA has elected to issue the NHSW rule and CISWI standards in tandem, as is also its right.

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 3

Comment: In my July 13 letter, I quoted from and attached the "court order" EPA claims compels issuance of a final CISWI rule by December 16, 2010. Sierra Club v. Jackson, 1:01CV01537 (D.D.C. 2006). [See DCN:EPA-HQ-OAR-2003-0119-1107.2 for Sierra Club v. Jackson order.] I showed how the order compels issuance of regulations under CAA § 112 (for major source and area source boilers) by that date, but does not compel issuance of final CISWI standards by any date. I also showed how, when EPA issued the "fact sheets" for the four companion proposals published on June 4, 2010, the fact sheets for the two boiler rules stated that they were required by the Sierra Club order whereas the fact sheet for the CISWI rule made no such claim.

We continue to maintain that the current court order does not compel EPA to issue final CISWI rules applicable to Portland cement kilns by December 16, 2010 – or by any date. In a conversation with EPA personnel, we were told that EPA believes it is in effect obligated to issue the CISWI standards by the court-ordered deadline because of the reference to CAA § 112(c)(6) in the order.

Response: See preamble Section V. for the response to this comment.

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 5

Comment: A Court-Ordered Deadline Does not Relieve the Agency of its Rulemaking Obligations

Assuming solely for purposes of argument that the current court order could somehow be interpreted to require issuance of CISWI rules by December 16, 2010, this deadline would in no way cure the significant legal deficiencies of the current proposal regarding Portland cement kilns. It should be obvious that EPA cannot claim that a court-ordered deadline excuses it from complying with notice-and-comment rulemaking requirements under the CAA and APA. See, e.g., American Mining Congress v. EPA, 907 F.2d 1179, 1191 (D.C. Cir. 1990) ("a court order cannot excuse [EPA's] obligation to engage in reasoned decisionmaking under the APA").

Response: The commenter accurately quotes the D.C. Circuit's American Mining Congress case. To the extent the commenter states EPA has not complied with its obligations, we disagree with the comment.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 17

Comment: Michigan Biomass made comments in the Advanced Notice of Public Rulemaking for the NSHM Rule (DOCKET ID#EPA-HQ-RCRA-2008-0329) regarding the establishment of a de minimis level of solid waste material that could be fired without classifying a source as an incinerator. Our comment was as follows:

Clearly there is some idea of what is considered an "incinerator" by defining what compounds were to be regulated under Section 129. These compounds of concern are not reflective of emissions of the wide variety of materials under review. Certainly, fuels fired in de minimis levels will not have an overall effect on air emissions.

A real-life example of why a de minimis level is needed is the burning of oily rags generated on site. This practice is common in any industry with solid fuel boilers. These oily rags are generated from routine maintenance activity in very small amounts. Storage of oily rags presents

a safety issue concerning spontaneous combustion. The amount of oily rags burned in a boiler may be in the range of 10-20 pounds in a year compared to an annual overall fuel consumption of hundreds of thousands of tons per year.

This de minimis concept also comes into play when looking at "homogenous" fuel that is processed from materials such as demolition wood. While there are strict requirements for sorting and removing contaminants in demolition wood, some trace amounts of non-wood or painted wood material may remain.

AF&PA submitted more extensive comments on this subject as follows (comment letter from Timothy Hunt dated February 2, 2009):

For the reasons discussed above, AF&PA does not believe that the presence or absence of constituents from manufacture, treatment, or coating should affect whether secondary wood products qualify as fuels. But cases may arise where a unit that burns a stream of secondary materials with fuel value will be unable despite reasonable efforts to screen out materials that in fact have been discarded or do not have substantial fuel value.

EPA in such cases should establish a de minimis exclusion that would allow such facilities to continue to be regulated under §112 rather than under §129. AF&PA believes such exclusion would be entirely proper. There is a presumption in favor of agency power to establish such exclusion. That presumption tracks back to Judge Leventhal's statement many years ago that unless Congress had been "extraordinarily rigid", agencies had inherent power to exclude from regulation cases where the gain from regulation would be of "trivial or no value". Alabama Power Co. v. Costle, 636 F.2d. 323, 360-61 (D.C. Cir. 1979).

It is true that the CISWI opinion said, 489 F.3d at 1260, that when Congress defined a "solid waste incineration unit" as a unit that burned "any" solid waste, see § CAA §129(g)(1), it meant "any" to mean "any". The court did not address the question whether EPA could establish a de minimis exclusion from any such literal reading. However, the Clean Air Act case on which the court chiefly relied also stated most strongly that "any" meant "any" and then expressly said this did not preclude a de minimis exclusion. See New York v. EPA, 443 F.3d. 880, 888 (D.C. Cir. 2006). Moreover, the environmental petitioners in CISWI also expressly left this point open. See Brief for Environmental Petitioners at 6 (stating that "Environmental Petitioners express no view on whether EPA might be able to demonstrate on remand that [excluding a unit that sometimes burns 1% solid waste from CISWI] meets this Court's standards for establishing de minimis administrative exclusions.")

In EPA's response to these comments (75 FR at Pages 31872 to 31873), EPA stated that this comment was not appropriate for consideration in the NHSM rule.

Therefore, Michigan Biomass requests that EPA revisit this concept in light of the proposed CISWI and boiler MACT rules. As we have previously noted, EPA acknowledges on FR 75 Page 31951 that emission profiles of energy recovery units resemble emissions from boilers that burn traditional fuel. This would certainly be the case for a de minimis level of materials.

Response: The final CISWI rule applies to solid waste incineration units. As the commenter notes, "materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals" are not solid waste incineration units pursuant to section 129(g)(1)(A). The final CISWI rule retains the 2000 exemption for such

units. The owner or operator must determine whether their facility is combusting solid waste for the primary purpose of recovering metals. If the combustion of solid waste is not for the primary purposed of recovering metals, the units may be subject to CISWI as an "incinerator", "energy recovery unit", "waste burning kiln", or "small-remote incinerator," and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today. To the extent the commenter is requesting an applicability determination, the commenter should contact EPA's Office of Enforcement and Compliance Assurance.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 3

Comment: We note that nothing in EPA's letter takes issue with our counsel's letters' detailed demonstration that the "court-ordered deadline" EPA has claimed applies to the CISWI rule does not in fact apply.

Response: See preamble Section V. for the response to this comment.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 6

Comment: Although section 129 of the Clean Air Act applies to units that burn "any" solid wastes, courts have recognized EPA's authority to establish exemptions. See New York v. EPA, 443 F.3d. 880, 888 (D.C. Cir. 2006) (the use of the term "any" does not preclude a de minimis exemption); Alabama Power Co. v. Costle, 636 F.2d. 323, 360-61 (D.C. Cir. 1979) (agencies have inherent power to exclude from regulation cases where the gain from regulation would be of "trivial or no value"). Further, EPA already has interpreted section 129 to exclude certain categories of wastes, such as the exclusion for household wastes in EPA's medical incinerator rules (40 C.F.R. 60.51c).

EPA must interpret section 129 of the Clean Air Act in a manner that does not conflict with section 3014 of the Resource Conservation and Recovery Act, which states that: "The Administrator shall ensure that such regulations do not discourage the recovery or recycling of used oil, consistent with the protection of human health and the environment." 42 U.S.C. 6935(a). The legally correct way to reconcile these statutes is to determine that all used oil is not a waste. An alternative way to reconcile these statutes could establish a de minimis exemption from the CISWI rule for units that are in compliance 40 C.F.R. Part 279.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial

solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 73

Comment: EPA has established its proposed floors by equating the best performing sources with those that have the lowest emissions for particular pollutant. These sources, even though there are other ways to measure performance, and in some cases other methodologies may comply with the statute were the "lowest emitter" approach does not. EPA apparently bases its action on a parenthetical phrase in Brick MACT, referring to the best performers as "those with the lowest emission levels." 479 F.3d at 879. This parenthetical is only dictum, however; it is not a necessary underpinning of the court's decision.

In addition, equating the lowest emitting sources with the best performers for the cement industry would contravene a congressional directive that in developing MACT standards EPA cannot require the substitution of raw materials in mineral processing industries such as cement manufacturing. The Joint Explanatory Statement of the Committee of Conference for the 1990 CAA Amendments states:

For categories and subcategories of sources of [HAPs] engaged in mining, extraction, beneficiation, and processing of nonferrous ores, concentrates, minerals, metals, and related in-process materials, the Administrator shall not consider the substitution of, or other changes in, metal- or mineral- bearing raw materials that are used as feedstocks or material inputs . . . in setting emission standards, work practice standards, operating standards or other prohibitions or requirements or limitations under this section for such categories and subcategories.

H.R. Rep. No. 101-952, at 339 (1990), quoted from Sierra Club v. EPA, 353 F.3d 976, 988 (D.C. Cir. 2004). This legislative history has a strong policy underpinning because, as a practical financial matter, cement facilities cannot rely on raw materials other than the raw material found in the quarries located on or very close to the facility property. Moreover, these quarries are generally developed to provide 50 to 100 years of limestone.

Congress recognized this in the drafting of the Joint Explanatory Statement of the Committee of Conference for the 1990 CAA Amendments. H.R. Rep. No. 101-952, at 339. While it was not necessary for the D.C. Circuit to rely on this legislative history in reaching its decision in Sierra Club (involving the primary copper smelter MACT standards), then-Judge Roberts noted that "[t]he Joint Explanatory Statement may be helpful in determining Congress's intent . . .." 353

F.3d at 988, n. 1. The Joint Explanatory Statement demonstrates congressional recognition that sources processing minerals cannot rely on raw materials not found at or very close to the facility. Because limestone with high mercury or organic emissions will result in higher emissions, and it is not cost-effective to import limestone from far away, equating the lowest emitters with the best performing sources makes no sense in the context of cement facilities. It also would be squarely in opposition to the Joint Explanatory Report.

Moreover, in its MACT decisions the D.C. Circuit has never required that the best performing sources be considered to be the lowest emitters. As noted above, the parenthetical in Brick MACT is only dictum. In fact, in its review of the 1999 Portland cement MACT standards the court endorsed a "technology approach" to setting the standards, in which EPA selects the best performing sources based on the relative performance of air pollution control technology. In rejecting Sierra Club's argument that EPA must only look to cement kiln emissions in selecting the best performing sources, the D.C. Circuit stated:

According to the Sierra Club, section 7412(d)(3) requires EPA to set new source floors at the lowest recorded emission level for which it has data and existing source floors at the average of the lowest twelve percent of recorded emission levels for which it has data. Nothing in the statute, the Sierra Club argues, permits the Agency to set floors based on the performance of technology as opposed to the recorded performance of plants.

In resolving this issue, we do not write on a clean slate. EPA's technology-based approach to setting new source emission standards has already faced and survived a Chevron one challenge. In Sierra, 334 U.S. App. D.C. 421, 167 F.3d 658, we reviewed a new source emission standard for solid waste combustion that EPA promulgated pursuant to section 7429, which establishes emission requirements virtually identical to section 7412's. There, as here, the Sierra Club argued that EPA's MACT technology approach to setting emission standards is unambiguously forbidden by the Clean Air Act. Sierra rejected that argument, holding that EPA may estimate the performance of the best performing units and that it was not "impossible" that EPA's methodology constituted a reasonable estimation technique. See 167 F.3d at 665.

National Lime Association v. EPA, 233 F. 3d 625, 631 (D.C. Cir. 2000). Thus, the court endorsed EPA using a technology-based approach that estimated performance rather than simply looking to the sources with the lowest emissions to set the MACT floors.

Other cases also approved EPA's use of floor-defining methods other than selecting those sources with the lowest emissions as the best performers, as long as the methods result in a reasonable estimate of the performance of the best controlled units. For example, in Mossville Environmental Action Now v. EPA, 370 F.3d 1232 (D.C. Cir. 2004), the court upheld EPA using regulatory/permit limits as the basis for setting floors, and rejected the contentions of the State and territorial Air Pollutions Programs Administrators that EPA failed even to identify the best performing sources. As the court noted, it has a long history of upholding reasonable estimates of best performance. Id. at 1240. In Brick MACT itself, the court suggested that a particular technology appropriately served as the basis of EPA's proposed standards, and that EPA erred in simply basing the final standards on another, less stringent technology. 489 F.3d at 880 ("Because the 94th percentile (the median of the top 12 percent) of the best-performing large tunnel brick kilns used non-DLA technology, EPA—as required by Cement Kiln—proposed a floor based on this technology."), citing Prop. Nat'l Emissions Stds for Haz. Air Pollutants for Structural Clay Products, 67 Fed. Reg. 47907 at 47911 (Jul. 22, 2002).

Thus, the D.C. Circuit has endorsed methodologies for setting the MACT floor other than selecting sources with the lowest emissions as the best performers. Consequently, Brick MACT does not endorse a straight emissions approach; nor could it. To do so would mean that the Brick MACT court was overturning the Chevron court holding in Sierra Club and Nat'l Lime and other cases – something that it cannot do. United States v. Lawrence, 471 F.3d 135, 141 (D.C. Cir. 2006) (one three-judge panel, does not have the authority to overrule another three-judge panel of the court); National Council of Resistance of Iran v. Dept. of State, 251 F.3d 192, 198 (D.C. Cir. 2001) (panel has no power to overrule another panel's decision, even if it was inclined to do so); United States v. Kolter, 71 F.3d 425, 431 (D.C. Cir. 1995) (panel is bound by a prior decision even if does not agree with it). Accordingly, and also because the interpretation would contradict the legislative history from the 1990 CAA Amendments conference report discussed above, EPA should not read the parenthetical in the Brick MACT decision to equate those sources with the lowest emissions as the best performers in a source category. In addition, and as a practical matter, those facilities identified by EPA as "lowest emitters " may not always be due to the changing chemistry of raw materials.

Response: See 75 FR at 55001-005 where EPA responded to many of these same comments. In particular, EPA explained why the joint Explanatory Statement accompanying the Conference Committee Report to the 1990 Amendments is of limited utility in this context. That response also explains why a 'straight emissions' approach is, at the least, consistent with applicable caselaw.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 2

Comment: The proposed rule reflects an over-interpretation of recent court actions, including the 2007 vacatur of the original Brick MACT, and establishes precedents that are unreasonable, unwarranted, and potentially catastrophic to U.S. industry. EPA has failed 1) to develop a standard that follows the CAA requirements, and 2) to utilize the flexibilities Congress included in the 1990 Clean Air Act that could have been used to mitigate these catastrophic impacts.

The result is a rule that is more costly than it needs to be to obtain equivalent benefits from HAP reduction.

Response: EPA contends it has established the standards in this final rule consistent with the requirements of the CAA.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 2

Comment: The Regulatory Options Paper on which EPA relied in initiating its 2000 CISWI rulemaking recommended several potential sub-categories for rulemaking. Of relevance here, the Regulatory Options Paper established two distinct categories of reclamation: "Drum Reclaimer Incinerators," and "Parts Reclaimer Incinerators." See Table 1, Regulatory Options Paper.

The Regulatory Options Paper set forth fundamental distinctions between the two suggested sub-categories. The paper described "Drum Reclaimer Incinerators" as follows:

Incinerators used to reclaim steel containers (e.g., 55 gallon drums)

for re-use or to prepare them for recycling by burning or pyrolyzing interior and exterior container coatings and residues (containers are empty as defined by RCRA prior to processing).

The paper described "Parts Reclaimer Incinerators" as follows:

Incinerators used to reclaim metal parts such as paint hooks and racks, electric motor armatures, transformer winding cores, and electroplating racks for use in their current form by burning off cured paint, plastisol (i.e., polyvinyl chloride and phthalate

plasticizer), varnish, or unwanted parts such as plastic spacers or rubber grommets.

EPA's 2000 CISWI Final Rule

In its initial final 2000 CISWI Rule, EPA exempted drum reclamation units, part reclamation units, and rack reclamation units from coverage. 65 Fed. Reg. at 75359, 75373, December 1, 2000. EPA defined each type of unit separately in 40 C.F.R. § 60.2265 (for new units in subpart CCCC) and § 60.2875 (for existing units in subpart DDDD). The definitions still appear in EPA's current CISWI regulations, and EPA's current proposed regulation (June 2010) would retain these definitions without amendment.

Comparing the definitions to the descriptions in the Regulatory Options Paper, it is clear that EPA followed the paper's recommended subcategory of "Drum Reclaimer Incinerators" in defining Drum Reclamation Units. Equally clear is that EPA adapted the paper's description of "Parts Reclaimer Incinerators" by separating the subcategory into two separate definitions for "parts" and "racks" reclamation units. Note the reference to "racks" in the paper's description of "Parts Reclaimer Incinerators."

Somewhat strangely, there is no discussion in EPA's final rule preamble about these definitions and no explanation of why EPA exempted these units from coverage. Even more strangely, EPA neither proposed these definitions in the proposed rule leading up to the final 2000 CISWI rule (64 Fed. Reg. 67092, November 30, 1999) nor included any discussion in the proposed rule preamble suggesting these types of units might be exempted.

EPA's Current (June 2010) Proposal

EPA explains in its June 2010 preamble that its 2000 CISWI rule excluded several types of units that combust solid waste, "including rack, part, and drum reclamation units." 75 Fed. Reg. at 31948. EPA then states that it is proposing to regulate several types of previously exempt units, and – for the first time ever – classifies rack, part and drum reclamation units as "burn-off ovens." The only rationale EPA provides is:

Accordingly, the proposed revisions to the CISWI rules would

remove the exemptions for: Agricultural waste incinerators; cyclonic barrel burners; cement kilns; rack, part and drum reclamation units (i.e. burn-off ovens); chemical recovery units; and laboratory analysis units. As stated above, we are proposing to create subcategories for waste-burning kilns, energy

recovery units and burn-off ovens and subject them to this proposed rule in light of the CISWI Definitions Rule vacatur.

75 Fed. Reg. at 31948, emphasis added.

EPA repeats this rationale a few pages later in its proposed rule preamble:

Cement kilns and rack, part and drum reclamation units (i.e. burn- off ovens) were exempt from the 2000 CISWI standards and, as stated above, we are proposing to create subcategories for those units and subject them to this proposed rule in light of the CISWI Definitions Rule vacatur.

75 Fed. Reg. at 31960, emphasis added.

EPA's Rationale Is Baseless and Illogical

The "CISWI Definitions Rule Vacatur" Is Irrelevant

The foregoing preamble excerpts constitute the sum total of EPA's rationale for (1) regulating drum, part, and rack reclamation units that have been exempt since 2000, and (2) combining drum reclamation units with rack and part reclamation units into a new "burn-off oven" sub-category for purposes of establishing emissions standards. But the "CISWI Definitions Rule vacatur" to which EPA is referring had nothing to do with drum, rack, and/or part reclamation units. The case EPA is referring to is NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007). That case was limited in its scope to whether EPA had erred in exempting units that combusted wastes for energy recovery purposes from the definition of CISWI units. Id. at 1257-58.

EPA discusses the NRDC case in its June, 2010 preamble and, in fact, correctly states that the scope of the dispute before the Court was the legality of EPA's attempts to exempt units that combust waste for energy recovery purposes. 75 Fed. Reg. 31940. Yet, as

EPA explains in its current proposed preamble, the brand-new "burn-off oven" subcategory is not being proposed for regulation because of energy recovery activity. Id. at 31948. The types of units EPA has now combined in this new "burn-off oven" subcategory in fact do not combust wastes for energy recovery purposes. This is clear from

all of the descriptions of the units in the Regulatory Options Paper and the definitions in EPA's current CISWI regulations.

So why has EPA, after 14 years of recognizing drum reclamation units as separate and distinct from rack and parts reclamation units, suddenly decided to place all three types into a single sub-category for establishing CAA § 129 emissions standards? EPA offers zero explanation or rationale beyond the irrelevant references to the 2007 NRDC case. And even that rationale is offered only to explain why EPA believes it should now regulate drum, parts and rack reclamation furnaces, not why drum furnaces should be placed in the same sub-category as part and rack furnaces.

EPA's Failure to Provide a Rationale Is a Fundamental Legal Flaw

CAA § 307(d) requires EPA, at the time it proposes a rule, to include a "statement of basis and purpose" that must include a summary of the "major legal interpretations and policy considerations underlying the proposed rule." This requirement, of course, is inherent in all federal agency rulemaking that proceeds under the federal Administrative

Procedure Act (APA), 5 U.S.C. §§ 551 et seq. An agency must set forth the reasons underlying its actions, and the reasons must be stated at the time of proposal so interested parties will have the opportunity to provide "meaningful comment." E.g., Northeast Maryland Waste Disposal Authority v. EPA, 358 F.3d 936, 948-49 (D.C. Cir. 2004) citing numerous Supreme Court and D.C. Circuit cases.

In Northeast Maryland, the D.C. Circuit reversed an EPA rule under CAA § 129 on the very grounds at issue here: EPA had failed to provide any rationale to support its sub-categorization of units in a manner that adversely affected the petitioners. In a passage revealing issues strikingly similar to those we are raising today, the Court stated:

We thus turn to the underlying question: Did EPA explain its decision to establish subcategories based on aggregate plant capacity? We are, frankly, stunned to find that it did not. As the Agency concedes, there is not one word in the proposed or final rule that explains why the Agency chose to distinguish among small MWCs on the basis of the aggregate capacities of the plants at which they are located.

Id. at 948, emphasis by the Court.

The "stunned" D.C. Circuit accordingly agreed with the petitioners that EPA's failure to provide a rationale for the sub-categorization "dooms" the rule at issue. Id. Citing CAA § 307(d), the APA, and numerous D.C. Circuit cases, the Court ruled that EPA's failure to have explained a rationale in the proposed rule deprived the petitioners of the ability to "comment meaningfully during the rulemaking process." Id. at 949.

We submit that in light of the foregoing, the D.C. Circuit would be equally stunned and would obviously reverse EPA's decision to subcategorize drum reclamation units along with parts and rack reclamation units. We thus urge EPA to suspend further action on the currently-proposed CISWI rule as it relates to drum reclamation units unless and until EPA might propose a new rule applicable to drum reclamation units with an

appropriately stated rationale and – as explained further below – adequate data from drum reclamation units.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule, and sources should consult the rule or their permitting authority to determine whether their combustion unit will be subject to the final standards issued today.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 8

Comment: Existing case law does not support EPA setting floor standards based on actual emissions.

Many cases have considered EPA's floor setting techniques, but none of them support a standard established on performance data. Instead, reliance upon test data can result in violating not only the statute, as noted above, but the strictures of an entire line of cases that require EPA to examine and consider all methods that best performers use to control emissions.

A. Sierra Club does not support EPA using a floor-setting methodology based on lowest actual emissions.

In Sierra Club the court considered a challenge to EPA's use of permit limits to set MACT floors instead of "performance data," i.e., test data, to set the floors. The court rejected Sierra Club's clairns and held that the use of actual emissions was not required. Sierra Club, supra. at 661-662. Instead, the court decided that in § 129, EPA is free to use whatever method it desires to set the floor as long as it represents a "reasonable estimate of what the best performers" do. Id. at 662, 665.

Thus, relying on the holding of Sierra Club to support EPA's use of actual emissions is inappropriate.

B. CKRC does not support EPA setting floor standards on test data and such a method may conflict with its holdings.

In Cement Kiln Recycling Coalition v. EPA 255 F.3d 855 (D.C. Cir 2001) ("CKRC') the court considered Sierra Club's challenge that EPA could not set the floors based solely on the performance of one method: add-on technology.

Thus, this case does not address EPA's authority to set floor standards using test data.

The court did, however, remand the rule because EPA did not consider all ways facilities control emissions. Id. at 866. Thus, the court's holding in CKRC is antithetical to an emission test approach since setting the floor in this fashion does not require the Agency to examine all methods of control. Instead, a performance data approach merely requires the Agency to examine its database, crunch some numbers, and set the floor without any examination of what sources actually do to reduce emissions.

Consequently, EPA's performance data approach in this rule may violate CKRC

because EPA did not check for all methods that sources use to reduce pollution.

C. Brick MACT does not require that standards be set based on performance data.

In Sierra Club v. EPA, 479 F.3d 875, 884 (D.C. Cir 2007) ("Brick MACT), EPA once again seta floor standard based on technology. However, the court vacated the final standards because they

were based on the "second-best" technology. Id. at 879 - 880. Therefore, it too does not support floor standards based on test data.

The court's reference to "lowest emissions" in Brick MACT does not support a floor methodology based on actual emissions.

In discussing its holding that EPA could not base floor standard on "second best" technology, the court stated: "But EPA cannot circumvent Cement Kiln's holding that section 7412(d)(3) requires floors based on the emission level actually achieved by the best performers (those with the lowest emission levels), not the emission level achievable by all sources, simply by redefining "best performing" to mean those sources with emission levels achievable by all sources. See 255 F.3d at 861." Brick MACT, supra at 880 — 881.

This parenthetical reference to "lowest emissions" was not the court directing the

Agency to use a performance data approach. The point of the court's statement, as evidenced by the text and the citation to the OK/RC case at 861, was that EPA could not set floor standards that are achievable by all sources. Its reference to "lowest emissions" was simply a reference to the Agency's.characterization of non-QLA technology as being the best. See Brick MACT, supra at 879. Consequently, the Brick MACT decision does not override EPA's responsibility to abide by CKRC and examine all methods facilities use to control emissions.

ii. The court did not decide that intent to control does not matter.

In addition, there seems to be some confusion, over Brick MACT's reference to the statement in National Lime II, supra at 625 that MACT floor standards under § 112 need not be the product of specific intent. This statement, if true, would seem to support setting floor standard on any test data that comes from a facility, because whatever is emitted is considered "achieved." CRWI does not believe this is a proper interpretation of what the court said in National Lime II or Brick MACT. The passage in National Lime II, supra at 640, cited by the Brick MACT court does not say control is irrelevant to standard setting.

In NationabLime II, the court held that EPA could not refuse to set standards because sources did not use air pollution control technology to control emissions. National Lime II, supra at 631, 633. Other, non-technological control, methods were not before the court. Id., at 632 - 633. Later in the opinion, when deciding a challenge from the National Lime Association, the court rejected their argument that PM was not a proper surrogate for setting a standard and wrote the language referred to in Brick MACT:

According, to the NLA, this methodology requires the agency to set a floor of "no control" for HAP metals because no cement plant intentionally controls HAP metals; metal emissions are controlled only incidentally by controls placed upon PM. The EPA's response is the correct one: "cement plants actually are controlling HAP metals[,] intentionally or not."

National Lime II, supra at 640.

Thus, the National Lime ll court was not saying that control does not matter. Instead, the court was explaining that as long as control is being achieved, intent to control does not matter. Therefore, if a source is controlling one pollutant and

that control also limits another pollutant, the Agency can consider the performance data for that second pollutant as well. Consequently, EPA may not use just any performance data to select

best performers — it can only use emission data from sources that are controlling, intentionally or not, that pollutant.

Response: Much of this comment is also answered in the response at 75 FR 55001-55004 (discussing relevant case law and determining that, at the least, it is permissible to evaluate performance based on emission levels of sources). In addition, EPA believes that performance test data necessarily reflects all the potential means of control (both air pollution control devices and low-HAP inputs). Stack emissions do not distinguish their origin. EPA's error identified in National Lime and CKRC was not in using test data to evaluate performance, but in limiting its inquiry to units that used at-the-stack (or other) air pollution control devices.

With regard to the commenter's statement regarding whether intent to control a pollutant figures into evaluation of source performance, the answer is no. A source's performance, as measured by its emission levels, can be determined without regard to the source's intent in achieving those emission levels.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 12

Comment: EPA is Not Required to Promulgate a CISWI Rule for Waste-Burning Kilns by the Court Ordered Deadline of December 16, 2010

EPA has stated twice in the proposed CISWI preamble (75 Fed. Reg. 31943 and 75 Fed. Reg. 31951-2), that due to a "court-ordered deadline" it did not have time to review and evaluate emissions test data. Further, in denying Lafarge's request for an extension of the public comment period on this proposed rulemaking, EPA stated in its letter of June 23, 2010 (emphasis added):

While EPA understands your concerns and appreciates your intent to provide substantive comments, we believe it is in the overall best interest to retain the existing comment period. In particular, EPA notes that it must take final action on the proposed CISWI rule by December 16, 2010, pursuant to a court order issued by the U.S. District Court for the District of Columbia.

These statements about the court-ordered deadline are incorrect, as explained below. EPA is under no deadline to complete its CISWI rulemaking with respect to Portland cement kilns. EPA thus has the time to re-visit many of the flaws in its CISWI proposal that we and others are pointing out in our comments, and even to issue a new notice of proposed

rulemaking so that Lafarge and others will have the opportunity to comment on the corrected proposal.

EPA published four proposals in the June 4, 2010 Federal Register, one under the Resource Conservation and Recovery Act (RCRA) and three under the Clean Air Act (CAA):

(1) the RCRA proposal would define "solid waste" under RCRA Subtitle D (nonhazardous waste program) for purposes of determining which facilities might be regulated under CAA §129 [75 Fed. Reg. 31844];

(2) the Commercial and Industrial Solid Waste Incineration Units ("CISWI") proposal includes proposed emission limits under CAA §129 for units that combust non-hazardous solid waste as will be defined by the new RCRA rule; several types of facilities, including Portland cement kilns and utility and industry boilers would be regulated by the CISWI standards if they combust such waste [75 Fed. Reg. 31938];

(3) another proposal would impose new CAA §112 hazardous air pollutant (HAP) limits on "major source" boilers [75 Fed. Reg. 32006]; and

(4) the last proposal would impose new CAA §112 HAP limits on "area source" boilers [75 Fed. Reg. 31896].

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There are two separate and unrelated judicial proceedings in the background of these four proposals. First, in NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007), the D.C. Circuit vacated EPA's CAA §129 rule on the grounds that EPA had improperly excluded from its coverage facilities that combusted certain types of solid waste. The first two proposals listed above constitute EPA's response to that Court vacatur. Importantly, there is no deadline – court order, settlement agreement, or otherwise – for EPA to issue these two rules.

Second, in Sierra Club v. Jackson, 1:01CV01537 (D.D.C. 2006), Judge Friedman has entered orders that, among other things, compel EPA to issue CAA §112 "HAP" standards for both major source and area source boilers. Under the most recently amended version of this order [see submittal for attachment of Sierra Club v. Jackson court order provided by commenter,] the judicial deadline for final rules is December 16, 2010. This deadline applies to the third and fourth proposals outlined above, but not the first and second.

Thus, the statements EPA made in the CISWI preamble and in the letter denying Lafarge's request for an extension about the court order applying to the CISWI rule are incorrect. The December 16, 2010 court order deadline simply does not apply to the CISWI rule. The following are relevant portions of the order:

No later than May 14, 2010, EPA shall promulgate emission standards assuring that sources accounting for not less than ninety percent of the aggregate emissions of each of the hazardous air pollutants enumerated in Section 112(c)(6) are subject to emission standards under section 112(d)(2) or (d)(4). This deadline shall be extended until December 16, 2010 if:

(a) no later than April 15, 2010, the Agency signs a notice of proposed rulemaking proposing emission standards for gold mining production processes and;

(b) no later than April 29, 2010, the Agency signs a notice(s) of proposed rulemaking proposing (1) emission standards for industrial, commercial and institutional boilers and process heaters under section 112(d); and (2) emission standards for commercial and industrial solid waste incineration units under section 129.

Thus, the only deadline for a final rulemaking in this order relates to the §112 standards for major and area source boilers mentioned at the beginning of this letter. The only reference to

CISWI in this order is contained in part (b) quoted immediately above, and it provides only that EPA's obligation to issue final §112 standards for boilers could be extended if EPA proposed CISWI standards by April 29, 2010.

We note further that EPA was clear on this point when it released the four proposals. In the "fact sheets" for both the major source boiler and area source boiler proposals, EPA stated: "The schedule for completing this rule is part of a court order, which requires the EPA Administrator to complete a final rule by December 16, 2010." In the "fact sheets" for the CISWI proposal and the RCRA definition proposal, EPA made no reference to this court order or deadline.

EPA may believe it needs to finalize the CISWI rule on the same track as the major and area source boiler rules under §112, so that boiler owner/operators will be on notice as to which standards they will be subject to – either §112 or §129 – depending upon whether they choose to burn solid waste. This concern is totally irrelevant with respect to Portland cement kilns, however. No court decision or court order compels EPA to issue CISWI standards for Portland cement kilns by any particular date, or even to include Portland cement kilns in the same CISWI rulemaking that addresses boilers.

In a conversation with EPA personnel, our legal counsel was told that EPA believes it is in effect obligated to issue the CISWI standards by the court-ordered deadline because of the reference to §112(c)(6) in the order. More particularly, the order requires EPA to "promulgate emission standards assuring that sources accounting for not less than ninety percent of the aggregate emissions of each of the hazardous air pollutants enumerated in §112(c)(6) are subject to emission standards under §112(d)(2) or (d)(4)." As we understand it, even though the order (and §112(c)(6) itself) refers only to §112 standards and not §129 standards, EPA believes it can satisfy this 90 percent requirement if it is allowed to take credit for sources covered by §129 standards.

We express no opinion at this time as to whether this is a sustainable interpretation of the plain words of §112(c)(6). Even assuming for the purposes of argument that this interpretation might be sustained, we can find nothing in the CISWI proposed rulemaking preamble or the RIA accompanying it – or even the two companion boiler MACT proposed rulemaking preambles or the RIAs accompanying them – that purports to explain how and why coverage of CISWI sources is necessary to meet the ninety percent requirement.

The CISWI preamble discusses §112(c)(6) at some length at 75 Fed. Reg. 31969-31970. In this discussion, EPA explains how and why it believes it can take credit for CISWI sources under this subsection, and EPA explains how certain of the proposed CISWI standards will provide controls over the seven pollutants covered by §112(c)(6).

EPA does not, however, include any finding or claim that its coverage of CISWI sources through this proposed rule will result in achievement of the 90 percent requirement. Similarly, EPA includes a detailed discussion of §112(c)(6) requirements in both the proposed §112 boiler rules and the CISWI proposal. See 75 FR 31898 (June 4, 2010) (area sources) and 75 FR 32008 (June 4, 2010) (major sources).

Once again, EPA includes no claim or finding in these proposed rules that it will achieve the 90 percent mandate by accounting for CISWI source coverage. Interestingly, EPA disclaims the need to regulate CISWIs to reach the 90 percent requirement for mercury: "based on the information we have learned to date as we are developing standards for various source

categories, such as [CISWI among others] we believe that we only need coal-fired area source boilers to meet the 90 percent requirement set forth in section 112(c)(6) for mercury." Id. at 31904-105, emphasis added.

Following fundamental rulemaking precepts, we would think that if EPA were taking the position that its coverage of CISWI units somehow put it "over the top" on the 90 percent requirement of the court order and the statute, the proposed rules would explain this, provide the data, calculations, and information to support the conclusion, and allow for comment on the conclusion and its supporting data. Again, we have found nothing in the three proposed rule preambles or the RIAs supporting them in which EPA attempts to explain (or assert) this conclusion.

Response: See preamble section V for a response to this comment.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 13

Comment: In any event, a court-ordered deadline does not relieve EPA of its rulemaking obligations. Assuming solely for purposes of argument that the current court order could somehow be interpreted to require issuance of CISWI rules by December 16, 2010, this deadline would in no way cure the significant legal deficiencies of the current proposal regarding Portland cement kilns. It should be obvious that EPA cannot claim that a court-ordered deadline excuses it from complying with notice-and-comment rulemaking requirements under the CAA and APA. See, e.g., American Mining Congress v. EPA, 907 F.2d 1179, 1191 (D.C. Cir. 1990) ("a court order cannot excuse [EPA's] obligation to engage in reasoned decision making under the APA").

Response: The commenter accurately quotes the D.C. Circuit's American Mining Congress case.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 24

Comment: Use Of Straight Emissions Approach Due To 112 Decisions Is Not Appropriate For This Rulemaking

EPA has established the proposed floors by selecting those sources with the lowest emissions for each of the 9 pollutants as the best performing sources, ignoring other measures of performance that might more accurately demonstrate the best performing sources and other factors (fuel/waste feed) that influence emissions

EPA's floor setting methodology under section 129 is essentially the same as its floor setting methodology under section 112. Section 112(d)(3) requires the MACT floor be no less stringent

than “the emissions control achieved in practice by the best controlled similar source” for new sources, and the “average emission limitation achieved by the best performing 12 percent of the existing sources,” for existing sources. Simply put, if Congress intended the MACT floor to be no less stringent than “the lowest emission levels” achieved by sources, it could have said so.

“Best controlled” and “best performing” are not the same as “lowest emission level.”

The D.C. Circuit has never required that EPA equate the “lowest emitting” sources to the “best performing” sources. See Sierra Club v. EPA, 167 F.3d 658, 661 (D.C. Cir. 1998) (section 112(d) “on its own says nothing about how the performance of the best units is to be

calculated”). In its review of the 1999 Portland Cement MACT standards, the court endorsed a “technology approach” to setting the MACT standard, whereby EPA would use the relative performance of air pollution control technology to select the best performing sources. In rejecting the view that emissions are the only factor EPA must consider, the D.C. Circuit stated:

According to the Sierra Club, section 7412(d)(3) requires EPA to set new source floors at the lowest recorded emission level for which it has data and existing source floors at the average of the lowest twelve percent of recorded emission levels for which it has data. Nothing in the statute, Sierra Club argues, permits the Agency to set floors based on the performance of technology as opposed to the recorded performance of plants.

In resolving this issue, we do not write on a clean slate. EPA‘s technology-based approach to setting new source emission standards has already faced and survived a Chevron one challenge. In Sierra, 334 U.S. App. D.C. 421, 167 F.3d 658, we reviewed a new source emission standard for solid waste combustion that EPA promulgated pursuant to section 7429, which establishes emission requirements virtually identical to section 7412‘s. There, as here, the Sierra Club argued that

EPA‘s MACT technology approach to setting emission standards is unambiguously forbidden by the Clean Air Act. Sierra rejected that argument, holding that EPA may estimate the performance of the best performing units and that it was not “impossible” that EPA‘s methodology constituted a reasonable estimation technique. See 167 F.3d at 665.

Nat. Lime Ass’n v EPA, 233 F.3d 625, 631 (D.C. Cir. 2000). Thus, the D.C. Circuit endorsed EPA‘s use of a technology-based approach that uses the relative performance of pollution control technology rather than simply looking to the sources with the lowest emissions test report to set the MACT floor.

Indeed, this was the approach adopted by EPA in the previously promulgated boiler MACT. There, EPA recognized that while it may be appropriate in certain circumstances to consider primarily available emissions test data, such an approach was ill-suited to setting the boiler MACT floor:

[A]fter review of the available HAP emission test data, we determined that it was inappropriate to use this MACT floor approach to establish emission limits for boilers and process heaters. The main problem with using only the HAP emissions data is that, based on the test data alone, uncontrolled units (or units with low efficiency add-on controls) were frequently identified as being among the best performing 12 percent of sources in a subcategory, while many units with high efficiency controls were not. However, these uncontrolled or poorly controlled units are not truly among the best controlled units in the category. Rather, the emissions from these units are relatively low because of the particular characteristics of the fuel that they burn, that cannot

reasonably be replicated by other units in the category or subcategory. A review of the fuel analyses indicate that the concentration of HAP (metals, HCl, mercury) vary greatly, not only between fuel types, but also within each fuel type. Therefore, a unit without any add-on controls, but burning a fuel containing lower amounts of HAP, can have emission levels that are lower than the emissions from a unit with the beset available add-on controls. If only the available HAP emissions data are used, the resulting MACT floor levels would, in most cases, be unachievable for many, if not most, existing units, even those that employ the most effective available emission control technology.

69 FR at 55,233.

It appears that EPA‘s decision in the proposed rule to equate best performance with lowest emissions, rather than with any other means of measuring performance, is based on a parenthetical phrase found in the Brick MACT decision, which refers to the “best performing” sources as “those with the lowest emission levels.” Sierra Club v. EPA, 479 F.3d 875, 879 (D.C. Cir. 2007). This isolated statement is dictum; it is not a necessary underpinning of the Brick MACT decision, nor is it supported by any other D.C. Circuit decision.

EPA seems to be relying on this dictum (it was unnecessary to resolve the issue before the court) to prohibit the adoption of any measure of ?best performing” other than lowest emission levels. This is an unnecessarily narrow view of the language in Brick MACT, and is contrary to the position EPA took in its 2009 proposed NESHAP for the Portland Cement Manufacturing Industry. In that proposal, EPA solicited comments on ranking best performers based on removal efficiency rather than the lowest emitters. EPA legally supported this manner of ranking by, among other things, citing the court in Sierra Club v. EPA, 167 F.3d 658, 661 (D.C. Cir. 1999)

“average emissions limitation achieved by the best performing 12 percent of units * * * on its own says nothing about how the performance of the best units is to be calculated.” EPA then

acknowledges that “the Brick MACT opinion states, arguably in dicta, that best performers are those emitting the least HAP.”[Footnote: 74 Fed. Reg. 21136, 21149 (May 2, 3009).(Emphasis in the original).]

It is important to note that the Brick MACT decision did not overrule either of the Nat’l Lime or Sierra decisions, in which the D.C. Circuit approved approaches that did not simply equate “best performing” sources with “those with the lowest emission levels.”

If the D.C. Circuit has been addressing the National Lime or Sierra cases, perhaps it would have used a different description of the “best performer” that comported with EPA‘s approach in those rulemakings. There is simply no reason to read the Brick MACT language as narrowly and rigidly when there is an alternative interpretation that harmonizes Brick MACT with prior and still binding case law.

Furthermore, EPA‘s interpretation of Brick MACT collides with Section 112(d)(3) and other D.C. Circuit decisions requiring EPA to take all factors into consideration if they impact emissions levels achieved in practice by sources, particularly as EPA is also advocating a

“pollutant-by-pollutant” approach to setting the MACT floor. For example, if a source utilizes a technology that dramatically lowers its emissions of a particular HAP but at the same time increases its emissions of other HAPs or other air pollutants, EPA takes those factors into account when setting the MACT floor and must devise a reasonable way to address such factors in its methodology. But under EPA‘s current interpretation of Brick MACT, EPA would be

constrained to identify the lowest emitters of that particular HAP as the best performing sources regardless of any collateral negative impacts. The CAA clearly provides EPA with much more discretion than that.

Since the Brick MACT ruling, EPA has acknowledged its discretion to define "best performing" sources in a manner that accounts for all the relevant factors. Though EPA modified its approach in the final rule, in its notice of the proposed HWC Reconsideration Rule, EPA justified using control efficiency, rather than the simplistic emissions levels, in defining "best

controlled" and "best performing" hydrochloric acid production furnaces:

First, the statutory language requiring floors to be based on "best controlled" (new)/"best performing" (existing) does not specify whether "best" is to be

measured on grounds of control efficiency or emission level. See Sierra Club v. EPA, 167 F.3d 658, 661 ("average emissions limitation achieved by the best performing 12 percent of units...on its own says nothing about how the performance of the best units is to be calculated"). The requirement that the new source floor reflect "emission control" achieved in practice reinforces that the standard can be determined and expressed in terms of control efficiency. Existing floors determined and expressed in terms of control efficiency are likewise consistent with the requirement that the floor for existing sources reflect "average emission limitation achieved," since "emission limitation" includes standards which limit the "rate" of emissions on a continuous basis—exactly what the standards do here. CAA section 302(k). Moreover, where Congress wanted to

express performance solely in terms of numerical limits, rather than performance efficiency, it said so explicitly. See CAA section 129(a)(4).

Solicitation of Comments on Legal Analysis, 72 FR 54,875, 54,884 (Sept. 27, 2007). While the HWC Final Rule hews to the unduly narrow view of the Brick MACT decision embraced by EPA here, in it EPA nonetheless observed that "Standards requiring HAP reduction of a given percent limit the emission quantity, rate, and (in any realistic scenario) concentration of the HAP and so falls squarely within the statutory definition [of emission standard]." See Reconsideration Final Rule, 73 FR 64,068, 64,087 (Oct. 8, 2008).

As discussed above, EPA also solicited comments on ranking best performers based on removal efficiency rather than the lowest emitters in its 2009 proposed NESHAP for Portland Cement and was not willing in that proposed rule to surrender its statutory discretion based on Brick MACT

"dicta." EPA has historically demonstrated persuasively why the Agency might in its discretion choose some other or more complex measure of what a "best performing" source is. The data here indicates that such an approach—which accounts for operational and other variability that undermines any straightforward connection between the "lowest emitters" and the "best

performing" sources—would be justified.

Response: See 75 FR at 55001-004 discussing why equating best performer with lowest emitters is a permissible approach. EPA has also noted that evaluating performance based on per cent of pollutant reduced may undervalue or ignore the role of low-HAP inputs. See 74 FR at 21149/2.

Commenter Name: Craig S. Campbell

Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 32

Comment: If undertaking a new or supplemental proposed CISWI rulemaking for Portland cement kilns were to mean that the CISWI final rule would be "split" so that a final rule for Portland cement kilns were to follow a final rule for other CISWI units, there is no legal impediment whatever to this result. EPA has many times over the course of its history followed just such a path and finalized certain portions of a proposed rule later than other portions. (For example, the addition of a Phase II category to the Hazardous Waste Combustor NESHAP as promulgated at 40 Fed. Reg. 59402)

Response: This comment is now moot given EPA's (at the least) permissible decision to issue the CISWI and NHSM rules.

3.10 Legal/Applicability: Requests for extension of comment period

Commenter Name: Sarah Markham
Commenter Affiliation: Southern Company
Document Control Number: EPA-HQ-OAR-2003-0119-0073.1
Comment Excerpt Number: 1

Comment: The following letter is Southern Company's request to provide an extension of the public comment period for the following recently proposed rules:

a) Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units ("CISWI Rule")

b) Identification of Non-Hazardous Secondary Materials That Are Solid Waste ("Definition of Solid Waste (DSW) Rule")

c) National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters ("IB-MACT Rule")

d) National Emissions Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers ("Area Source Rule")

Southern Company is a leading U.S. producer of electricity, generating and delivering electricity to over 4 million customers in the southeastern United States. Southern Company subsidiaries include four vertically integrated electric utilities - Alabama Power, Georgia Power, Gulf Power, and Mississippi Power - as well as Southern Power, which owns generation assets and sells electricity at market-based rates in the wholesale market. These subsidiaries operate nearly 40,000 megawatts of coal, natural gas, oil, nuclear, and hydroelectric generating capacity.

The proposed rules included a 45-day comment period, which EPA subsequently extended to 60-days in a Federal Register Notice dated June 13, 2010. The comment period for these rules officially ends on August 3, 2010. As explained below, despite the extension and the delay in the

publication date, we believe that this is still an insufficient amount of time to fully evaluate these complicated and interrelated rules. Southern Company respectfully requests that the comment period be extended an additional 60 days (120-day comment period ending on October 2, 2010) to allow for a more thorough review of the proposed rules. Southern Company's justification for this request is provided as follows:

1. Additional Time Necessary to Review MALT Floor Data

Our ongoing review of the emissions data used in the MACT floor analysis provided by EPA thus far suggests that these data contain a number of potential errors that will significantly affect the underlying emissions floor calculations and, ultimately, the proposed emissions standards. The nature of these errors suggests that EPA did not perform an adequate quality assurance review of the data. Ensuring the quality of the underlying emissions data is fundamental to establishing any emissions standards. While the responsibility for these efforts can be debated, it is ultimately EPA's responsibility to provide defensible emissions standards.

Thus far, our review has focused on the emissions data used in the major source MACT rule, although a cursory review of the data used in the CISWI and area source rules suggests that these same types of errors exist in all the data. The data quality review process is very time intensive and it will be impossible for us to complete this task for the major source MACT rule, let alone the CISWI and area source rules, within the allotted comment period.

Southern Company acknowledges that EPA provided some of the ICR data used in the rulemaking in January 2010 and released subsequent updates to this data in the months leading up the proposed rules. However, this information only included the emissions test results and did not contain the additional details necessary to verify many of the final emissions calculations that would be required for an adequate quality assurance review of the data. Southern Company and many other affected sources were well aware of the level of effort that would be required for this task early on in the ICR process. However, despite repeated attempts to obtain early access to this additional data, EPA indicated that it would only provide the data when the rules are proposed. This inevitably forced affected sources to delay data review until the comment period, which, as stated previously, is insufficient for such an effort.

Southern Company understands the time constraints imposed on EPA for these rulemaking efforts, which may have resulted in limiting the scope of EPA's own data review effort. However, this does not obviate the fact that such a data review should be conducted prior to the floor analysis to avoid inefficiencies in the rulemaking process. Furthermore, both EPA and industry should be provided the same amount of time to review the data used in rulemaking. Had EPA provided greater transparency of the data during the ICR, this issue may have been avoided.

Given the amount of data involved and the complexity of some of the emissions tests, we believe additional time is necessary to perform a thorough review of the data used in the emissions floor calculations. Southern Company believes that is in the best interest of all parties to ensure that the data used in the rulemaking is of the highest quality possible.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Regina Henry
Commenter Affiliation: CEMEX
Document Control Number: EPA-HQ-OAR-2003-0119-0064.1
Comment Excerpt Number: 1

Comment: CEMEX is requesting an extension to the "Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units" proposed rule comment period.

The current comment period of 60 days, ending August 3, 2010 does not provide us the time required to fully review and provide comment on a proposed rule that has the potential to significantly impact our operations. We request that the comment period be extended to at least 90 days.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Sarah Markham
Commenter Affiliation: Southern Company
Document Control Number: EPA-HQ-OAR-2003-0119-0073.1
Comment Excerpt Number: 3

Comment: The proposed comment period is more consistent [Footnote: Notwithstanding data quality issues] with the timeframe allotted to a single MACT rulemaking effort and does not provide an adequate amount of time to make the much more complicated assessment of four interrelated rules.

Southern Company requests that EPA extend the public comment period on all of the proposed rules by an additional 60 days. Southern Company understands that EPA is under a court-ordered deadline of December 16, 2010 to issue the final rules. However, EPA can renegotiate this deadline as they have done previously with the proposed rules.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Kristine Krause
Commenter Affiliation: We Energies
Document Control Number: EPA-HQ-OAR-2003-0119-0274.1

Comment Excerpt Number: 1

Comment: Wisconsin Electric Power Company, doing business as We Energies, is directly affected by the following proposed rules:

• Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units ("CISWI Rule"). Docket No. EPA-HQ-OAR-2003-0119.

• Identification of Non-Hazardous Secondary Materials That Are Solid Waste ("Definition of Solid Waste (DSW) Rule"). Docket No. EPA-HQ-RCRA-2008-0329.

• National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters ("IB-MACT Rule"). Docket No. EPA-HQ-OAR-2002-0058.

• National Emissions Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers ("Area Source Rule"). Docket No. EPA-HQ-OAR-2006-0790.

Each of the proposed rules included a 45-day comment period, which EPA subsequently extended to 60 days in a Federal Register Notice dated June 13, 2010. The comment period for these rules officially ends on August 3, 2010. Despite the extension and the delay in the publication date, we believe that this is still an insufficient amount of time to fully evaluate these complicated and interrelated rules. We respectfully request that the comment period be extended an additional 60 days (120-day comment period ending on October 2, 20ID) to allow for a more thorough review of the proposed rules.

Additional Time Necessary to Review MACT Floor Data

Our ongoing review of the emissions data used in the MACT floor analysis provided by EPA thus far suggests that these data contain a number of potential errors that will significantly affect the underlying emissions floor calculations and, ultimately, the proposed emissions standards. Ensuring the quality of the underlying emissions data is fundamental to establishing any emissions standards.

We understand the time constraints imposed on EPA for these rulemaking efforts, which may have resulted in limiting the scope of EPA's own data review effort. However, this does not obviate the fact that such a data review should be conducted prior to the floor analysis to avoid inefficiencies in the rulemaking process.

Given the amount of data involved and the complexity of some of the emissions tests, we believe additional time is necessary to perform a thorough review of the data used in the emissions floor calculations. We believe that it is in the best interest of all parties to ensure that the data used in the rulemaking is of the highest quality possible.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Richard Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-0095.1
Comment Excerpt Number: 3

Comment: For this exceedingly complex CISWI rulemaking, EPA initially established a comment deadline of 45 days. Soon after the June 4 Federal Register publication, EPA extended the comment period by 15 days, until August 3, 2010. Both PCA and Lafarge soon thereafter requested an additional 30 days, until September 3, 2010.

In letters dated June 23, 2010 to both PCA and Lafarge, an EPA staffer denied the requests. Both rejection letters stated the following (emphasis added):

While EPA understands your concerns and appreciates your intent to provide substantive comments, we believe it is in the overall best interest to retain the existing comment period. In particular, EPA notes that it must take final action on the proposed CISWI rule by December 16, 2010, pursuant to a court order issued by the U.S. District Court for the District of Columbia.

As I indicated above, the December 16, 2010 court order deadline simply does not apply to the CISWI rule. I have attached the Sierra Club order in full, and now quote from the relevant portion of the order:

No later than May 14, 2010, EPA shall promulgate emission standards assuring that sources accounting for not less than ninety percent of the aggregate emissions of each of the hazardous air pollutants enumerated in Section 11 2(c)(6) are subject to emission standards under section 11 2(d)(2) or (d)(4). This deadline shall be extended until December 16, 2010 if:

a. no later than April 15, 2010, the Agency signs a notice of proposed rulemaking proposing emission standards for gold mining production processes and;

b. no later than April 29, 2010, the Agency signs a notice(s) of

proposed rulemaking proposing (1) emission standards for industrial, commercial and institutional boilers and process heaters under section 112(d); and (2) emission standards for commercial and industrial solid waste incineration units under section 129.

Thus, the only deadline for a final rulemaking in this order relates to the CAA §112 standards for major and area source boilers mentioned at the beginning of this letter. The only reference to CISWIs in this order is contained in part (b) quoted immediately above, and it provides only that EPA's obligation to issue final CAA §112 standards for boilers could be extended if EPA proposed CISWI standards by April 29, 2010.

We note that EPA was clear on this point when it released the four proposals. In the "fact sheets" for both the major source boiler and area source boiler proposals, EPA stated: "The schedule for completing this rule is part of a court order, which requires the EPA Administrator to complete a final rule by December 16, 2010." In the "fact sheets" for the CISWI proposal and the RCRA definition proposal, EPA made no reference to this court order or deadline. All four "fact sheets" appear at http://www.epa.gov/airquality/combustion/actions.html.

Finally, EPA may believe it needs to finalize the CISWI rule on the same track as the major and area source boiler rules under CAA §112, so that boiler owner/operators will be on notice as to which standards they will be subject to – either CAA §112 or §129 – depending upon whether they choose to burn solid waste. This concern is totally irrelevant with respect to Portland cement kilns, however.

There is absolutely nothing in any court decision or order that compels EPA to issue CISWI standards for Portland cement kilns by any particular date, or even to include Portland cement kilns in the same CISWI rulemaking that addresses boilers. Especially in light of EPA's failure thus far to provide critical data relating to its proposed CISWI standards relating to

Portland cement kilns, we believe EPA should now be extending the comment period on the CISWI rule (at least as it relates to Portland cement kilns) until at least September 3, 2010 as previously requested.

The fact that EPA has just posted 20 additional documents in the docket in the last few days provides additional support to our request for additional time. All of these documents relate to MACT floor calculations, and many of them relate in whole or in part to the floor calculations that would be applicable to PCA members. We note that these documents were placed in the docket more than a month after the deadline mandated by CAA §307(d)(3).

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Tim Manning
Commenter Affiliation: HOVENSA, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-0884.1
Comment Excerpt Number: 1

Comment: This letter is HOVENSA L.L.C's (HOVENSA) request for an extension of the deadline for public comments for the following recently proposed rules:

• National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

• National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

• Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units.

• Identification of Non-Hazardous Secondary Materials That Are Solid Waste.

The proposed rules include a 60-day period for regulated sources and the public to analyze and comment on these four complicated proposed rules. HOVENSA has reviewed the docket and supports the request for extension already provided by Southern Company, other regulated

entities, and Trade Associations. A 60-day period is inadequate given the complexity and economic impact of the proposed rules.

HOVENSA, a joint venture between subsidiaries of Hess Corporation and Petroleos de Venezuela, S.A. (PDVSA), operates the second largest petroleum refinery in North America on the Caribbean island of St. Croix in the United States Virgin Islands. This refinery is one of the most modern in the United States with a crude oil processing capacity of 525,000 barrels per day (BPD). Due to HOVENSA's island location, the refinery has unique configurations and constraints that mainland refineries do not. Reviewing the proposed rules and providing a meaningful analysis is a time-consuming process; however, this process is more onerous for entities like HOVENSA who are so uniquely impacted by the proposed rules.

In conclusion, HOVENSA requests that EPA extend the public comment period on all the proposed rules by an additional 90 days. HOVENSA realizes that the EPA must meet a December 2010 judicial deadline to issue the final rules. However, EPA has successfully renegotiated similar deadlines for previously proposed rules.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 15

Comment: In the past EPA has provided a minimum of 30 days for proposal comment and should have provided affected parties with 120 days to review and comment on these four interrelated rules, rather than the 60 days allowed. EPA should also then pursue with the court a similar extension to the promulgation date for these rules.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 68

Comment: The health and potential impacts of these proposed rules demand fair and thorough consideration of all underlying data and information. In addition to the proposed rules

themselves, the sheer volume of support documents and the gigabytes of supporting data require time to review so that constructive comments can be filed in a timely manner.

While we greatly appreciate the opportunity for a hearing and the comment extension for -– to 60 days, that overall time is grossly inadequate for filing comments in this particular case. We will be submitting a request for additional time tied to the final extension or to the extension of the final promulgation date so that EPA has adequate time to consider all comments and additional supporting data.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 30

Comment: It is my opinion that the public is incapable of completing adequate review and comment on these rules by the scheduled comment date.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 34

Comment: Honestly, you know, the magnitude of the material that's in these dockets are personally -- as I said in these comments, have focused on the biomass issues having to do with both the area source and major source boiler rules, so I really haven't been able to get into the CISWI rule or the solid waste rule, but just -- you know, I've been a practicing professional in this field for more than 35 years, and I've grown up in the Clean Water Act regulations all the way until now, and -- and I've been helping industry comply with these for almost 40 years, and I have never seen -- you know, and I provided comments on rulemakings for all of those 40 years, and I have never seen a rule come out of the Agency that I think is clearly rushed . It's not the kind of job that I've seen the EPA do customarily, when you can go and find in -- in a rather rapid and cursory review, the errors that I've identified, we have to know there are a multitude of

other areas that are in these rules that I don't know who's going to have the time to look at them by August the 3rd.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 1

Comment: June 23. 2010 – EPA rejected PCA and Lafarge's request for a CISWI comment deadline extension beyond August 3, citing a need to comply with a "court-ordered deadline" of December 16, 2010.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 8

Comment: Additional errors are suspected in data reported by EPA for CEMEX kilns that do

not affect the floor calculations. Time constraints did not allow for further analysis to make corrections to this data, however, once the complete data set is made available to the public and industry, further analysis can be completed. When this data is made available, CEMEX urges EPA to extend addition comment time to allow for review of this important data utilized by EPA in this rulemaking.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)

Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 3

Comment: The 80 day comment period for the proposed CISWI rule is too short even if the "solid waste" definition had been resolved and the NHSM rule promulgated beforehand. The magnitude of the engineering task alone to research the capabilities of technologies to achieve such stringent proposed standards, assess compliance approaches for both

CISWI and Boiler MACT and conduct engineering assessments to determine the feasibility of achieving compliance and the estimated cost to do so is easily a 6 month project even on a fast track. Controls conceivably needed to achieve proposed limits have never been applied to boilers of the size and design of those common to the pulp

and paper industry (e.g., combustion catalysts and carbon impregnated filters for dioxins) and actual research is needed to assess their feasibility. Then, because fuels may become unavailable, or cost-prohibitive, or may be needed to assure compliance (e.g., natural gas), there is the need to assess availability of alternative fuels and the infrastructure needed to deliver and use them.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Matthew Todd
Commenter Affiliation: The American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2003-0119-2258.1
Comment Excerpt Number: 4

Comment: We wish to express our appreciation to EPA for extending the comment deadline for this and the two other air proposals in this package from the original July 19 due date.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 1

Comment: The Energy Recovery Council believes that the comment period was inadequate given the complexity, breadth of applicability, and economic impact of the four rules proposed

on June 4, 2010. Each of the proposed rules, considered alone, is complex. Moreover, because EPA published the rules simultaneously, regulated facilities must also assess the impact of the rules as they interrelate, raising many more operational and practical questions. While EPA granted 35 days of extensions to the original 45-day period, ERC believes that a total of eighty days to comment was insufficient to allow the public to analyze, understand, and comment on work which took EPA years to compile.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 8

Comment: EPA did not Provide a Reasonable Comment Period for the Four Interrelated Rules. The four interrelated rules raise an unprecedented number of issues for the Agency in determining the appropriate emissions standards for these very large, diverse source categories. Nevertheless, EPA provided only 60 days for regulated sources and other members of the public to analyze and comment on the rules [Footnote: In fact, EPA originally provided 45 days for comment on the 4 rules. See 75 FR 32682 (June 9, 2010)(extending initial 45-day comment period to 60 days).]

Affected sources asked EPA for an additional 90-day period to permit affected sources to quality control data, review the database and analysis, consider EPA's proposed and alternative proposed regulatory options, and develop comments that would demonstrate the significant compliance problems with the standards as proposed. CIBO appreciated EPA's agreement to provide an additional 3 weeks for comment for 3 of the 4 rules (EPA did not extend the comment period for the Solid Waste Definition Rule).

It is important to be clear, however, that even with the 3-week extension of the comment period, the time EPA allotted for comment for four interrelated rules of this complexity, broad application and economic impact failed to constitute the reasonable opportunity for public comment guaranteed by the Clean Air Act and the Administrative Procedures Act. 42 U.S.C. § 7607(h) (2006).

In their request for comment to EPA, regulated sources made the followng and other points to EPA.

Under basic principles of due process and administrative law, EPA must provide the public with a reasonable opportunity to comment on proposed rules. Under the CAA, 30-day comment period would be reasonable for a single, ordinary proposed rule. The truncated comment period

violates the clear terms of the CAA and deprives sources of a means to adequately protect their interests and rights in the administrative and judicial processes.

The complexity, breadth of applicability, and economic impact of the proposed rules, and because EPA published the four rules simultaneously, demands even more time to comment, as regulated facilities must also assess the impact of the rules as they interrelate, raising many more operational and practical questions.

The rules will have an extraordinary impact in terms of applicability and compliance costs, covering what EPA estimates to be this scope of facilities nationwide: Boiler MACT rule, 13,555 units located at 1,608 different facilities. 75 FR 32048; Area Source rule, 183,000 existing boilers at 91,000 facilities (75 FR at 31914, 31924) and 6,800 new boilers over the next three years (75 FR at 31914); CISWI rule, 176 units (75 FR at 31950-51); and the Solid Waste Definition rule would cover sources at facilities in at least 85 NAICS codes (75 FR at 31845).

EPA allocated to itself 30 months to collect and analyze data to develop emissions standards and reserved for itself almost 4 months to review comments and prepare a final rule. In contrast to the 34 months that EPA has allocated to its own rulemaking efforts, EPA gave sources 2 months (and an additional 3 weeks) to evaluate the same data and proposed standards, and then write substantive comments that could meaningfully inform the rulemaking process.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

3.11 Legal/Applicability: Delegation of authority

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 9

Comment: Solid Waste Determinations And Permit Delays

There are concerns that the process for determining applicability with the Boiler MACT Rule versus CISWI will cause significant delays in issuing construction permits. Based on the EPA's proposed applicability determination process, a facility applies directly to the EPA regional administrator for a determination, which includes a 30-day public notice period. South Carolina issues permits to both minor and major sources. A facility must apply for and be issued a construction permit prior to using any additional fuel. We would not be able to issue a construction permit without first determining if the source was subject to CISWI or the Boiler MACT Rule. Additionally, our State regulations specify the amount of time we are given to issue these permits, from 90 days (minor) to 270 days (P SD) depending on the regulations triggered. The process proposed by the EPA would first, remove the state permitting agency from the

determination process and second, potentially delay permit issuance until a determination was drafted, noticed and issued by the EPA. The EPA has not committed to a timeframe to review and notice these determinations. Additionally, South Carolina issues operating permits for minor and major sources. These permits must address all applicable requirements, including a determination of CISWI or Boiler MACT Rule applicability.

South Carolina's solid waste management program currently makes solid waste determinations and determinations on the beneficial reuse of certain materials. The EPA should rely on a determination through the state's beneficial use program rather than through the petition process to the EPA regional administrator. The EPA should use the flexibility provided by CAA Section 129 to rely on a state's determination that certain secondary materials are or are not solid waste when handled in a manner approved by the State. The State is more than qualified to act on behalf of the EPA to make such case-by-case determinations.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 20

Comment: EPA's Proposed Rule is Unnecessary Because States, Who are in a Better Position to Evaluate the Furnaces, Have Already Evaluated the Furnaces and Imposed Oversight.

States have always been responsible for the health and safety of their citizens, even before passage of the federal Clean Air Act. Since passage of the Clean Air Act, regulation of some types of sources and sources of certain size has been left to the states. States that have evaluated these furnaces have appropriately recognized that any regulation of these furnaces should be distinct from regulation of incinerators. Some states specifically exempt furnaces from the scope of incinerators (e.g., Georgia, North Carolina, Wisconsin). Other states provide a general permit or standard permit for these furnaces (e.g., Pennsylvania, Tennessee, Texas). Some states have determined that the minimal level of emissions from these furnaces do not warrant significant regulation (e.g., Iowa, Maine, Minnesota, South Dakota). EPA should consider how these states have evaluated and regulated the furnaces.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 17

Comment: EPA Should Delegate as Much Authority as Possible to States

EPA requested comment in the preamble on proposed revisions to the authorities delegated to states. AF&PA strongly believes that states should retain as much authority as possible. EPA's own MACT Implementation Strategy recognizes that the closer the authority is to the combustion unit, the better the permit. State officials are in much better position to understand the issues at particular facilities and can apply appropriate discretion when needed.

Response: See preamble Section V. for the response on the role of states.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 79

Comment: EPA Should Delegate as Much Authority as Possible to States

EPA requests comment in the preamble on proposed revisions to the authorities delegated to states. AF&PA believes that the states should retain as much authority as possible to implement and enforce the standards. The states are responsible for incorporating the emission guidelines into their own rules, for permitting and inspecting sources, and for enforcing compliance with the rules. Facilities have more frequent communication with their local permitting agency, and the permitting staff have been to the facility and have knowledge about how the facilities operate. The local permitting agency can also be more timely in responding to facilities' requests, due to their knowledge of the facility and the limited number of sources they cover, as opposed to the larger number of sources under an EPA regional office. The local permitting agency should retain the authority to approve alternate compliance approaches under CISWI rules.

Response: See preamble Section V. for the response on the role of states.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 13

Comment: The proposed rules will create additional resource burdens on state and local permitting agencies that will have to issue several thousand Title V permit revisions, draft emission control regulations and submit them to EPA for review and approval under section 111

of the CAA and become involved in disagreements about the applicability of section 129 standards (imposed under state regulations) for specific units. EPA can mitigate this burden in several ways: (1) provide in its section 129 rule (rather than in the preamble) lists of specific "secondary materials [Footnote: This could be accomplished by adding to its definition of solid waste based on the criteria it has proposed additional provisions such as "the definition of solid waste set out above includes, but is not limited to..." and " the definition of solid waste set out above excludes ...." EPA has already created such lists as part of the calculation of section 112 and section 129 MACT floors. They can be found in the "Data: Fuel Analysis" table under the field "Proposed Option Waste?"]" that are known today to constitute a waste and those that are not considered a waste;

and (2) specifically set out its expectations of state and local permitting authorities and incorporate reasonable timelines in its implementation schedule.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule. See preamble Section V. for the response on the role of states. See also the regulations addressing state plan requirements in the final CISWI rule.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 9

Comment: EPA states that the CIS WI rule may be interpreted to provide the Administrator with flexibility

in determining the meaning of solid waste under that section. EPA is requesting comment on an option where, to determine applicability of CISWI, the Agency would rely on a determination through a state's beneficial use program that certain secondary materials are or are not solid waste. EPA states that such state programs are meant to encourage the use of non-hazardous secondary materials, provided that the uses maintain the specified state's acceptable level of risk, protect human health and the environment, and are managed in accordance with the conditions of the determination. The EPA should use the flexibility provided by the CAA Section 129 to rely on a determination through a state's beneficial use program that certain secondary materials are or are not solid waste when handled in a manner approved by the state.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 11

Comment: The regulatory impacts of these rules may take effect sooner than EPA anticipates because the Definitions Rule implementation schedule is unclear. It is unclear whether or not the Definitions Rule requirements apply earlier than the Boiler/Process Heater MACT, Area Source Boiler Rule and CISWI proposals. Thus materials may need to be diverted much sooner than the applicability dates of the Boiler/Process Heater MACT, Area Source Boiler Rule and CISWI in order to comply with the effective date of the Definitions Rule. In that event, permitting revisions to authorize the change in materials burned would be necessary.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 1

Comment: EPA has proposed three related actions under Sections 112 and 129 of the Clean Air Act ("CAA"), hereinafter referred to as the Major Source Proposal, the Area Source Proposal, and the Incinerator Emissions Proposal.1 While these proposals make significant progress within the existing structure of the Clean Air Act, the current statutory framework is excessively complex. A set of local market-based programs would be more economically efficient while meeting the same environmental goals. Such a program would solve many of the regulatory issues that EPA is now facing. However, the current statute likely does not give EPA discretion to implement such programs. EPA should make recommendations to Congress that would give them that authority.

Response: As commenter notes, the final CAA rules issued today are consistent with the authority provided in the CAA.

Commenter Name: Charles Lim
Commenter Affiliation: Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright)
Document Control Number: EPA-HQ-OAR-2003-0119-2405
Comment Excerpt Number: 4

Comment: EPA should allow states and local regulatory authorities an option for case-by-case determinations.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 61

Comment: EPA Should Delegate As Much Authority As Possible To States

EPA requests comment on proposed revisions to the authorities delegated to states. [Footnote: 75 FR 31964.] ACC believes that the states should retain as much authority as possible to implement and enforce the standards. The states are responsible for incorporating the emission guidelines into their own rules, for permitting and inspecting sources, and for enforcing compliance with the rules. Facilities have more frequent communication with their local permitting agency, and the permitting staff have been to the facility and have knowledge about how the facilities operate. The local permitting agency can also be more timely in responding to facilities' requests, due to their knowledge of the facility and the limited number of sources they cover, as opposed to the larger number of sources under an EPA regional office. The local permitting agency should retain the authority to approve alternate compliance approaches under CISWI rules.

Response: See preamble Section V. for the response on the role of states.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 12

Comment: Responsibility for non-waste determinations under a state plan implementing the emission guidelines: The DEC requests clarification of the responsibility for non-waste determinations under a state plan implementing the emission guidelines. Will EPA retain the authority to review and issue such determinations, or are state agencies responsible for them? The DEC requests that EPA develop and issue formal guidance explaining this process.

Response: This comment concerns requirements included in the Non-hazardous Solid Waste Definition Rulemaking. Commenter should review that final rule. See preamble Section V. for the response on the role of states.

3.12 Legal/Applicability: State Plans

Commenter Name: Trina L. Vielhauer
Commenter Affiliation: Division of Air Resource Management, FL DEP
Document Control Number: EPA-HQ-OAR-2003-0119-1526.1
Comment Excerpt Number: 1

Comment: The Division appreciates EPA's effort to provide an option for states to implement the Federal plan for this rule. Due to resource constraints and increasing rulemaking processes at the state level, this option may provide a streamlined avenue for rule implementation. We encourage EPA to further explore this option in its other rulemaking efforts.

Response: EPA thanks the commenter for their input.

3.13 Other - Legal/Applicability Comments

Commenter Name: James Menton
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0887
Comment Excerpt Number: 1

Comment: The concept of "the industry policing itself on environmental impact" is absurd and must be rejected in all cases. Penalties for the breach of EPA standards must carry such a heavy toll such as imprisonment of the corporate heads that administer such wanton action and write it off, fines, as the cost of business. Only then will they act with some regard to the communities they share the planet with.

Response: We thank the commenter for the comment.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 25

Comment: The public's task of providing meaningful comments is complicated by EPA not settling the question of what is a solid waste under the RCRA first. We recommend EPA complete the Definition of Non-hazardous Secondary Material rulemaking first and then issue a Notice of Data Availability for the new preliminary floor units for public comment, and only at that point proceed with the other three Clean Air Act rules.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 28

Comment: EPA has proposed a series of four interrelated rulemakings. Due to the nature of definitions, affected sources, and how EPA has chosen to view the data, it is impossible for EPA to accurately determine the data sets to use in setting the limits and thereby equally impossible for sources to understand how the are affected to determine what steps are required to comply. MeadWestvaco believes that EPA should first finalize its definitions of solid waste, and then determine which sources fall into the boiler categories and which sources fall into the solid waste

incinerator category. Then EPA can more accurately interpret the existing data and collect more as it is needed and propose standards in a meaningful fashion.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 4

Comment: We strongly encourage the Agency to ask the court for as much time as it needs to finalize reasonable and well-supported rules.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 31

Comment: The EPA should finalize a solid waste rule first so the regulated entities are in a position to know how it impacts the combustion rules. The Agency should seek additional time from the court as needed.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 56

Comment: The public's task providing meaningful comments is complicated by EPA not setting -- settling the question of what is a "solid waste" under RCRA first. We recommend EPA complete the Definition of Non-Hazardous Secondary Materials rulemaking first and then issue a Notice of Data Availability for the new preliminary floor units for public comment, and only at that point proceed with the promulgation of the three Clean Air Act rules.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 50

Comment: We strongly encourage the Agency to ask the court for such time as it needs to finalize reasonable and well supported rules that do not impose unreasonable and unwarranted economic burden on the country. We believe that EPA has significant discretion within the MACT program to make prudent and the appropriate regulatory judgments, judgments that do not unnecessarily burden American industry.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 68

Comment: If EPA fails to adopt a standard in a timely fashion, or fails to adhere to the statute and the rule is overturned again, the public health benefits will be delayed and state and local agencies could be faced with the significant burden of developing MACT for several thousand permits on a case-by-case basis.

Response: We thank the commenter for the comment.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 1

Comment: EPA must finalize an appropriate limited definition of Non-Hazardous Secondary Materials that are Solid Wastes, re-evaluate the CISWI proposal in light of these comments, and develop more reasonable and defensible emission standards for combustion units that are truly burning solid wastes. The changes in EPA's databases and analytical approaches that will be needed to correct the errors in the proposal are far too pervasive to be justified as a "logical outgrowth" of the proposal. Instead, EPA must develop and issue for public comment a new proposal incorporating these changes in order to have any prospect of promulgating a legally defensible final rule. We would be more than willing to cooperate with EPA on developing such a proposal.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Joe O'Rourke
Commenter Affiliation: F. H. Stoltze Land and Lumber Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1467.1
Comment Excerpt Number: 4

Comment: The EPA needs to petition the court for more time to finalize the new rules. That would give the EPA sufficient time to weigh all the comments that will be submitted during the comment period. These rules could have a devastating effect on industry and our country as a whole. Please take the time to examine all the implications and options and to make the correct decisions.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 6

Comment: It has been quite common over the years for EPA to seek and obtain extensions to court orders to allow sufficient time to conduct responsible and legally-defensible rulemaking. In fact, in the very case that EPA claims requires promulgation of the CISWI rule by December 16, 2010, EPA has obtained seven extensions of various deadlines related to the required rulemaking process. See, in reverse chronological order, Sierra Club v. Jackson, No. 1:01CV01537 (D.D.C. Apr. 13, 2010) (order), No. 1:01CV01537 (D.D.C. Sept. 10, 2009) (order), No. 1:01CV01537 (D.D.C. June 30, 2009) (order), No. 1:01CV01537 (D.D.C. Nov. 13, 2008) (order), No. 1:01CV01537 (D.D.C. Sept. 19, 2008) (order), No. 1:01CV01537 (D.D.C. Nov. 15, 2007) (stipulation), and No. 1:01CV01537 (D.D.C. Oct. 17, 2006) (order).

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 3

Comment: It's unclear how EPA can finalize the CISWI rules without the NHSM rule finalized so it can be determined with certainty which facilities will be classified as CISWI units and which facilities will be classified as boilers. There is a large number of sources that may go either way, depending on the outcome of the NHSM rule. EPA has attempted to create emission limits under the 'alternate scenario' in the NHSM rule, but there are other nuances in the NHSM

rule that make it impossible to predict with certainty which sources will be regulated as boilers and which sources will be regulated as incinerators.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 15

Comment: Michigan Biomass is particularly concerned by the EPA statements that facilities currently using TDF without the wire removed would have to comply with the proposed, more stringent emission limits being proposed. This demonstrates the need to finalize proposed rules on NHSM before finalizing proposed CISWI rules.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 21

Comment: EPA Has Relied upon the "Absurdity Doctrine" to Avoid Covering Large Numbers of Sources under the Prevention of Significant Deterioration Program ("PSD") under the Clean Air Act When Regulating Greenhouse Gas Emissions from Stationary Sources.

In its final rule governing greenhouse gas emissions from stationary sources, the EPA created its "Tailoring Rule" to avoid regulating thousands or more of small sources of greenhouse gas emissions [Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31513 (June 3, 2010)]. EPA considered the costs to regulate the sources, and applied the absurdity doctrine in "tailoring" the legislative provision to develop a common-sense approach to developing greenhouse gas regulations for small sources. Here we believe a similar approach could be taken. As discussed above, the plain meaning interpretation of "solid waste incineration unit" does not apply to Pollution Control's furnaces and how they are used by their customers. Applying the absurdity doctrine in this situation would result in a more reasoned approach to the regulation of these units under the MACT program and the Clean Air Act

generally, if the units ever reach that level of emissions of HAPs, which is unlikely. States are already regulating the units, many by requiring the afterburner or thermal oxidizer and regulating the temperatures and other aspects of the use of the furnaces. We believe this would serve as a better program than considering these furnaces to be incinerators, or their air pollution control devices as

incinerators.

Response: In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule. Commenter should work with it permitting authority to determine whether the units it describes are subject to the final CISWI rule. Commenter may also contact EPA's Office of Enforcement and Compliance Assurance to obtain an applicability determination.

Commenter Name: Dirk J. Krouskop
Commenter Affiliation: MeadWestvaco (MWV)
Document Control Number: EPA-HQ-OAR-2003-0119-1962.1
Comment Excerpt Number: 1

Comment: One of the proposed rulemakings published in June 4, 2010 was to establish criteria for non hazardous secondary materials that would allow sources to classify materials as either fuels or wastes. MWV filed specific comments on this proposal on August 3, 2010. MWV understands that EPA must act to create a mechanism that allows facilities to classify materials as fuels or wastes. This is a critical step that will allow facilities to understand the regulatory implications and requirements for managing these materials. MWV is very concerned with the approach that EPA is taking to propose and finalize the CISWI rule in conjunction with the non-hazardous secondary materials (NHSM) rule. Final implementation of the CISWI rule depends on the initial determination of which materials are considered fuels and which must be managed as a solid waste. EPA cannot accurately propose a CISWI rule based on the available data set until a final determination on secondary material rulemaking is made. MWV believes, as appears to be evident in the alternate approach to this rulemaking, that EPA's decisions with respect to fuel and waste definitions have significant impacts on the limitations imposed by this rule. As such, MWV facilities cannot properly evaluate the impact of the proposed rule on our operations, make economic decisions on which fuels to uses, or determine what appropriate pollution control equipment might be required. The NHSM rule must be promulgated and this rulemaking, as well as the other pending and directly related rulemakings (Boiler MACT and Area Source MACT) EPA is considering should be re-proposed based on the final outcome of the NHSM rule.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Carl Johnson
Commenter Affiliation: Southern Pressure Treaters' Association (SPTA)
Document Control Number: EPA-HQ-OAR-2003-0119-1960.1
Comment Excerpt Number: 1

Comment: The proposed changes to the Commercial and Industrial Solid Waste Incinerator (CISWI) assumes that a large number of units now regulated as boilers and kilns will become CISWI units. This increase in units regulated under CISWI are based on another proposed rule that has not even been finalized yet. I am in reference to the Identification of Non-Hazardous Secondary Materials that are Solid Waste proposed rule published in the Federal Register June 4, 2010. Comments in the docket of this proposed rule indicates that many units EPA is proposing to regulate under CISWI do not in fact burn solid waste.

As with the major source and area source Boiler MACT proposed rules, the CISWI proposed rule also has the cart before the horse. The Agency should not issue multiple proposed rules all at the same time that are dependent upon the final issuance of another proposed rule which was issued at the same time and whose final wording makes all the difference in the world on how the other proposed rules are commented on or applied.

And even if EPA properly defines secondary materials as fuels and thus not required under the CISWI rules, the Agency has inaccurately developed standards for CISWI units using incorrect data, improper analysis of that data, incorrect application of testing and sampling methodologies and also grossly underestimated (AF&PA $740 million vs. EPA's $455 million) the financial impact that this rule will have on the community of regulated units.

In conclusion, we believe the Agency should put the CISWI proposal on hold until they finalize an appropriate limited definition of Non-Hazardous Secondary Materials that are Solid Wastes. Then re-evaluate the CISWI proposal in light of these comments to develop more reasonable and defensible emission standards for combustion units that truly burn solid wastes. We believe this will entail developing and issuing for public comment a new CISWI proposal incorporating database and analytical changes that will create a legally defensible final rule.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns

with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 1

Comment: EPA's proposal, NSPS for New Source and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (the Proposed CISWI Rule), raises a number of significant concerns with PCA, concerns that have been exacerbated by the insufficiency of information provided in the public record to support the Proposed Rule. 75 Fed. Reg. 39198; (June 4, 2010). Based on our own review of the publicly-available record and on our technical consultant's review of the same, PCA believes that there is insufficient record support to sustain EPA's proposed action. Finalizing the rule based upon the information available in the rulemaking docket would therefore be arbitrary and capricious, an abuse of discretion and without observance of procedure required by law and in violation of the Clean Air Act (CAA). See Administrative Procedure Act (APA), 5 U.S.C. § 706(2) and § 307(d) of the CAA. Given the issues with the information in the docket identified below and the lack of information supporting EPA's conclusions throughout the rulemaking (such as EPA's conclusions relating to its proposed approach for startup, shutdown and malfunction (SSM) limitations), EPA must correct the deficiencies and re-propose. PCA reaffirms and incorporates herein as Attachment 1 [see submittal for attachment 1 provided by commenter] our previous letters to EPA's General Counsel requesting that EPA remedy the deficiencies in the docket and re-propose the regulation. These letters highlight the deficiencies in the docket.

The two letters (dated July 13 and July 27, 2010) show that EPA refused on July 2, 2010 to release a critical Excel spreadsheet (or spreadsheets) that would allow PCA and other commenters to determine how EPA had, from kiln-specific data in the record, used certain assumptions and made certain calculations to determine the emission standards in the Proposed CISWI Rule. Specifically, EPA has refused to make public cells in the appropriate Excel spreadsheet (or spreadsheets) showing EPA's conversion calculations which are imperative in determining how EPA established the proposed MACT floors and emission limits. The information in these cells is only known to EPA and it is imperative for the public to have access to this information so it can meaningfully comment on the Proposed Rule. To this day, the spreadsheets that EPA refused to release and place in the docket have still not been released or placed in the docket. These letters also show how EPA placed numerous documents in the docket weeks after the proposed rule had been published in the Federal Register, thereby further reducing the opportunity for meaningful comment.

On Friday, August 20, three days before the deadline for filing these comments, EPA responded to our counsel's letters of July 13 and 27. Letter from Stephen D. Page, Director of Office of Air Quality Planning and Standards, to Richard G. Stoll, August 20, 2010 [see submittal for attachment 2 provided by commenter.] It is a major effort to coordinate and produce these

comments on behalf of PCA's members, so we have had little time over the weekend between August 20 and 23 to evaluate Mr. Page's letter in full.

Included in Mr. Page's letter is at least a partial explanation of why EPA had refused on

July 2 to release the spreadsheets PCA had requested (emphasis added):

EPA included an Adobe Acrobat version of the floor spreadsheets in the docket at the time of publication of the proposed rule because of concerns that metadata found in the Excel files contained deliberative information. As noted above, EPA also included in the docket memoranda that provided the information necessary to conduct the floor calculations using the Adobe Acrobat spreadsheets. Once EPA received the request for the Excel version of the floor spreadsheets, we removed the metadata and posted the Excel versions of the floor spreadsheets on our website. We also placed the Excel files in the docket for the CISWI rule.

PCA reserves the right to seek the withheld metadata through a Freedom of Information Act (FOIA) request or other process, and we note that it may be questionable whether metadata for an Excel file would likely contain truly deliberative material in the nature of internal legal or policy debate or discussion. Moreover, we also note that this Administration has issued many strong policy statements supporting transparency and open government, and material that may arguably be exempt from disclosure under FOIA Exemption 5 may still be released by EPA, and in fact often is.

EPA appears to be arguing in Mr. Page's letter that as of June 4, 2010 – and even well before then – PCA and other commenters had access to everything needed to determine how EPA had taken data from facilities and had applied and converted that data in calculating its proposed emission standards. We reserve the right to respond to EPA's assertions in more detail, but for now we have the following reactions, showing our strong disagreement with EPA's new assertions.

The bottom line is that we still cannot find anywhere in the record the actual calculation (equation with variables filled in) for the conversion of reported emissions to the emissions used to represent each kiln in EPA's determination of the floors. EPA's letter states that "the reported concentration data and flue gas characteristics . . . and the normalized concentration data . . . are contained in the Access database." EPA also appears to argue that there is enough data in the Access database to reproduce all of its conversions. But here are the facts as we find them in the EPA emissions data base for kilns: [Footnote: Data on waste-burning kilns contained in CISWI 2009 Alternative Approach Database (EPAHQ-OAR-2003-1119-0046).]

a. Fields in the data base for flow rates, oxygen concentration, etc. are often blank, even though such information is needed to perform conversions.

Examples: Holcim Midlothian K2 test dated 27-Feb-2007 for mercury (emissions reported in lb/hr and normalized emission values given, but oxygen, moisture, and flow rate fields are blank.) Lafarge Whitehall K3 test dated 12/13-Jun-2007 for PM (emissions reported in lb/hr and normalized emission values given, but oxygen, moisture and flow rate fields are blank.)

b. There are fields for emissions as reported and emissions as normalized, but the first is not always given (it may be blank or zero). We are left uninformed as to whether the normalized values were reported in the standardized units or whether a conversion was performed elsewhere and its result entered into the database.

Examples: Lehigh Mason City 302.203 tests dated 4/13-Aug-2009 for mercury (emissions as reported blank, oxygen blank, but normalized emission values given). Ash Grove Seattle test dated 6-Aug-1996 for cadmium, Ash Grove Durkee tests dated 15-Nov-2001 for cadmium and 16-Apr-2002 for HCl (emissions as reported zero, oxygen zero, but normalized emission values given).

c. There is no flag in the Access database to indicate which test values were converted and which were used as reported.

d. There are cases where there is no value for emissions as reported (blank or zero), but oxygen values are reported at levels other than 7%. It is not possible to determine what the reported value was and whether or not it was converted.

Examples: Lehigh Evansville 121 test dated 12-Jan-2006 for lead and 13-Jan-2006 for dioxin/furans. SCNorboard test dated 13-Dec-2001 for CO. Monarch Humboldt K5 tests dated 04-Jun-2009 for dioxin/furans.

e. There are instances where the record indicates emissions in lbs/hr or gm/hr as reported and a stack gas flow rate is given, but oxygen content is not present; or the record indicates emissions in ppm as reported, but moisture content is not present. It is clear that EPA performed a conversion, but its assumptions for oxygen and moisture are not documented. We are left uninformed as to whether a blank field means the values were assumed to be zero, or whether the values used in the conversions were not entered, or whether a conversion was not done.

Examples: Lehigh York 200 test dated 4-Jan-2007 for mercury (gm/hr as reported, but missing oxygen). Lafarge Buffalo K1 tests dated 14-Jun-2007 and 15-Jun-2007 for PM (lb/hr as reported, oxygen missing). Mitsubishi 4-RK-1 tests dated 25-Mar-1998 for CO, NOx, and SO2 (ppm as reported, but moisture missing).

f. The database includes flow rate codes distinguishing actual cfm (acfm) from dry cfm (dscfm and scfm/1000), but nowhere do we see a code saying the flow rate was based on capacity or another assumption versus being an actual value taken from a filing.

The APA requires public notice to include "either the terms or substance of the proposed rule or a description of the subjects and issues involved." 5 U.S.C. § 553(b) (2006). "A notice of proposed rulemaking must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully." See Cement Kiln Recycling Coalition v. EPA, 493 F.3d 207, 225 (D.C. Cir. 2007) (quoting Honeywell Int'l, Inc. v. EPA, 372 F.3d 441, 445 (D.C. Cir. 2004)). The "promulgation of standards based upon inadequate proof. . . [defies APA's] mandate against action that is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." National Lime Ass'n. v. EPA, 627 F.2d 416, 430-31 (D.C. Cir. 1980) (quoting 5 U.S.C. § 706 (1976), remanding EPA's order); State of N.Y. v. EPA, 413 F.3d 3, 43 (D.C. Cir. 2005) (EPA's actions can be found arbitrary and capricious if it has failed to "examine the relevant data and articulate a satisfactory explanation for its action" or reached a decision without the support of substantial evidence.)

The CAA provisions concerning rulemaking are more stringent and require EPA to be more transparent than the provisions of the APA. Under the CAA the EPA is required to publish, with its notice of proposed rulemaking, an accompanying statement of basis and purpose, which includes a summary of the factual data on which the proposed rule is based, the methodology used in obtaining and analyzing the data and the major legal interpretations and policy

considerations underlying the proposed rule. 42 U.S.C. § 7607(d)(2)-(3); see also Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 551 (D.C. Cir. 1983) (holding that "a rule without a stated reason is necessarily arbitrary and capricious"); Ne. Maryland Waste Disposal Auth. v. EPA, 358 F.3d 936, 949 (D.C. Cir. 2004) (holding that vague references will not satisfy the instructions of § 307(d) that require a proposed rule be accompanied by a statement of basis and purpose).

EPA is also required to include in the docket no later than the date a proposal is published in the Federal Register "all data, information, and documents" on which it relies in its statement of basis and purpose and "all documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking." 42 U.S.C. § 7607(3)(C), (4)(B)(i). Ultimately, "the final rule must be based entirely on material that has been placed in the docket as of the date of... promulgation." Small Lead Refiner v EPA, 705 F.2d at 518-19.

In Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973), in which Judge Leventhal stated certain basic principles that became imbedded in CAA § 307(d) and which have been cited approvingly in dozens of D.C. Circuit cases over the last few decades. The D.C. Circuit ruled that there had been a "critical defect" in the rulemaking based upon the petitioner's "initial inability to obtain – in a timely fashion" certain data. Id. at 392. In language directly applicable to EPA's refusal to release its data showing how it derived it standards (see the attached letters to EPA's General Counsel), the Court made the following observations:

Obviously a prerequisite to the ability to make meaningful comment is to know the basis upon which the rule is proposed. . . . It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, critical degree, is known only to the agency. . . . In order that rule-making proceedings to determine standards be conducted in orderly fashion, information should generally be disclosed as to the basis of a

proposed rule at the time of issuance. If this is not feasible, as in case of statutory time constraints, information that is material to the subject at hand should be disclosed as it becomes available . . . .

Id. at 393-94 (emphasis added).

Like the APA, the rulemaking provisions of CAA protect against EPA actions that are arbitrary and capricious. One of the fundamental requirements of non-arbitrary administrative decision-making is that the agency set forth the reasons for its actions. Ne. Maryland Waste Disposal Auth. 358 F.3d at 949; see also Motor Vehicle Mfrs. Ass'n of U.S.. Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 48-50. EPA has a "duty to examine key assumptions as part of its affirmative burden of promulgating and explaining a non-arbitrary, non-capricious rule," which requires it to "justify its basic assumptions (even if no one objects)." Id. at 948 (quoting Small Refiner, 705 F.2d at 818). CAA's arbitrary and capricious test is the same as the substantial evidence test; there must be enough reliable evidence from which reasonable extrapolations can be made to justify the rulemaking. Natural Res. Def. Council v. EPA, 805 F.2d 410, 431-32 (D.C. Cir. 1986). Where there is no evidence the rule will be considered arbitrary and capricious. Id. An agency rule promulgated arbitrarily and capriciously without observing the procedure required by law can be reversed. 42 U.S.C. § 7607(d)(9)(D); see also Kennecott Corp. v. EPA, 684 F.2d 1007, 1016 (D.C. Cir. 1982) (holding that EPA's failure to observe the rulemaking procedures mandated by CAA by not including eligibility tests or financial tests, was arbitrary

and capricious, and thus reversible error); Husqvarna v. EPA, 254 F.3d 195, 205 (D.C. Cir. 2001).

The courts are tasked with ensuring that the EPA's choices were "reasonable and supported by the record." Am. Trucking Ass'n v. EPA, 283 F.3d 355, 363 (quoting Lead Indus. Ass'n v. EPA, 647 F.2d 1130, 1160 (D.C. Cir. 1980)); Kennecott Corp. 684 F.2d at 1016. In reaching its decision, the courts must ask: "were the actual parties to the rulemaking afforded genuine opportunity to present views and information relevant to the agency's decision?" Natural Res. Def. Council, 805 F.2d at 437; see also Ne. Maryland Waste Disposal Auth., 358 F.3d 936 (remanding to EPA because of its failure to explain adequately its decision to establish subcategories based on aggregate plant capacity).

The D.C. Circuit has consistently recognized the importance of notice and comment for several reasons.

[First,] notice improves the quality of agency rulemaking by ensuring that agency regulations will be tested by exposure to diverse public comment...Second, notice and the opportunity to be heard are an essential component of fairness to affected parties. Third, by giving affected parties an opportunity to develop evidence in the record to support their objections to a rule, notice enhances the quality of judicial review.

Natural Res. Def. Council, 805 F.2d at 437 (quoting Small Refiner, 705 F.2d at 547); see also Connecticut Light & Power Co., 673 F.2d 525, 530 (D.C. Cir. 1982) (stating that the comment period allows interested members of the public to communicate information, concerns, and criticisms to the agency); Sprint Corp. v. FCC, 315 F.3d 369, 373 (D.C. Cir. 2003) ("notice and comment also ensures fairness to all parties and provides a well-developed record"). As with any federal agency, EPA has a legal obligation to justify its regulatory decisions with data, analysis and demonstrably rational decision-making. Motor Vehicle Manufacturers Ass'n, 463 U.S. at 43. A party's ability to criticize or formulate alternative possibilities necessarily requires analytical information be placed in the docket for public review. See Small Refiner, 705 F.2d at 548-49; Home Box Office, Inc. v. FCC, 567 F.2d 9, 36 (D.C. Cir. 1977); State of N.Y., 413 F.3d at 78 (the ability of an agency to craft a final rule based on the comments of interested parties is central to notice-and-comment rulemaking.) The information provided in EPA's public docket for the Proposed Rule fails to provide the quantity and type of information for PCA or any other interested stakeholder to weigh intelligently the risks and advantages, if any, of EPA's Proposed CISWI Rule and to provide meaningful feedback to the EPA.

Indeed, the Proposed CISWI Rule docket is (1) difficult for even those with technical expertise in the industry to understand, (2) not consistent with the 114 submittals provided to EPA by PCA members; and (3) missing key documents provided by PCA. CAA's rulemaking provisions require that, "promptly upon receipt by the agency, all written comments and documentary information... received from any person for inclusion in the docket during the comment period ... be placed in the docket." 42 U.S.C. § 7607(4)(B)(i); (iv).

Incomplete and untimely access to the actual data that EPA is using renders this public comment period an incomplete process for stakeholders who will not be able to participate or provide input that the agency can consider before promulgating a final rule. This is the precise danger that the D.C. Circuit warns against in Connecticut Light & Power:

In order to allow for useful criticism, it is especially important for the agency to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules. To allow an agency to play hunt the peanut with technical information, hiding or disguising the information that it employs, is to condone a practice in which the agency treats what should be a genuine interchange as mere bureaucratic sport. An agency commits serious procedural error when it fails to reveal portions of the technical basis for a proposed rule in time to allow for meaningful commentary.

673 F.2d at 530 (emphasis added). Adding information, vital to the promulgation of the rule, to the docket "so late as to preclude any effective public comment ... violates the structure and spirit" of the CAA rulemaking provisions. Ne. Maryland Waste Disposal Auth., 358 F.3d at 952 (quoting Sierra Club v. Costle, 657 F.2d 298 (D.C. Cir. 1981) (If EPA relies on documents "entered on the docket too late for any meaningful public comment" the "structure and spirit of section 307 [will] have been violated)).

Response: We disagree with this comment for all the reasons set forth in the letter from Stephen D. Page, Director of Office of Air Quality Planning and Standards, to Richard G. Stoll, August 20, 2010. The materials made available at the time of publication of the notice of proposed rulemaking are sufficient to allow commenters to review and comment on EPA's proposed MACT floor analyses. These materials include an Access database that EPA used to compile, convert, and analyze the emissions data used to calculate the MACT floors, in addition to Adobe Acrobat spreadsheets containing the information EPA used to calculate the floors. Memoranda explaining the floor calculations were also included in the docket at the time of publication of the proposed rule. A memorandum titled "CISWI Test Data Database" was also included in the CISWI docket at the time of publication of the proposed rule. This memorandum describes the data standardization methods that EPA used to convert the raw emissions data into normalized units. Furthermore, we maintain the standards set forth in the final CISWI rule are supported by the record.

Commenter Name: Jeffery S. Hannapel,
Commenter Affiliation: National Association for Surface Finishing
Document Control Number: EPA-HQ-OAR-2003-0119-2017.1
Comment Excerpt Number: 1

Comment: Administrative Procedure Act: EPA Must Promulgate the NHSM Rule before the CISWI Rule

This proposal was issued in conjunction with three other rules: the Industrial, Commercial and Institutional Boilers and Process Heaters rule for Major Sources (Boiler MACT), the Industrial, Commercial and Institutional Boilers rule for Area Sources (Boiler GACT), and the Identification of Non-Hazardous Secondary Materials that Are Solid Waste rule (NHSM). While these proposals are separate rulemakings, they are inter-twined and highly dependent on each other. In fact, the original Boiler MACT was vacated on grounds that EPA failed to identify which secondary materials are solid waste when combusted and subject to the Boiler MACT requirements. In response to the court action, EPA has now proposed all four of these rules at the same time.

NASF recognizes that EPA is bound by court-ordered deadlines for promulgation of these regulations. Nonetheless, as the court noted in vacating the original Boiler MACT rule, implementation of these rules depends on the final determination of which secondary materials must be managed as solid wastes. EPA should, therefore, finalize the NHSM rule before closing the comment period on the Boiler MACT, Boiler GACT and CISWI regulations.

Without that initial determination on which secondary materials are solid wastes, facilities would be unable to identify the applicable regulatory requirements for each affected unit. For example, whether the unit would be subject to the CISWI provisions would depend on the regulatory status of the fuel or secondary material processed in the unit. As a result, it would be impossible for owner and operators to understand the effect of the rules on their facilities, to make economic decisions as to which fuels or other secondary materials to use, to install the appropriate pollution control equipment, and to conduct test burns in a timely manner.

EPA's failure to provide adequate notice of the regulatory requirements that are applicable to regulated units would prevent facilities from providing meaningful comments. Such a process oversight is a clear violation of the Administrative Procedure Act (APA) that governs EPA's rulemaking process. The court's finding that EPA's failure to address this fundamental issue was a fatal flaw for the original Boiler MACT rule provides further evidence that EPA needs to promulgate the NHSM rule before closing the comment period on the Boiler MACT, Boiler GACT and CISWI regulations.

EPA should, therefore, first establish the regulatory foundation for the Boiler MACT, Boiler GACT and CISWI rules and promulgate the NHSM rule that identifies the non-hazardous secondary materials that are solid wastes when combusted. Such an approach is consistent with the APA and would give an opportunity for adequate notice and comment. While this may necessitate an extension of the court-ordered deadline for these rules, it can avoid the unnecessary costs and time in challenging and overturning the Boiler MACT, Boiler GACT and CISWI rules on the same grounds that the original Boiler MACT was vacated.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 1

Comment: While the EPA did extend the Public Comment Period for these Proposed Rules, the review time was still inadequate given the complexity and far-reaching impact of these Proposed

Rules (also given the number and complexity of recent rulemakings from the EPA). Westlake requests that the substantive comments related to these rulemakings in the Docket be considered and revised Proposed Rules be issued with another Public Comment Period to allow adequate time to review.

Response: EPA provided 80 days for public comment, which is more than is required under the CAA. Section 307(h). In addition, the Agency posted the signed rules on EPA's website 35 days before the rules were published in the Federal Register. EPA maintains that the comment period was sufficient, and, in any case, EPA is under a court ordered deadline and must sign final standards no later than February 21, 2011.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 1

Comment: EPA's proposal, NSPS for New Source and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (the "Proposed Rule"), raises a number of significant concerns with Essroc and the Cement Industry, concerns that have been expressed to the Agency. These are noted by the insufficiency of information provided in the public record to support the Proposed Rule. 75 Fed. Reg. 39198, (June 4, 2010). Based on our own review of the publicly-available record, finalizing the rule based upon the information available in the rulemaking docket would not be prudent. Given the complexity of issues with the information in the docket and the lack of clear information supporting EPA's conclusions throughout the rulemaking, EPA must correct the deficiencies and re-propose.

PCA had indicated in two letters (dated July 13 and July 27, 2010) to show that EPA refused on July 2, 2010 to release a critical Excel spreadsheet (or spreadsheets) that would allow commenters to determine how EPA had, from kiln-specific data in the record, used certain assumptions and made certain calculations to determine the proposed CISWI emission standards. Specifically, EPA has refused to make public cells in the appropriate Excel spreadsheet showing EPA's conversion calculations which are imperative in determining how EPA established the proposed MACT floors and emission limits. The information in these hidden cells is only known to EPA and it is imperative for the public to have access to this information so it can meaningfully comment on the Proposed Rule. The letters also indicate how EPA placed numerous documents in the docket weeks after the proposed rule had been published in the Federal Register, a procedure not common in past rulemaking.

EPA is required to include in the docket no later than the date a proposal is published in the Federal Register "all data, information, and documents" on which it relies in its statement of basis and purpose, and "all documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking." [42 U.S.C. § 7607(3)(C), (4)(B)(i); see also 705 F.2d at 518-19.] Ultimately, "the final rule must be based entirely on material that has been placed in the docket as of the date of... promulgation." 705 F.2d at 519.

In Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973), in which Judge Leventhal stated certain basic principles that became imbedded in CAA §307(d) and which have been cited approvingly in dozens of D.C. Circuit cases over the last few decades. The D.C. Circuit ruled that there had been a "critical defect" in the rulemaking based upon the petitioner's "initial inability to obtain – in a timely fashion" certain data. Id. at 392. In language directly applicable to EPA's refusal to release its data showing how it derived it standards, the Court made the following observations:

Obviously a prerequisite to the ability to make meaningful comment is to know the basis upon which the rule is proposed. . . . It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, critical degree, is known only to the agency. . . . In order that rule-making proceedings to determine standards be conducted in orderly fashion, information should generally be disclosed as to the basis of a proposed rule at the time of issuance. If this is not feasible, as in case of statutory time constraints, information that is material to the subject at hand should be disclosed as it becomes available . . . .

Id. at 393-94 (emphasis added).

Like the APA, the rulemaking provisions of CAA protect against Agency actions that are arbitrary and capricious. One of the fundamental requirements of non-arbitrary administrative decision-making is that the agency set forth the reasons for its actions. Ne. Maryland Waste Disposal Auth. 358 F.3d at 949; see also Motor Vehicle Mfrs. Ass'n of U.S. Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 48-50. EPA has a "duty to examine key assumptions as part of its affirmative burden of promulgating and explaining a non-arbitrary, non-capricious rule," which requires it to "justify its basic assumptions (even if no one objects)." Id. at 948 (quoting Small Refiner, 705 F.2d at 818). CAA's arbitrary and capricious test is the same as the substantial evidence test; there must be enough reliable evidence from which reasonable extrapolations can be made to justify the rulemaking. Natural Res. Def. Council v. EPA, 805 F.2d 410, 431-32 (D.C. Cir. 1986). Where there is no evidence, the rule will be considered arbitrary and capricious. Id. An agency rule promulgated arbitrarily and capriciously without observing the procedure required by law can be reversed. 42 U.S.C. § 7607(d)(9)(D); see also Kennecott Corp. v. EPA, 684 F.2d 1007, 1016 (D.C. Cir. 1982) (holding that EPA's failure to observe the rulemaking procedures mandated by CAA, by not including eligibility tests or financial tests, was arbitrary and capricious and thus reversible error); Husqvarna v. EPA, 254 F.3d 195, 205 (D.C. Cir. 2001).

The courts are tasked with ensuring that the Agency's choices were "reasonable and supported by the record." Am. Trucking Ass'n v. EPA, 283 F.3d 355, 363 (quoting Lead Indus. Ass'n v. EPA, 647 F.2d 1130, 1160 (D.C. Cir. 1980)); Kennecott Corp. 684 F.2d at 1016. In reaching its decision, the courts must ask: "were the actual parties to the rulemaking afforded genuine opportunity to present views and information relevant to the agency's decision?" Natural Res. Def. Council, 805 F.2d at 437; see also Ne. Maryland Waste Disposal Auth., 358 F.3d 936 (remanding to EPA because of its failure to explain adequately its decision to establish subcategories based on aggregate plant capacity).

The D.C. Circuit has consistently recognized the importance of notice and comment for several reasons.

[First,] notice improves the quality of agency rulemaking by ensuring that agency regulations will be tested by exposure to diverse public comment...Second, notice and the opportunity to be

heard are an essential component of fairness to affected parties. Third, by giving affected parties an opportunity to develop evidence in the record to support their objections to a rule, notice enhances the quality of judicial review.

Natural Res. Def. Council, 805 F.2d at 437 (quoting Small Refiner, 705 F.2d at 547); see also Connecticut Light & Power Co., 673 F.2d 525, 530 (D.C. Cir. 1982) (stating that the comment period allows interested members of the public to communicate information, concerns, and criticisms to the agency); Sprint Corp. v. FCC, 315 F.3d 369, 373 (D.C. Cir. 2003) ("notice and comment also ensures fairness to all parties and provides a well-developed record"). As with any federal agency, EPA has a legal obligation to justify its regulatory decisions with data, analysis and demonstrably rational decision-making. Motor Vehicle Manufacturers Ass'n, 463 U.S. at 43. A party's ability to criticize or formulate alternative possibilities necessarily requires analytical information be placed in the docket for public review. See Small Refiner, 705 F.2d at 548-49; Home Box Office, Inc. v. FCC, 567 F.2d 9, 36 (D.C. Cir. 1977); State of N.Y., 413 F.3d at 78 (the ability of an agency to craft a final rule based on the comments of interested parties is central to notice-and-comment rulemaking.) The information provided in EPA's public docket for the Proposed Rule fails to provide the quantity and type of information for PCA or any other interested stakeholder to weigh intelligently the risks and advantages, if any, of EPA's Proposal and to provide meaningful feedback to the agency.

Indeed, the Proposed Rule docket i) is difficult for even those with technical expertise in the industry to understand, ii) is not consistent with the 114 submittals provided to EPA by PCA members; iii) is missing key documents provided by PCA (CAA's rulemaking provisions require that, "promptly upon receipt by the agency, all written comments and documentary information... received from any person for inclusion in the docket during the comment period ... be placed in the docket." 42 U.S.C. § 7607(4)(B)(i); (iv).

Incomplete and untimely access to the actual data that EPA is using renders this public comment period an incomplete process for stakeholders who will not be able to participate or provide input that the agency can consider before promulgating a final rule. This is the precise danger that the D.C. Circuit warns against in Connecticut Light & Power:

In order to allow for useful criticism, it is especially important for the agency to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules. To allow an agency to play hunt the peanut with technical information, hiding or disguising the information that it employs, is to condone a practice in which the agency treats what should be a genuine interchange as mere bureaucratic sport. An agency commits serious procedural error when it fails to reveal portions of the technical basis for a proposed rule in time to allow for meaningful commentary.

673 F.2d at 530 (emphasis added). Adding information, vital to the promulgation of the rule, to the docket "so late as to preclude any effective public comment... violates the structure and spirit" of the CAA rulemaking provisions. Ne. Maryland Waste Disposal Auth., 358 F.3d at 952 (quoting Sierra Club v. Costle, 657 F.2d 298 (D.C. Cir. 1981) (If EPA relies on documents "entered on the docket too late for any meaningful public comment" the "structure and spirit of section 307 [will] have been violated)).

Essroc has worked with PCA's technical experts and have reviewed the publicly-available documents, listed above, in the record and report that those documents raise more questions than they answer regarding the rule proposal. Specific technical questions stemming from the docket

review are included in PCA's comments submitted under separate cover. While we believe we have accurately represented information presented in EPA's thought process, conversion of data, and calculations in setting MACT floors, we still believes EPA's docket contains inadequacies and incomplete information and the data relied upon by EPA contains errors and miscalculations. Examples of the inadequacies are provided in Section VII of the PCA submission and are not included here but incorporated as reference.

Given the lack of record support, we respectfully requests that EPA respond to these concerns by posting in the docket all information that supports the proposal, meeting minutes with consultants and third party advisors, in-house meeting minutes with Agency members and other Government directives indicating changes in development of the proposed rule. Also incorporating and correcting the information provided by PCA, notifying the public of the availability of the completion of the record, providing an opportunity for the public to comment on this data, and then considering those comments in reaching its decision. These actions are necessary to cure the procedural errors in this public comment period and we remain hopeful that such information will enable it and other stakeholders to provide meaningful comments regarding the Proposed Rule. See Columbia Falls Aluminum v. EPA, 139 F.3d 914, 922 (D.C. Cir 1998) (rejecting standards that use data which "bears no rational relationship to the reality it purports to represent.")

Response: We disagree with this comment for all the reasons set forth in the letter Letter from Stephen D. Page, Director of Office of Air Quality Planning and Standards, to Richard G. Stoll, August 20, 2010. Furthermore, we maintain the standards set forth in the final CISWI rule are supported by the record.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 1

Comment: The changes in EPA's data bases and analytical approaches that will be needed to correct the errors in the proposal are far too pervasive to be justified as a "logical outgrowth" of the proposal. EPA must, therefore, re-evaluate the CISWI proposal in light of these comments and develop more reasonable and defensible emission standards for combustion units that are truly burning solid wastes.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Furthermore, we maintain that the standards in the final CISWI rule are consistent with the CAA and that we had sufficient information to establish those standards. To the extent the commenter believes the final rule is not a logical outgrowth of the proposed rule, commenter can submit a petition for reconsideration pursuant to section 307(d)(7)(B).

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 4

Comment: We should note here that EPA has claimed in its Proposed CISWI Rule that it must issue final CISWI rules under a "court-ordered deadline." E.g., 75 Fed. Reg. at 31943, n.2; 75 Fed. Reg. 31951-52. On June 23, 2010, EPA also denied PCA's request for extra time to file comments on the basis of this "court-ordered deadline." (See attached letters to EPA's General Counsel.) As explained in detail in these two letters, the court order to which EPA has referred does not require that EPA issue a final CISWI rule for cement kilns. The rule clearly applies to currently pending rulemaking for boilers under CAA § 112. We also explain in these letters that even if the court order could somehow apply to CISWI rules, EPA cannot rely upon a deadline to excuse flawed rulemaking. Moreover, we explain that EPA has throughout its history sought and obtained extensions to court-ordered deadlines where necessary to conduct responsible rulemaking, and show how the very court-order to which EPA refers has had its deadlines amended at least seven times.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA did in fact seek additional time from and it was denied by the D.C. District Court. Further, as noted above, we provided a comment period far in excess of that required under the CAA.

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)
Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 4

Comment: The changes that will be required to correct the multitude of errors [regarding burn-off ovens] in the databases and analytical approaches of the proposed regulation necessitate that the EPA develop and issue for public comment a new proposed regulation incorporating these corrections, and others, to have any prospect of promulgating a legitimate final rule.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, see preamble Section V. for the response on New Data/Corrections to Existing Data.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 6

Comment: It is possible that EPA has reasonable responses to each of the critiques based on information that has not been provided in the public docket, and that EPA could provide the additional data/documentation requested by PCA. However, a post hoc explanation of EPA's proposal and post hoc provision of relevant documents will not remedy the defects in the public comment period. "A 'notice of proposed rulemaking must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully.'" Cement Kiln

Recycling Coalition v. EPA, 493 F.3d 207, 225 (D.C. Cir. 2007) (quoting Honeywell Int'l, Inc. v. EPA, 372 F.3d 441, 445 (D.C. Cir. 2004)) (emphasis added). See also HBO Inc., 567 F.2d at 54 ("[e]ven the possibility that there is here one administrative record for the public and this court and another for the [agency] and those 'in the know' is intolerable.") The fact remains that PCA, and its technical experts, simply are not in a position to provide meaningful comment by the close of the public comment period.

Given the lack of record support, PCA respectfully requests that EPA respond to these concerns by posting in the docket all relevant information that supports the proposal, correcting the information provided by PCA, notifying the public of the availability of the completion of the record, providing an opportunity for the public to comment on this data, and then considering those comments in reaching its decision. These actions are necessary to cure the procedural errors in this public comment period and PCA remains hopeful that such information will enable it and other stakeholders to provide meaningful comments regarding the Proposed Rule. See Columbia Falls Aluminum v. EPA, 139 F.3d 914, 922 (D.C. Cir. 1998) (rejecting standards that use data which "bears no rational relationship to the reality it purports to represent.")

Response: We disagree with this comment for all the reasons set forth in the letter Letter from Stephen D. Page, Director of Office of Air Quality Planning and Standards, to Richard G. Stoll, August 20, 2010. Furthermore, we maintain the standards set forth in the final CISWI rule are supported by the record and that EPA provided in the docket the information that is required to be available under the CAA.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 13

Comment: EPA should delay issuing the CISWI standards until the Definition of Solid Waste rule is final.

EPA's parallel proposed rulemaking, "Identification of Non-Hazardous Secondary Materials That Are Solid Waste" will have a significant impact on the applicability of the CISWI rule. Given that the solid waste definition is still under review, it is premature to issue the CISWI rule that is based on data from sources that may or may not be included in the standard, pending issuance of the final rule defining what is a solid waste. The addition or removal of certain units from the CISWI rule based on the solid waste definition could dramatically shift the baselines for the various CISWI categories beyond that currently considered for this rulemaking. Until the solid waste definition issue is finalized, EPA should defer setting the CISWI baselines.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often

change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 53

Comment: Sections III.B (75 FR 31946) and III.C (75 FR 31947) of the Preamble describe EPA's reasoning on the five-year review of the performance standards. EPA states in these sections that this review under Section 129(a)(5) of the statute does not require a recalculation of the floor. AF&PA supports EPA's assessment. As EPA makes clear, case law has firmly established that no such automatic updating is required. NRDC and LEAN v. EPA, 529 F. 3d. 1077, 1083-84 (D.C. Cir. 2008). As EPA also makes clear, this result is supported by the plain language of the statute, by precedent under other EPA programs, and by the illogical and very burdensome results that would follow from any different interpretation.

Response: We thank the commenter for the comment. See preamble Section V. for the discussion on EPA's approach for conducting a 5-year review under CAA section 129(a)(5).

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 1

Comment: We propose several comments to clarify and strengthen the proposed regulations, and request that EPA take due care in responding to the comments to create a final regulation without sacrificing rule quality.

Response: We have established the final CISWI standards consistent with the CAA.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 2

Comment: Without knowing how non-hazardous secondary materials would be addressed under the companion proposal for the non-hazardous definition of solid waste, facilities would not have thought to respond for a number of units that EPA is now intending to regulate under the proposed revisions to CISWI.

At a minimum, if EPA must regulate these units, Dow believes EPA must conduct a more thorough survey of these units before proposing emission limits and the other accompanying

CISWI requirements (e.g, operator certification, operating limits, testing, recordkeeping, reporting).

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, see preamble Section V. for the response on Biased Data Collection from ICR Phase II Testing.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 2

Comment: Due to new data that is available and major changes needed to the rule, EPA should re-propose and provide the public another opportunity for public comment.

There are several valid reasons why EPA should re-propose the CISWI rule.

First, in the CISWI Test Data Database memo (dated April 26, 2010 from ERM), EPA states that they have additional data obtained in late 2009, did not have sufficient time to review and evaluate the data, and plans to incorporate the data into the final rule. This alone, is reason enough to afford the public time to review this data and comment on how EPA uses the data in the final rule.

Second, we believe that the energy recovery subcategory must be broken down further into several subcategories is a very valid reason to re-propose. The public needs to see how EPA determines the MACT floor standards once the data is subdivided and this new set of data is incorporated.

If EPA decides to use the Alternative definition of non-hazardous secondary materials that are solid waste, the public should get another opportunity to comment as the alternative appears to have a dramatic affect on the standards. There was a statement in the preamble on page 31959 that EPA may set beyond the floor standards. If this is the case, clearly the public deserves an opportunity to comment before a final rule is issued.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards (the Agency did not finalize the alternative definition identified by the commenter). As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont

Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 2

Comment: Reproposal is Required for the CISWI Rule.

Several justifications exist that warrant EPA reproposal of the CISWI rule. These include new data available to EPA, the need for additional subcategorization as noted above, and potential changes to the definition of solid waste rule which was also proposed on June 4, 2010. Final promulgation of the solid waste rule provisions will allow EPA to finalize determination of which units will fall under CISWI rule requirements vs. those falling under §112 requirements, allowing additional certainty to the floor determination process. For these reasons, reproposal is appropriate following consideration of these issues.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 9

Comment: EPA must provide any opportunity for further comment if any new incinerator test data is incorporated into the MACT floor calculation and leads to more stringent emissions standards.

In the rule preamble, EPA states:

EPA did receive some additional emissions data earlier this year, but due to the court-ordered deadline, we did not have time to review and evaluate that data. We intend to review the data submitted earlier this year from a quality assurance and completeness perspective and incorporate that data into the final standards, as appropriate. To the extent EPA receives additional emissions data during the comment period, EPA will assess that data as it develops the final emission standards. [Footnote: 75 FR 31943, footnote 2. June 4, 2010]

We strongly believe that it would be inappropriate to lower any emission standards proposed unless EPA subjects any new proposal to another public comment period. Lowering the emission standards after this public comment period could substantially change the context within which such facilities developed their comments. This could render the comments inapplicable or invalid and could preclude the generation of other important comments. As such, any changes to the proposed emission limits must be subject to additional public comment.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, see preamble Section V. for the response on New Data/Corrections to Existing Data. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 12

Comment: EPA has asked for comment as to whether it may (or must) consider new emissions data and calculate a new MACT floor when conducting the mandatory five-year review of MACT standards. We suggest that EPA not adopt a position that attempts to govern its review of all future MACT standards at this time. NACAA believes the better approach would be to evaluate this issue on a case-by-case basis and make a reasoned decision based on the record before it. Where the initial MACT floor is based on a robust data set, it is likely that a number of units will be top performers and reconsideration will not change the MACT floor significantly. Given the large compliance margins adopted in promulgated standards, it is unlikely that the top performers will significantly improve their performance in the next five years.

However, where the floor was based on limited testing data, testing uncertainty, rather than technical limitations, may have been the dominant factor in setting the floor. In these circumstances it may be appropriate to use (in some fashion) subsequent testing when conducting a five-year review. A review of the calculated uncertainty assigned to the best performers may be particularly relevant since, the post-compliance period provides the first real opportunity to gauge the variability in emissions where the source is making some attempt at controlling those emissions and the data concerning this issue has been limited for almost all standards promulgated to date.

With respect to the section 129 standard under consideration, it is quite clear that the earlier data were extremely limited and information concerning variability of performance of complying units remains limited. Accordingly, NACAA recommends that in the course of its current rulemaking EPA recalculate the MACT floors for the subject section 129 units using relevant new data as appropriate, and consider this issue on a case-by-case basis as it reviews other standards.

Response: See preamble Section V. for the discussion on EPA's approach for conducting a 5-year review under CAA section 129(a)(5). In addition, EPA notes that it used all available data, including data obtained after proposal, to the extent appropriate.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 18

Comment: Dow supports EPA's conclusion that recalculation of the floors is not required every 5 years.

Sections III.B (75 FR 31946) and III.C (75 FR 31947) of the Preamble describe EPA's reasoning on the five-year review of the performance standards. EPA states in these sections that this review under Section 129(a)(5) of the statute does not require a recalculation of the floor. Dow supports EPA's assessment.

Response: We thank the commenter for the comment.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 1

Comment: The Brick Industry Association (BIA) on behalf of its member companies submits these comments on the proposed Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, published in the Federal Register on June 4, 2010 (75 FR 31938). The B1A is the national trade association that represents brick manufacturers, distributors, and associated services. The BIA has been working diligently with the U.S. Environmental Protection Agency (EPA) on the development of standards for major sources of brick and structural clay products (Brick MACT). BIA is providing these comments on this proposal because we are unclear whether these standards could potentially apply to our operations. While we do not believe that any fuel or recycled raw material that we use should be considered a solid waste, the June 4, 2010 proposed Identification of Non-Hazardous Secondary Materials That Are Solid Waste (75 FR 31843) does not clearly exclude us.

As a small trade association (representing numerous small and large businesses), we do not have the resources to fully review a proposal (within the timeframe provided) that is only possibly applicable to our operations (and dependent on another future determination by EPA), particularly given the other critical proposals that were released the same day. Applicability of this rule to our members will not be known until EPA promulgates their final identification of what is and is not solid waste. Therefore, we request that EPA re-open their public comment period for this proposed rule once the solid waste definition is finalized if this rule will impact sources that made reasonable determinations that no extensive review of this rule was warranted during this comment period.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. In addition, as noted above, we provided a comment period far in excess the period required in the CAA.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 1

Comment: The proposed standards are arbitrary and capricious

As stated by EPA in the preamble (75 FR 31951 – 31952):

"EPA must consider available emissions test data to determine the MACT floor. We based the floor calculations on available emissions data. We did receive some additional data earlier this year, but as noted above, due to the court-ordered deadline, we did not have sufficient time to review and evaluate that data. We intend to review and evaluate the data submitted earlier this year and any data received during the comment period, and we intend to include those data in our final analysis, as appropriate."

EPA's stated intent to incorporate all the available data after the public comment period has ended is simply unacceptable. The proposed rule should be withdrawn and re-proposed after EPA has had sufficient time to evaluate all the data, regardless of how long that process requires. The admission by EPA that the proposed standards are not based on all the available data, regardless of the reason all the data was not considered, result in proposed standards that are arbitrary and capricious.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, see preamble Section V. for the response on New Data/Corrections to Existing Data. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Sarah E. Amick
Commenter Affiliation: Rubber Manufacturers Association
Document Control Number: EPA-HQ-OAR-2003-0119-2029.1
Comment Excerpt Number: 1

Comment: RMA strongly recommends that EPA finalize the "Identification of Non-Hazardous Materials That Are Solid Waste" ("Definition of Non-Hazardous Solid Waste Rule") rule prior to asking for public comment on the CISWI proposed rule. The Definition of Non-Hazardous Solid Waste Rule, Notice of Proposed Rulemaking ("NPRM") sets forth two basic approaches to distinguish waste from fuel, and asks for comments on numerous elements of each of these approaches [Footnote: See, e.g., id. at 31873 ("EPA is proposing that non-hazardous secondary materials used as fuels in combustion units that remain within the control of the generator and that meet legitimacy criteria specified in section VII.D.6 would not be solid waste ....Nevertheless, EPA is seeking comment on whether such secondary materials should be considered solid wastes and thus, be subject to the CAA section 129 requirements if combusted.").] As

a result, the Definition of Non-Hazardous Solid Waste NPRM sets out a continuum of possible final rules rather than two distinctly different possibilities. This means that commenters on the proposed CISWI rule have no way of knowing what population of units will qualify as incineration units upon promulgation of the Definition of Non-Hazardous Solid Waste Rule. This lack of certainty in the outcome of the Non-Hazardous Solid Waste Rule affects all aspects of the CISWI proposal, including the which facilities are affected, the MACT floors for this rule and the Boiler MACT rule, the emission limitations, the number of facilities affected, the compliance cost per facility and the total anticipated compliance costs.

In short, EPA's proposed rule effectively requires commenters to guess what data EPA will eventually use to set the standard. We believe this violates EPA's duty to provide a full and fair opportunity to develop and submit comments on the proposal. This problem can only be cured by promulgating the waste rule and then proposing industrial boiler standards based on the units that are then known to be industrial boilers.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 2

Comment: 1. Regulations must be crafted in a reasonable and rational way, with proper notice and comment, in a logical order where multiple rules are attempted, in a manner consistent with overall national policies, and in a way that avoids substantive adverse effects. This has not happened with this suite of boiler rulemakings.

2. International Paper understands and appreciates that EPA is under court-ordered deadlines for final promulgation of the Boiler MACT Rule (and thus Boiler GACT, CISWI and NHSM rules). However, implementation of those rules depends on the final determination of which material is a fuel and which must be managed as a solid waste, an issue that is dealt with in the NHSM rule on which International Paper has extensively commented.

Without that threshold determination, it is impossible for the regulated community to:

accurately analyze and understand the effect of the suite of rules on their facilities; conduct engineering analyses to determine the feasibility and cost of complying; make economic decisions as to which fuels to use and enter into contracts for their supply; install appropriate pollution control equipment or make modifications to existing equipment; implement operational processes appropriate to any fuel that is new to the facility; conduct test burns; and seek required new or modified permits - all within the compliance window EPA will provide. The definition of non-hazardous solid waste must be promulgated, including final agency decisions for secondary materials burned at pulp and paper mills boilers before any consideration of the follow-on Boiler/CISWI rules can effectively begin.

3. There has been insufficient notice and comment associated with this suite of proposed rules.

The issuance of the suite of four proposed rules all at the same time, without the definitional threshold being set, as well as the extremely short timeline which EPA has given the regulated community to review and comment actually provides insufficient notice and comment opportunity. This is impermissible under the principles of administrative law. EPA should attempt to garner more time (at the very least a period of six months) on the deadlines from the court, otherwise it is a virtual certainty that it will only face more litigation on these rules after final promulgation. Rulemaking via litigation is no way to effectively regulate, but that will no doubt continue to be the reality in this rulemaking unless more time is given and major modifications of the proposed rule are made.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Matthew Todd
Commenter Affiliation: The American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2003-0119-2258.1
Comment Excerpt Number: 2

Comment: On June 4, 2010 at 75 FR 32006, EPA proposed the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The American Petroleum Institute (API) and the National Petrochemical and Refiners Association (NPRA) submit these comments on that proposal. Our members own and operate major sources with boilers and process heaters that will be impacted by this proposal. Thus, we are vitally interested in assuring the promulgated rule is achievable, reasonable, cost effective, imposes minimal burdens and that all requirements are appropriately justified under the provisions of the Clean Air Act and other applicable laws

We are commenting on a few issues because of their precedential importance or because of the interaction of this proposal with the concurrent Area Source Boiler and Process Heater NESHAP proposal (June 4, 2010 at 75 FR 31896), and the Commercial and Industrial Solid Waste Incinerator (CISWI) rulemaking (June 4, 2010 at 75 FR 31938). Because of these items and the referencing of this set of comments in our specific comments on the area source proposal, we are copying this set of comments to all three dockets.

These comments are based on the assumption that the proposed Definition of Non-hazardous Solid Waste (June 4, 2010 at 75 FR 31844) will be finalized essentially as proposed. We have previously filed comments on that proposal (Docket ID: EPA-HQ-RCRA-2008-0329-0783). Should the final definition be substantially different from the proposal, EPA will need to reopen this rulemaking, the area source rulemaking and the CISWI rulemaking to allow for comments to reflect the significant impact of any such change on these three proposals. Failure to do so for this and other key premises underlying this proposal would effectively deprive affected entities of their right to comment on this rulemaking.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 12

Comment: EPA has indicated its intention to issue the final CISWI rule by December 16, 2010, based at least in part on its understanding that it is subject to a court order to do so. However, neither the District Court order in the Sierra Club case [Footnote: Sierra Club v. Jackson, 1:01CV01537 (D.D.C. 2006).], nor the appellate decision in the 2007 NRDC case discussed above, include a mandate for the issuance of a final rule under CAA §129 for CISWI's burn-off subcategory by any particular date. It simply is not there. The agency, therefore, should take the time necessary to gather the appropriate technical and economic data, and to consider the comments submitted by RIPA and many other parties.

We do not believe the statutory requirements of the Clean Air Act have been followed in developing a rule that would impact drum reclamation furnaces. We find it impossible for the agency to select the best 12% of units for this (or any) category when so few facilities have been tested and when the agency failed to test a single drum reclamation furnace, despite having knowledge of their existence. No court order, even if there were one, would mandate non-compliance with the CAA requirements.

In addition, the Administrative Procedure Act, 5 U.S. Code 553(c) demands, "After consideration of the relevant material presented, the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose." The agency cannot short-cut the time necessary to consider the material presented in comments because of a fictional sense of a court order demanding a final rule by a specific date, regardless of the comments. See, e.g. American Mining Congress v. EPA, 907 F.2d 1179, 1191 (D.C. Cir.1990) ("a court cannot excuse [EPA's] obligation to engage in reasoned decision making under the APA").

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. In Natural Resources Defense Council v. EPA, the Court held that the term "solid waste incineration unit" in CAA section 129(g)(1) "unambiguously include[s] among the incineration units subject to its standards any facility that combusts any commercial or industrial solid waste material at all—subject to the four statutory exceptions identified [in CAA section 129(g)(1)]." 489 F.3d 1250, 1257–58 (D.C. Cir. 2007). Combustion units located and commercial or industrial facilities that combust solid waste as that term is defined in the Non-hazardous Solid Waste Definition Rulemaking may be subject to CISWI, unless the unit is expressly exempt pursuant to section 129(g)(1). EPA is establishing standards for units at commercial or industrial facilities that meet the definition of "incinerators", "energy recovery units", "waste burning kilns", or "small-remote incinerators" in this final rule. Commenter should work with it permitting authority to determine whether the units it describes are subject to the final CISWI rule. Commenter may also contact EPA's Office of Enforcement and Compliance Assurance to obtain an applicability determination.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC

Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 1

Comment: On June 4, 2010, the Environmental Protection Agency issued the proposed rules intended to replace the industrial boiler Maximum Achievable Control Technology (MACT) rule vacated in 2007 by the U.S. Court of Appeals for the D.C. Circuit. To address the court's concern, EPA has proposed rules for (1) a new MACT for industrial commercial and institutional boilers and process heaters (75FR32006 - ICI boilers), (2) a revised MACT for commercial and industrial solid waste incinerators (75FR31938 - CISWIs), and (3) a revision to the defmition of the term "solid waste" to help distinguish between the two (75 FR31896). Thus, three significant rules have been generated for review and comment at the same time. It is incredibly challenging for the regulated community to address several parallel rulemakings at the same time. Therefore, it is recommended that EPA re-evaluate this approach and determine the definition of solid waste prior to establishing standards for Industrial Boilers and Commercialandustrial Solid Waste Incinerators (CISWI).

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. As stated above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 1

Comment: As an overriding issue, CIBO believes EPA's current schedule, with promulgation by December

16, 2010 is wholly inadequate for the necessary evaluations, deliberations, and revisions that are needed to this proposed rule. This rule in combination with the three other proposed combustion rules presents the largest set of rulemakings from an impact and cost perspective on the nation's manufacturing sector that EPA has ever issued. As such, the cost and potential impact on jobs in the US demand a thorough deliberation and thought process so that the most reasonable and defensible rule can be finalized that meets the intentions of the Clean Air Act. Requiring EPA to do all of the work required in less than 4 months puts EPA in an untenable position and the results of having too little time will be a less than optimum regulatory result. Therefore, CIBO recommends that EPA pursue at least 6 months additional time in preparation for promulgation of final Subpart DDDDD, Subpart JJJJJJ, and Subpart CCCC and DDDD rules.

However, in the case of CISWI, CIBO believes the issues that need to be addressed are so encompassing and the required results of further evaluation so different than the proposed rule, that a re-proposal is called for. EPA should issue a revised proposed rule, after it analyzes new data that is available, or takes any one of the following additional actions that will affect the proposed rule, which will necessitate notice and comment.

First, in the CISWI Test Data Database memo (dated April 26, 2010 from ERM) CITE, EPA states that they have additional data obtained in late 2009, did not have sufficient time to review

and evaluate the data, and plans to incorporate the data into the final rule. Any additional data analysis will need the same level of scrutiny as the data analysis EPA provided for proposed rule. Second, EPA needs to subcategorize units now in the energy recovery category subcategory, for the reasons noted above. Adding subcategories will affect a large portion of the covered sources, and sources will need to review the impact of the revised rule, especially how EPA determines the MACT floor standards once the data is subdivided and this new set of data is incorporated. Third, if EPA decides to use the alternative definition of non-hazardous secondary materials that are solid waste, that alternative is likely to have a dramatic effect on the standards. Last, EPA indicated that that it may set beyond the floor standards. 75 FR 31959. Any one of these changes to the rule would trigger a requirement for an opportunity for the public to comment on revisions to the rule. Changed floors, changed basic definitions, and changed subcategories would not constitute logical outgrowths of the proposal and the CAA and APA would require re-proposal and additional comment by affected sources [Footnote: See Envtl. Integrity Project v. EPA, 425 F.3d 992, 996 (D.C. Cir. 2005); Shell Oil Co. v. EPA, 950 F.2d 741, 750- 51 (D.C.Cir.1991).]

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. Further, see preamble Section V. for the response on New Data/Corrections to Existing Data. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 1

Comment: The Definition of Non-Hazardous Solid Waste is the foundation for CISWI and Boiler MACT Applicability Determinations and should be promulgated before EPA can appropriately develop achievable MACT standards for these source categories.

EPA has proposed changes to its Commercial and Industrial Solid Waste Incinerator (CISWI) regulations that assume that a large number of combustion units currently regulated as boilers and kilns will become CISWI units. The increase in the universe of units regulated under the CISWI rule is based on the proposed Identification of Non-Hazardous Secondary Materials that are Solid Wastes, 75 FR 31844 (June 4, 2010). There is no doubt that comments submitted on that proposed RCRA rule will indicate that many of the units EPA is proposing to regulate under

the CISWI rule do not in fact burn solid waste. Therefore EPA cannot properly promulgate final CISWI or Boiler MACT limits until the solid waste definition rule is finalized and universe of units subsequently and appropriately divided into CISIWI and Boiler MACT units.

The potential impact that the final solid waste definitional rule will have on determining MACT limits is starkly illustrated in the difference between the energy recovery subcategory floors for the proposed solid waste definition (75 FR 31945, Table 1) and the floors for the alternative solid waste definition (75 FR 31946, Table 3). The alternative case reflects the re-categorization of some Boiler MACT units into CISWI units because the alternate solid waste definition classifies more secondary materials as wastes. The floors derived for the two different solid waste definitions are remarkably different driven by the significant difference in the number of units and test results used in the respective MACT floor calculations. Under the proposed solid waste definition there are 40 total units in the energy recover category with 5 units making up the top 12%. For the alternative solid waste definition there are a total of 420 units and 52 units for the top 12%. The existing unit floors for the proposed solid waste definition are generally one to two orders of magnitude (up to 366 times) more stringent than floors for the alternative case. New unit floors are up to 20 times more stringent for the alternate case, including metals limits as low as one nanogram per cubic meter. These vast differences clearly illustrate the potential impact the solid waste definitional rule can have on determining MACT floors. More than likely the final solid waste definitional rule fall somewhere in between.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 2

Comment: EPA has proposed changes to its Commercial and Industrial Solid Waste Incinerator (CISWI) regulations that assume that a large number of combustion units currently regulated as boilers and kilns will become CISWI units. The increase in the universe of units regulated under the CISWI rule is based on the proposed Identification of Non-Hazardous Secondary Materials that are Solid Wastes, 75 FR 31844 (June 4, 2010).

There is no doubt that comments submitted on that proposed RCRA rule will indicate that many of the units EPA is proposing to regulate under the CISWI rule do not in fact burn solid waste.

Therefore EPA cannot properly promulgate final CISWI or Boiler MACT limits until the solid waste definition rule is finalized and universe of units subsequently and appropriately divided into CISIWI and Boiler MACT units. For instance, the "CA Wheelabrator Shasta" biomass fired boiler was included as CISWI unit based on the proposed solid waste definition rule. While the unit was permitted years ago to combust some small amounts of solid waste (such as paper cubes and cardboard), it has not combusted these fuel types in years and should be appropriately regulated under Boiler MACT. Nonetheless the Wheelabrator Shasta boiler was one of the top 12% performing energy recovery units and its data used in the proposed lead and cadmium limits for existing energy recovery units. Further it was also the best performing unit and used to set the cadmium floor for new energy recovery units despite combusting only biomass fuels.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 3

Comment: The use of the Wheelabrator Shasta emissions data (a facility that should be subject to boiler MACT) to determine MACT floors for CISIW energy recovery units underscores the importance of finalizing the solid waste definitional rule prior to under taking MACT floor determinations.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any

concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 3

Comment: EPA must finalize the definition of Non-Hazardous Secondary Materials that are Solid Wastes, re-evaluate the CISWI proposal in light of these comments, and develop more reasonable and defensible emission standards for combustion units that are truly burning solid wastes.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 4

Comment: EPA Must Finalize an Appropriate Limited Definition of Solid Waste Under the Section 129 Rule and Then Revaluate the CISWI Proposal Based on That Rule

As detailed in AISI's comments on the Proposed Section 129 rule, many changes are necessary to that proposal to make it comport with the statutory language, ensure consistency with EPA's existing policy and precedent, and prevent wholesale environmental harm by deterring key recycling practices. In the steelmaking context, the most pressing concerns relate to:

?’scrap Tires: EPA’s abrupt reversal of course to now propose that scrap tires are

"initially abandoned" by individual car owners is inappropriate. To the contrary, because almost 90% of these materials are being legitimately reused or recycled in a variety of industrial processes, they are by definition, not being disposed of, abandoned, or thrown away. Scrap tires that are reused in industrial processes are not abandoned and are not solid waste.

Used Oil: By EPA’s own criteria, all used oil is "traditional fuel." Used oil, both on-spec and off-spec, has been historically managed as valuable fuel rather than waste. Consistent with the existing used oil regulations, EPA should deem all used oil (both on- and off-spec) to be traditional fuel.

Slag: Slag is managed as a valuable ingredient in a variety of industrial processes and is a valued economic commodity. Given the longstanding and widely accepted legitimate industry recycling practices for slag, it is not “discarded” and thus not a solid waste.

Sintering Materials: Sinter is used as a substitute for iron ore and flux in the blast furnace, which produces iron that is ultimately refined to steel products at the integrated mill. This recycling process involves materials that are being legitimately used as ingredients for the purpose of metals recovery and do not constitute solid waste.

Biomass: Plans for use of biomass in iron ore kilns and pelletizing facilities in the iron and steel industry necessitate changes in the definition of traditional fuels to include clean cellulosic biomass and a definition for that material.

In light of the changes needed to properly characterize these materials (and the many other core deficiencies in EPA’s proposed definition of solid waste rule noted by others), it was premature and arbitrary to develop §129 standards based on that rule. EPA must first reshape and finalize an appropriately limited definition of Non-Hazardous Secondary Materials that are Solid Wastes and then reevaluate the CISWI proposal in light of the necessary changes. That is critical because those changes to the solid waste rule will fundamentally alter the pool of sources subject to §129 and thus impact both the proper subcategorization of those units and related emissions limits established. The changes needed to the underlying solid waste rule are far too significant and pervasive for the current derivative CISWI limits to survive as a “logical outgrowth” of the underlying earlier proposal. We stand ready to cooperate with EPA in taking the necessary steps to first revise the proposed definition of solid waste and then establish rational derivative §129 limits.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In

addition, as noted above, EPA provided a comment period far in excess of the period required in the CAA.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 8

Comment: If it can be demonstrated that CISWI rules are needed for the cement industry, then, after a re-proposal, promulgate emission standards that are achievable with the implementation of existing control technology that is proven to achieve the standards

Take more time to properly collect and evaluate emission data from the cement industry in developing CISWI emission limits

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA established the final CISWI standards consistent with the CAA by basing the standards on the information available to the Agency at the time. The cement industry could have provided additional data during the comment period and EPA would have considered it.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 14

Comment: It has been quite common over the years for EPA to seek and obtain extensions to court orders to allow sufficient time to conduct responsible and legally-defensible rulemaking. In fact, in the very case that EPA claims requires promulgation of the CISWI rule by December 16, 2010, EPA has obtained seven extensions of various deadlines related to the required rulemaking process. See, in reverse chronological order, Sierra Club v. Jackson, No. 1:01CV01537 (D.D.C. Apr. 13, 2010) (order), No. 1:01CV01537 (D.D.C. Sept. 10, 2009) (order), No. 1:01CV01537 (D.D.C. June 30, 2009) (order), No. 1:01CV01537 (D.D.C. Nov. 13, 2008) (order), No. 1:01CV01537 (D.D.C. Sept. 19, 2008) (order), No. 1:01CV01537 (D.D.C. Nov. 15, 2007) (stipulation), and No. 1:01CV01537 (D.D.C. Oct. 17, 2006) (order).

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA sought an additional extension and the D.C. District Court denied the request.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 17

Comment: As a first point in review of the database used to establish the MACT standards, we note that many of the decisions regarding which sources will be in which categories are still under consideration by EPA as a result of the parallel action EPA is taking regarding the definition of waste. Thus EPA is forced into the situation of evaluating the MACT emissions database without a final knowledge of how specific sources in the database will ultimately be classified. This appears to be an improper methodology for setting emission standards and it greatly inhibits the public's ability to present comments on specific emission limits since the sources from which these limits are generated are subject to potential reclassification in the final rule.

EPA proposes emissions limits for two different waste definition scenarios in this proposed rule. These emission limits vary by up to three orders of magnitude for existing energy recovery units. And this variation does not even account for minor modifications EPA may make within the general approaches in the final regulation. There is additional uncertainty regarding some combustion sources related to the forthcoming utility MACT. It is difficult to provide specific comments on these issues with so many factors unresolved.

ARIPPA suggests that EPA first finalize the waste definition rule and then re-propose the three combustion rules (i.e. this CISWI rule, the major boiler MACT and the area boiler MACT) so that the public has a clear understanding of what limits are actually being proposed for which sources and so that they may comment more appropriately.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 17

Comment: For all of the reasons developed throughout these comments, Holcim (US) urges EPA to repropose this rule. Holcim (US) has significant concerns with EPA's proposal on multiple fronts, including general legal issues, technical deficiencies, implementation mechanics, and monitoring considerations. The frequency and extent of technical deficiencies, from the use of inappropriate data sources to the flawed analyses to the incorrect application of testing and

sampling methodologies, is particularly alarming, and warrants nothing less than the re-proposal of the CISWI rule.

The finalization of the SWI rule is also a key consideration. This proposed rule largely turns on the SWI rule, whose purpose is to clarify which NHSM are, or are not, solid wastes when used in combustion units. As such, it is commonsensical to delay the CISWI rulemaking until the SWI rule is finalized. Otherwise, the universe of NHSM defined as solid waste is unknown and the kilns deemed incinerators, whose environmental performance will be used to develop the CISWI standards, cannot be identified. Therefore, in the absence of the finalization of the SWI rule, appropriate CISWI standards are unable to be established.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 17

Comment: As these comments show, EPA has both the need and the opportunity to make significant changes to the proposed CISWI rule which will reduce the burden on affected sources while still providing ample protection to health and the environment. EPA should develop and issue for public comment a new proposal that corrects the fundamental technical and data issues that compromise the validity of the proposed standards and address the basic legal infirmities that call into question the viability of key aspects of the rule.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence.

Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 25

Comment: ACC Supports EPA's Conclusion That The Agency Is Not Required To Recalculate Floors Every 5 Years

Sections III.B (75 FR 31946) and III.C (75 FR 31947) of the proposed rule describe EPA's reasoning on the five-year review of the performance standards. EPA states in these sections that this review under section 129(a)(5) does not require a recalculation of the floor. ACC supports EPA's conclusion. As EPA makes clear, the D.C. circuit addressed the issue and firmly established that no such automatic updating is required. NRDC v. EPA, 529 F. 3d. 1077, 1083-84 (D.C. Cir. 2008).

Response: We thank the commenter for the comment. See preamble Section V. for the discussion on EPA's approach for conducting a 5-year review under CAA section 129(a)(5).

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 26

Comment: CIBO strongly supports the assertion that there is no requirement , legal or otherwise, to recalculate the MACT floors every 5 years.

Response: We thank the commenter for the comment. See preamble Section V. for the discussion on EPA's approach for conducting a 5-year review under CAA section 129(a)(5).

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 31

Comment: We believe that the only responsible course for EPA to take, in light of the inadequacy of its data is to set aside CISWI standards for cement kilns until adequate data is collected to establish legally-supportable floor limits. At that time, Lafarge would expect EPA to issue a new proposal (if deemed necessary) for public comment.

EPA has followed this course of action innumerable times in its history of its rulemakings, and even if EPA somehow felt that it were subject to a court-ordered deadline here, EPA could

always seek an extension from that deadline. EPA has followed this course of action innumerable times as well, in fact, the deadlines in the very order EPA erroneously claims mandates final CISWI rules have been extended several times.

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, we maintain the standards were established consistent with the CAA in that we used the information we have available at the time of the action.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 9

Comment: If it can be demonstrated that CISWI rules are needed for the cement industry, then, after a re-proposal, promulgate emission standards that are achievable with the implementation of existing control technology that is proven to achieve the standards

Take more time to properly collect and evaluate emission data from the cement industry in developing CISWI emission limits

Response: See preamble Section V. for the response on the CISWI Promulgation Schedule and 112(c)(6) Obligations. EPA based the proposed standards on the proposed definition of solid waste and also indicated in the proposal the standards that would be in effect if the alternative definition of solid waste was adopted. Therefore, sources should have been able to evaluate they would be subject as proposed. Further, EPA has considered the final definition of non-hazardous solid waste in issuing the final CISWI standards. As a result, we have removed some sources from the CISWI inventory but we have not changed our approach to setting the standards. For this reason, we maintain the public could fairly evaluate the CISWI rule and identify any concerns with the approach taken. The fact that the standards may have changed as the result of a changed inventory, without a change in the analytical approach, is of no consequence. Standards often change after proposal based on the submission of additional information and we see no substantive difference between that situation and the situation we have in this case. In addition, we maintain the standards were established consistent with the CAA in that we used the information we have available at the time of the action. The cement industry could have submitted additional data during the comment period and EPA would have considered it.

Commenter Name: Eric Trauner
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 4

Comment: There could be some debate as to whether the underlying law can be construed as requiring a study on energy conservation. As for execution of such a study, expectations for review of energy conservation options may be defined differently by different oversight authorities. US-EPA would do well to clearly state that the philosophies of Quality Systems and Environmental Management Systems would be considered adequate for such studies.

Response: Commenter does not explain how this comment relates to the proposed CISWI standards and we thus provide no response.

4.0 MACT FLOOR ANALYSIS

4.1 MACT Floor: Methodology: General Approach

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 5

Comment: EPA has proposed emission standards based on a pollutant-by-pollutant approach that relies on a different set of best performing sources for each pollutant. ACC believes this methodology is flawed and results in standards that are unrealistic and are not representative of the levels actually being achieved by the best performers.

In other words, looking just at individual HAP data from different best performers without regard for the overall performance of these sources results in a set of standards that reflect the performance of a theoretical set of best performing sources that can simultaneously achieve the greatest emission reductions for each and every HAP. This does not reflect the actual performance of real sources.

What's more, our preliminary analysis of the proposed limits has determined that no one source exists that can meet all the standards concurrently. ACC believes that EPA should use other methods to establish these emissions standards which more accurately reflect the emission levels being achieved in practice by the best performers.

EPA's method of setting MACT floors rightly takes into account variability of fuel sources. However, we are concerned about the particular method of accounting for variability because the underlying data are not in fact representative of the range of expected operations and true variability hat reasonably should be expected from better performers.

The reason is that emissions data relied upon in the proposal were produced during reference method performance testing over a short period of time. ACC recommends that EPA reconsider its approach to adjusting the emission limits that provide a realistic adjustment of standards.

Response: See preamble Section V. for the responses on the MACT Floor Analysis including responses on Pollutant-by-Pollutant Approach and Alternative Approaches, and Methodology (UL or UPL).

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 7

Comment: The resulting MACT floors are so low that equipment manufacturers have informed some ACC member companies that no known controls can be specified to achieve compliance with emission limits such as carbon monoxide and dioxin/furn.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and control technology assumptions for the floor and beyond the floor.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 65

Comment: The breadth and impact of these rules can be seen by the number of facilities listed in EPA's Boiler/Process Heater MACT Survey database. Over 2,400 facilities across more than 50 NAICS Codes, including not only manufacturing facilities but also educational services –- colleges and universities -– hospitals, nursing and residential care facilities, and national security, military bases will be impacted.

EPA indicates that the Boiler/Process Heater MACT Rule will cover 13,555 units at 1,608 facilities nationwide. And the Area Source Rule will cover 183,000 units at 91,000 facilities nationwide. The CISWI Rule and the Solid Waste Definition Rule will directly impact many of these sources and many other facilities and combustion units.

As proposed, the rules impose emission limits with no known means or assurance of achieving them. This will result in incredible uncertainty in the regulated community and a reluctance to invest in the United States.

We would like to remind EPA that MACT includes the word achievable. New source limits so low as to preclude installation of new sources are not in line with Congress' intentions in drafting NESHAP provisions for the Clean Air Act. Facility owners must be able to obtain combustion equipment and emission controls to utilize the available and most economical fuels with vendor guaranties that emissions can actually meet the –- meet the limits during normal and expected operating conditions. The proposed existing, and especially new source emission, limits preclude

that ability. CIBO challenges EPA to identify existing units that have demonstrated the ability to achieve all the proposed existing or new source emission limits simultaneously with the ability to be replicated any place in the United States.

Imposing severe and unattainable emission limitations on sources that use or may use locally available alternative fuels such as bio-based fuels, landfill gas, and process off-gases, will decrease the use of alternative fuels and put greater demand on conventional fossil fuel use to the extent that continued operations are justified. These impacts are counter to the stated administration goals of improving national energy efficiency, reducing greenhouse gases, increasing national security, and increasing employment.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches. Further, See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 91

Comment: I encourage you to best-performance standards that are available out there, even if that means cherry picking data. I'm not against that. If that is what you need to do to fulfill your mission and to protect us here, the American people.

Response: See preamble Section V.L. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 11

Comment: The law requires EPA to base CISWI emission limits on control levels that the best performing sources have actually achieved in practice. However, EPA's proposal violates that condition in multiple ways.

By setting floors based on the average of the top performing 12 percent of units in a subcategory and also using a confidence limit to attempt to account for variability, one would assume that at least 6 percent of all units in each subcategory would be able to comply with the emission limits with no further controls. However, an analysis of the data in EPA's database shows that this is not the case. For example, the CISWI MACT floor memo [see submittal for footnote.] Table A-3 indicates that less than 3 percent of energy recovery units will meet each proposed limit. Further, there are no energy recovery units or incinerators that have data in EPA's database to indicate

they can meet all of the limits simultaneously. That in itself indicates something is wrong with EPA's approach.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 7.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 14

Comment: EPA's proposal does not take adequate account of the variability associated with emissions from units over time. EPA's use of short term tests to measure CO, S02, and NOx does not address the varying levels of emissions that can be seen from hour to hour for each of these pollutants. Even EPA acknowledges this fact in the Boiler MACT preamble: "We believe that single short term stack test data (typically a few hours) are probably not indicative of long term emissions performance, and so are not the best indicators of performance over time [see submittal for footnote.] In the final rule, EPA must use data to set the standard that are consistent with the form of the standard (e.g., if CEMS are required as the compliance method, CEMS data should be used to set the limits).

Response: See the response to comment EPA-HQ-OAR-2003-0119-2453, excerpt 11.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 16

Comment: There is no assurance that EPA has conducted thorough data quality reviews to ensure that the data are representative. EPA has used data to set floors that represent levels at or below which the testing and analytical methods are truly capable of measuring. In some cases, values of zero are being used in floor calculations, which are not at all appropriate, as there is no control technology capable of reducing emissions to zero since the emissions of a pollutant can only be zero if there is nothing in the fuel or feed to produce emissions of that pollutant. Many of the flaws in these methods could be reduced with better quality and quantity of data.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 12.

Commenter Name: Michael R. Shoemaker
Commenter Affiliation: Wenck Associates, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1840.1
Comment Excerpt Number: 2

Comment: The process by which the EPA determined the MACT standards for new CISWI units does not adhere to Clean Air Act (CAA) requirements.

As stated in the Background which provides the summary of statutory authority, Section II. Part A.:

For new and reconstructed sources, CAA Section 129(a)(2) provides that the "degree of reduction in emissions that is deemed achievable * * * shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator. Emissions standards for existing units may be less stringent than standards for new units, but "shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category.'' (p. 31941)

The CAA language specifically states that standards are based on "the best controlled similar unit" in contrast to the statement regarding standards for existing units which deliberately includes an average from multiple units. The word "unit" is singular and indicates that a standard will be set based on the single unit which is best controlled as determined by the Administrator.

The CAA provides the EPA with "discretion to distinguish among classes, types, and sizes of incinerator units within a category while setting standards." (p. 31940) However, the EPA has used multiple units to determine standards rather than the best controlled unit, "...the approach ranks individual CISWI units based on actual performance and establishes MACT floors based on the best performing source for each pollutant and subcategory...." (p. 31943) The method does not follow CAA requirements.

As documented in the memo titled "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" dated April 26, 2010, from Eastern Research Group to the EPA, the rankings included as Tables B-1 to B-48 for each category show the best controlled units for each subcategory by pollutant. Using energy recovery units as an example, the ALIPRiverdale No. 2 Bark Boiler/BK2 is the only unit that makes the top five rankings for more than 4 pollutants. The No. 2 Bark Boiler is ranked in the top five for six pollutants. However, the unit only leads the subcategory for control on particulate matter (PM). Moreover, the unit only achieves in practice three of the proposed standards being proposed, hydrogen chloride (HCl), lead (Pb), and PM.

The selection of different performance by different units to set a standard does not follow the CAA language.

The EPA should use the best controlled similar unit to determine emissions standards rather than using multiple units and selecting performance standards that are not truly achieved in practice as required by the CAA.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 3

Comment: The MACT Floor limits rational. We understand that the EPA has performed a Combustion Survey Information Collection Request (ICR) indicating a population of 176 CISWI units, and is using the received data to set the proposed emission limits of the existing and new CISWI units. However, 176 is only a small fraction of all incinerators, kilns, energy-recovery units, furnaces, fluidized beds, and ovens operating presently within the USA, as the oven-manufacturers alone estimate over 10,000 units in-use in the US.

Response: See preamble Section V. for the responses on the MACT Floor Analysis, rationale for subcaegories, and biased data collection from Phase II ICR survey.

Commenter Name: Catharine Fitzsimons
Commenter Affiliation: Iowa Department of Natural Resources (IDNR)
Document Control Number: EPA-HQ-OAR-2003-0119-1837.1
Comment Excerpt Number: 4

Comment: NACAA further expands on this disparity in its comments submitted regarding the CIS WI amendments and in its comments regarding the Boiler MACT [Docket No. EPA-HQ-OAR-20020058]. The IDNR concurs with the following, specific comments submitted by NACAA:

"In its MACT determinations EPA needs to explain how an emission limit imposed for a unit subject to section 129 (and therefore presumably meeting the reasonable cost test for MACT) is not reasonable for an identical unit subject to section 112. Under EPA's proposal those units will be regulated as energy recovery units (under section 129)...

EPA offers no technical justification for its proposal that these limits in fact represent application of the "maximum achievable" control technologies."

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Michael R. Shoemaker
Commenter Affiliation: Wenck Associates, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1840.1
Comment Excerpt Number: 4

Comment: The EPA does not follow the CAA language when setting the standards by not accounting for cost of implementing the proposed standards. As stated in Section II. Part A:

In setting forth the methodology EPA must use to establish the first-stage technology-based standards, CAA Section 129(a)(2) provides that standards "applicable to solid waste incineration units promulgated under Section 111 and this section shall reflect the maximum degree of reduction in emissions of [certain listed air pollutants] that the Administrator, taking into consideration the cost of achieving such emission reduction and any non-air quality health and

environmental impacts and energy requirements, determines is achievable for new and existing units in each category." (p. 31941)

The EPA states that it expects no new CISWI units to be built. As such, it can be argued that the cost of implementing the technology to meet the new standards is not reasonable and those standards are not achievable in practice.

The EPA should set the standards in accordance with the CAA by considering the cost of technology to meet appropriate standards.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 6

Comment: It appears EPA did some statistical analysis on a set of data without putting the results in context of present standards or accepted operating practices in determining whether or not these new standards are rational or reasonably achievable. When put in context, it is apparent that something is wrong with the proposed limits because they are not achievable. For example, the proposed emission limits for CISWI units are much more stringent than the emission limits in the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for large municipal waste combustors (MWCs). In some cases, the emission limits are orders of magnitude more stringent than the MWC limits. EPA should explain the rationale of regulating small sources much more stringently than large sources under the same regulatory system.

EPA should also review available permit determinations to gauge what emissions are achievable under real-world operating standards and existing technology.

Response: See preamble Section V. for the response on Consistency between other applicable NESHAP limits.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 8

Comment: No Unit Tested Would Comply with All of the Proposed Regulations for New Units.

By setting emission limits based on the best performing units on a pollutant by pollutant basis without considering whether those limits are achievable in combination and by testing units with and without controls, EPA has created a standard where not even one of the "best performers"

can comply with all of the proposed emission limits. A MACT that is not achievable is not a proper or legally defensible MACT. We believe that at the very least, EPA should conduct additional performance tests on gas fired units with direct flame afterburners to obtain a more representative data pool for all pollutants.

Response: See preamble Section V. for responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 2

Comment: EPA has significantly underestimated the number of units that have the potential for being drawn into the CISWI universe.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1906.1, excerpt 2.

Commenter Name: Robert E. McKenna
Commenter Affiliation: Motor & Equipment Manufacturers Association (MEMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1964.1
Comment Excerpt Number: 2

Comment: EPA's HAP by HAP approach to setting the MACT floor violates the Clean Air Act. EPA has proposed MACT standards for industrial boilers and process heaters that are based on individual pollutant-by-pollutant – rather than source-by-source – analyses in patent violation of the Clean Air Act. EPA has set limits for the suite of HAPs that reflect the "best performing source" for each, individual HAP. Put differently, EPA has "cherry picked" the best data in setting each HAP standard, without regard for the sources from which the data come. This results in a combined set of standards for purely hypothetical boilers that may never have actually been achieved by any single, real-world source. Creating hypothetical "best performing" units that demand performance not achieved by any actual

source in the category is arbitrary and capricious and violates the language of § 112, which focuses on actual "sources." See CAA § 112(d)(1), (2), and (3) Rather than focusing on individual HAPs, the Clean Air Act unambiguously directs EPA to set standards based on the overall performance of "sources."

Further, EPA has calculated its proposed MACT floors solely on the basis of emission data. EPA utterly ignored the plain mandate of the Clean Air Act by entirely neglecting to determine whether there was emission control equipment in use in each subcategory that could actually achieve those inordinately strict emission limits, a critical and necessary analysis required by the Clean Air Act.

EPA's focus on individual HAPs has resulted in a failure to recognize the critical interplay between emissions controls and emissions of other pollutants. For example, we are concerned that the controls necessary to meet the stringent emissions limitations for CO will result in increased energy usage, with the concomitant increase in emissions of NOx and other pollutants. Further, EPA failed to account for this interrelationship in its economic analysis.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 3

Comment: The Proposed Rule includes multiple pollutant MACT Standards based on the top 12% MACT floor based on individual pollutant test results. Demonstration of compliance with all pollutants simultaneously should be the basis for establishing MACT emission limits that would be instituted across the board for all pollutants.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 5

Comment: PCA's technical experts have reviewed the publicly-available documents, in the record, and report that those documents raise more questions than they answer regarding the Proposed CISWI Rule. While PCA believes it has accurately assessed EPA's thought process, conversion of data, and calculations in setting MACT floors PCA still believes EPA's docket is filled with inadequacies and incomplete information and the data relied upon by EPA is rife with errors and miscalculations. Examples of the inadequacies are provided below:

EPA must correct deficiencies and re-propose the Rule to allow for full public involvement in this rulemaking effort. The first step in doing so would be to remedy deficiency in EPA's analysis, which is that EPA artificially restricted the number of data sources that it should have considered in setting the MACT floor. The CAA § 112(d) requires EPA to set the MACT floor for existing sources using "the average emission limitation achieved by the best-performing 12 percent of the existing sources (for which the Administrator has emissions information)." See 42 U.S.C. § 7412(d). By choosing to seek data from only the best-performing sources from the Phase I testing, however, EPA seeks to put a thumb on the scale in favor of a more stringent MACT floor. EPA cannot deliberately avoid collecting data from sources that will provide a

more accurate picture of the performance of the sources overall. Such an effort would be in derogation of EPA"s duty to look at data providing "an accurate picture of the relevant sources' actual performance." Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 862 (D.C. Cir. 2001). "[W]here test results are relied upon, it should involve selection or use of test results in a manner which provides some assurance of the achievability of the standard for the industry as a whole, given the range of variable factors relevant to the standards' achievability." Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 433 (D.C. Cir. 1980). Here, by deliberately avoiding data from certain sources, EPA has failed fairly to consider the representativeness for the industry as a whole of the tested plants on which it relies, a procedural error where EPA's central argument is that the standard is achievable because it has been achieved at tested plants. Id

Response: See preamble Section V. for responses on CISWI Promulgation Schedule and 112(c)(6) Obligations and Biased Data Collection from Phase II ICR Testing.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 6

Comment: EPA MUST RE-EVALUATE EMISSION FLOOR LEVELS.

EPA should set MACT floor limits based on the same methodology to set limits under the Industrial Boiler MACT rule. This will insure consistency between the two programs. The FSI has separately commented on the methodology to set the MACT floors under the Industrial Boiler MACT rule.

Response: See preamble Section V. for the response on Consistency between other applicable NESHAP limits.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 7

Comment: The law requires EPA to base CISWI emission limits on control levels that the best performing sources have actually achieved in practice. However, EPA's proposal violates that condition in multiple ways.

By setting floors based on the average of the top performing 12 percent of units in a subcategory and also using a confidence limit to attempt to account for variability, one would assume that at least 6 percent of all units in each subcategory would be able to comply with the emission limits with no further controls. However, an analysis of the data in EPA's database shows that this is

not the case. For example, the CISWI MACT floor memo [Footnote: See DCN:EPA-HQ-OAR-2003-0119-0059] Table A-3 indicates that less than 3 percent of energy recovery units will meet each proposed limit. Further, there are no energy recovery units or incinerators that have data in EPA's database to indicate they can meet all of the limits simultaneously. That in itself indicates something wrong with EPA's approach.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 10

Comment: EPA Illegally Proposes to Set the Standard Based on One Type of Data, and Use Another to Determine Compliance

EPA's proposal does not take adequate account of the variability associated with emissions from units over time. EPA's use of short term tests to measure CO, SO2, and NOx does not address the varying levels of emissions that can be seen from hour to hour for each of these pollutants. Even EPA acknowledges this fact in the Boiler MACT preamble: "We believe that single short term stack test data (typically a few hours) are probably not indicative of long term emissions performance, and so are not the best indicators of performance over time." In the final rule, EPA must use data to set the

standard that are consistent with the form of the standard (e.g., if CEMS are required as the compliance method, CEMS data should be used to set the limits).

Response: See the response to comment EPA-HQ-OAR-2003-0119-2453, excerpt 11.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 11

Comment: EPA should provide for a removal efficiency standard as an alternative to the proposed concentration based emission standards.

Due to the differences in fuels used in the various sources potentially subject to this proposed rule and the challenges in reducing emissions to the proposed levels in the rule regardless of fuel source, EPA should consider an alternative to numerical emission standards for all pollutants. In addition to the tiered and fuel-specific standards previously discussed, a reasonable alternative for many of the pollutants is a control device removal efficiency in lieu of a fixed outlet

concentration. Specifying a removal efficiency of, say, 90% across an add-on control device as an alternate to the proposed concentration-based limits can provide for effective control of pollutants in situations where meeting all of the numerical standards is impractical.

Support for this approach comes from the fact that the proposed standards are not based on a single group of the best-performing CISWI units but on different units depending upon the pollutant, indicating that achieving the proposed numerical standard is fuel and/or control device dependent and meeting all the proposed numerical limits may not be practically achievable for any individual CISWI unit. Offering the option of meeting the numerical limit or attaining a specified removal efficiency may be the only practical solution for units with certain combinations of fuels and add-on controls.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 12

Comment: There is no assurance that EPA has conducted thorough data quality reviews to assure that the data are representative. Our comments critique several of the methods EPA used to set PM, CO, chlorinated dioxins and furans, metals and mercury limits. In some cases, values of zero are being used in floor calculations, which are not at all appropriate, as there is no control technology capable of reducing emissions to zero since the emissions of a pollutant can only be zero if there is nothing in the fuel or feed to produce emissions of that pollutant. Many of the flaws in these methods could be reduced with better quality and representative data.

Response: See preamble Section V. for the responses on treatment of detection levels and Limits for TMB and TEQ for dioxin/furans.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 18

Comment: EPA Has Failed to Collect or Analyze New Data on CISWI Despite Having Had Almost a Decade to Do So.

In a number of sections throughout the proposed rule, EPA discusses the sufficiency of its data on the composition of the CISWI sector. EPA claims that “due to the court-ordered

deadline, we did not have sufficient time to review and evaluate [newly submitted] data," and that it intends to include the data in its final analysis, if appropriate. 75 Fed. Reg. at 31,952. The claims of insufficiency of data misrepresent the history of the CISWI rule and the length of time that EPA has had to obtain new data and update its data set. As noted above and in the preamble to the proposed rule, EPA took a voluntary remand of its last CISWI rule in 2001 to rework and re-propose the rule. See, e.g., id. at 31,938. In a memorandum dated April 26, 2010, it is noted that:

[T]he initial database of CISWI units operating in the United States as of 1998 was

obtained from the information collected to support EPA's Industrial Combustion Coordinated Rulemaking (ICCR). In 2006, the list of CISWI units initially identified was distributed to 10 EPA regional offices to confirm whether the units were operational. Based on the information supplied by the EPA Regions, the initial CISWI database was revised to reflect the unit deletions/additions provided by the Regional contacts. The regions also provided emissions test reports, as available.

CISWI Test Data Database, EPA Doc. No. EPA-HQ-OAR-2003-0119-0055.

This memo points out that the data used for the proposed CISWI rule and the original data set

that EPA worked with in developing the 2000 CISWI rule are one and the same. This data is from 1998, and since then EPA has only updated the data to ascertain that the CISWI originally identified in 1998 are still in existence. Though EPA has made these very limited efforts to

update the accuracy of the data, the data is nonetheless over a decade old. EPA itself has had almost a decade since its own voluntary remand of the rule to obtain better data, and it has failed

to focus its efforts on doing so. EPA has no one to blame but itself for the flaws in its data set, and pointing to insufficient time to review newly submitted data that it should have gathered earlier should not now justify EPA's failure to consider that data.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 23

Comment: EPA Should Consider New Regulatory Approaches

EPA and states have expressed concern that the current framework for setting standards on a pollutant-by-pollutant basis may need a change, as evidenced by the EPA's multi-pollutant air quality management plan (AQMP) pilot program. Three air quality agencies are developing pilot AQMP's that focus on specific air quality concerns, sector-based emissions reductions, and risk-based emissions reductions. The AF&PA agrees that a multi-pollutant, sector-based approach to air quality regulation would make sense for the forest products industry. This would allow the

development of cost-effective regulatory approaches that achieve environmental benefit, while promoting energy self sufficiency, combustion improvements, and the use of renewable fuels without significantly increasing operational costs by requiring installation of additional emissions controls on these already regulated and well-controlled units. Any sector-based approach would need to reconcile conflicting requirements and focus further reductions to where significant public health risks are clearly established.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 29

Comment: Translation of Floors to Standards Enforced By CEMS

In the Pre-Publication Portland Cement NESHAP, EPA used the statistical equation for the UPL to translate PM emissions data that had been measured using stack tests to a floor that would be enforced using PM continuous emissions monitoring systems (CEMS). In doing this, EPA has made the assumption that the statistical characteristics of PM CEMS measurements are identical to those of the Method 5 stack test for PM, although no data are presented to support this assumption. EPA has also assumed that the emissions variability introduced by start-up, shut-down, and malfunctions is adequately allowed for in the floors that it establishes, but no evidence in support of this assumption is provided in the final rule. The CEMS measurements will record emissions during these periods, yet none of the stack tests on which the floor was established were taken during such times.

In the Proposed CISWI Rule, EPA proposes to require new waste-burning kilns to demonstrate compliance with the proposed mercury limit developed from stack tests using mercury CEMS. To the extent that compliance is to be demonstrated using CEMS for any of the pollutants considered in the Proposed CISWI Rule, EPA must have an adequate technical basis to adjust floor values determined from stack tests to have equivalent stringency when enforced using CEMS. The two very different sampling and measurement methods should be assumed to have different statistical characteristics until a demonstration has been made of their equivalency. Statistical differences may include bias – meaning that the methods give different numerical values on average – and differences in variance. The fact that a multi-day average determined from CEMS data will have attenuated variance because of the averaging does not in any way mean that CEMS measurements have the same (or lower) variability compared to stack tests when put on a comparable basis.

To understand the relative performance of the two measurement methods requires data taken each way (stack test and CEMS) for comparable averaging periods (3 hours) in sufficient numbers to allow an assessment of bias and variability. Further, EPA must make explicit adjustments in the average emission level and the variance to account for the effect of including SSM events in CEMS data used for compliance. The best performing kilns will regularly go through start up and shut down cycles and will unavoidably experience periodic malfunctions,

but these conditions have not been captured in the stack tests. EPA must take such events into explicit consideration in the translation if the best performing kilns are to be able to meet the resulting emission limitations. The data required to convert from stack test to CEMS do not now

exist, because mercury CEMS have never been used on a cement kiln, let alone on the specified best performers. EPA must develop appropriate data to adjust the floors before it can require compliance based on CEMS.

Response: See preamble Section V. for the responses on the MACT Floor Analysis, Start-up, Shutdown, and Malfunction Requirements, and Testing and Monitoring- CEMS data to set standards.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 32

Comment: CAA §129, like CAA §112 on which it was based, incorporates two different sets of requirements for setting emission limits for existing and new sources.

First, these emission limits must be "achievable," and must be set after considering "cost... non-air quality health and environmental impacts and energy requirements".

Second, standards for existing sources "shall not be less stringent than the average emissions limitation that is achieved [in practice] by the best performing 12 percent of units in the [regulatory category or subcategory] while standards for new sources "shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar source, as determined by the Administrator". These are the "MACT floor" provisions. See Nat. Res. Def. Council v. EPA, 489 F.3d 1250, 1254 (D.C. Cir. 2007).

Both the plain language of the floor provisions, which requires standards based on emission levels that actual sources have actually achieved on a consistent basis, and the parallel requirement that standards be achievable, require EPA to base its floor calculations on actual real-world emission results, not calculations or synthetic constructs.

Beyond that, standards will inevitably be set on the basis of limited test data or other information that does not precisely replicate the full range of conditions that sources will face in actual operation. As the case law and EPA practice have uniformly recognized, those standards will not be either "achievable" or cost-effective unless EPA when setting the standards adjusts them so that they can be met over the much wider range of operating conditions that sources will face in actual operation. Nat'l Lime Ass'n v. EPA, 233 F.3d. 631-32 (D.C. Cir. 2000);Sierra Club v. EPA, 167 F.3d. 658, 665 (D.C. Cir. 1999).

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)

Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 37

Comment: Further justification for a source approach rather than a pollutant by pollutant approach is evidenced by the interaction of sulfur, chlorides, metals, and mercury in boiler exhaust. Fuels with higher sulfur or chloride contents will form mercury particulates that are more easily captured in particulate control devices, while boilers burning fuels with low sulfur and chloride contents will emit mercury in its elemental form, which is harder to capture. There is also a large body of research which has documented that during combustion there is a complex interaction between fuel chlorine, alkali metal, and sulfur content that determines the amount of hydrochloric acid that is finally produced. Simply explained, when fuels containing chlorine and alkali metals are burned, HCl and alkali chlorides are formed. During such combustion, the ratio of HCl and alkali chloride is determined primarily by the combustion temperature, with lower HCl formation at higher combustion temperatures. However, sulfur is also present in the fuel, and the SO2 formed during combustion reacts with alkali chloride to release HCl [Footnotes: Duong, D. N. B., Tillman, D. A. 2009. Chlorine issues with biomass cofiring in pulverized coal boilers: sources, reactions, and consequences – a literature review. Presented at the 34th International Technical Conference on Coal Utilization and Fuel Systems, Clearwater, FL, May 31-June 5; Xu, J., Xie, W., Han, W., Dicken, L. Riley J. T., and Pan, W-P. 1998. The effect of chloride on emissions from atmospheric fluidized bed combustors. Journal of Fuel Chemistry and Technology, 152- 156; Liu, Y., Che, D., and Xu, T. 2006. Effects of NaCl on the capture of SO2 by CaCO3 during coal combustion. Fuel 85 (2006): 524-531.] A source approach would take these factors into account.

We recommend EPA develop overall rankings for each unit in each subcategory based on their emissions of all 9 pollutants and develop floors based on a common set of top

performers. The statute unambiguously directs EPA to set standards based on the overall performance of "units." Sections 129 (a)(2) specifies that emissions standards must be established based on the performance of "units" in the category or subcategory and that EPA's discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of units. These provisions make clear that standards must be based on actual units, and cannot be the product of pollutant-by-pollutant parsing that results in a set of composite standards that do not necessarily reflect the overall performance of any actual unit. Congress provided express limits on EPA's authority to parse units and sources for purposes of setting standards under § 129 and that express authority does not allow EPA to "distinguish" units by individual pollutant as is proposed in this rule.

By setting floors based on the average of the top performing 12 percent of units in a subcategory and also using a confidence limit to attempt to account for variability, one would assume that at least 6 percent of all units in each subcategory would be able to comply with the emission limits with no further controls. However, the following charts show this is not the case [See submittal for data tables provided by commenter showing number of energy recovery units and incinerators meeting the proposed limits.]

(X indicates there is data to indicate the unit meets the limit)

The CISWI MACT floor memo [see DCN:EPA-HQ-OAR-2003-0119-0059] Table A-3 indicates that less than 3 percent of energy recovery units will meet each proposed limit.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 48

Comment: For many of the units being regulated by this rule, EPA has obtained only one set of stack test data. One short term stack test does not represent the range of operating conditions and emissions from any unit. Stack tests are typically conducted at maximum normal operating conditions and when the unit is running at steady state. As units are expected to meet the proposed standards under all operating conditions, including startup, shutdown, and malfunction, it is imperative that EPA use as much data as possible from top performers to ensure that achievable standards are being set. The 2008 ICR only asked for the most recent stack test information from each unit. EPA should collect as much stack test information from units as is available.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 50

Comment: EPA should not use one method to set standards and another method to demonstrate compliance

We are concerned that EPA is developing standards based on stack test data while requiring compliance based on CEMS. It appears that EPA is using one method to set the standard and a totally different method to show compliance. The U.S. Court of Appeals for the D.C. Circuit has ruled that "a significant difference between techniques used by the Agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard." Portland Cement Ass'n v. Ruckelshaus, supra, at 396. We believe that using stack test data to set the standards and then CEMS to show compliance qualifies as "a significant difference between techniques." The primary difference between these two methods will be that the variability experienced during normal operations will not be captured during the stack test but will become apparent as the

facility operates a CEMS over time. We believe that if EPA wishes to use CEMS to show compliance with the standard, then the standard must be developed using CEMS data.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2092.1, excerpt 21.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 72

Comment: Setting MACT Floors on a Pollutant-by-Pollutant Basis Violates the Law and Results in MACT Floors That Bear No Relation to Emission Limits that are Being Achieved at the Best Performing Existing Sources

Pursuant to § 129(a)(2) of the CAA, EPA uses the MACT standard setting method to derive the applicable emission standards under § 129 of the CAA. 75 Fed. Reg. at 31941. EPA recognizes that the two-step process it describes in the preamble to the proposed rule is "the similarly required 'two-stage' approach under CAA §§ 112(d) and (f)." Id. While there may be some differences between the emission setting process in § 112 and § 129 of the CAA, both sections require that the MACT be based on the "emission control that is achieved in practice be the best controlled similar unit." See § 112(d) and § 129(a)(2). Section 112(d) of the CAA has been the subject of various court interpretations over the years, and many of those cases are applicable in the emission limit setting process of the § 129 of the CAA. However, EPA has misinterpreted many of those cases and is proposing to set a MACT standard that is inconsistent with the legal principles established under previous court decisions. Most importantly, the MACT process is clear that emission standards must be "achieved in practice" before finalizing the regulation. EPA, however, applies the "achieve in practice" standard on a pollutant-bypollutant" basis, which results in a final standard that has never been achieved by any subject

facility or best performer. EPA took this approach in the Pre-publication Portland Cement NESHAP. PCA submitted comments adverse to this approach in that rulemaking.

EPA's pollutant-by-pollutant approach to setting a MACT floor violates § 129(a)(2) of the CAA. See 42 U.S.C. § 7429(a)(2). The CAA requires a two-step process to set a MACT standard: First, EPA identifies a MACT floor for each pollutant and source category based on emission limitations that have already been achieved by the best-performing 12% of existing sources. Natural Resource Defense Council v. EPA, 479 F.3d 875, 877 (hereinafter Brick MACT); Northeast Maryland Waste Disposal Authority v. EPA, 358 F.3d 936, 954 (D.C. Cir. 2004) (stating that "[t]o satisfy this requirement, EPA must 'demonstrate with substantial evidence – not mere assertions' that the chosen floors 'represent a reasonable estimate of the performance of the [best-performing] units.'" (citing Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 866 (D.C. Cir. 2001)). Second, the CAA then requires EPA to determine whether stricter standards—beyond the floor limits—are achievable, taking into account cost and feasibility factors. Id. In this CISWI rulemaking, the EPA has chosen to establish the MACT floor by assessing the best-performing sources on a pollutant-by-pollutant basis, rather than by identifying the overall best-performing sources taking into account all pollutants. This method

violates the plain language and intent of MACT setting process, and the effect is a MACT floor that reflects a standard that no one plant in existence currently achieves.

A. EPA's Pollutant-by-Pollutant Methodology Is at Odds with the Plain Language

and Legislative History of § 129(a)(2) and the MACT process

The plain language of MACT process requires EPA to set a MACT floor for existing sources that is not less stringent than "the average emission limitation achieved by the best-performing 12 percent of the existing sources." Natural Resources Defense Council v. EPA, 489 F.3d 1250, 1254 (D.C. Cir. 2007) (emphasis added). Sections 129(a)(2) and 112(d)'s use of the terms "best-performing" and "existing" clearly means that sources in a category or subcategory that are used to set the MACT floor are to be real, not theoretical or hypothetical sources. See Northeast Maryland Waste Disposal Authority, 358 F.3d at 954. Indeed, § 129(a)(2) instructs that the MACT floor "shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source." Id. (emphasis added). The phrase "achieved in practice" can only mean that Congress intended actual sources, performing under real-life conditions, to be the benchmark for determining the MACT floors. Furthermore, the language of the statute does not speak in terms of the best-performing source or sources for each listed pollutant or group of pollutants. See 42 U.S.C. § 7429(a)(2). Rather, the focus is on the best existing source or sources for all pollutants, and what these sources truly can achieve on an overall basis. Id. If Congress wanted EPA to establish separate MACT floor levels for different pollutants, it would have worded § 129(a)(2) to allow this result by referring to the best-performing sources "for each pollutant" or "for each group of pollutants." See Bluewater Network v. EPA, 370 F.3d 1, 18 (D.C. Cir. 2004) (rejecting EPA's interpretation of § 213(a)(2) of the CAA as running counter to the plain language of the statute, reasoning that "[h]ad Congress intended the meaning and result which EPA urges, it would have said so more clearly."); Chevron U.S.A., Inc. v. Nat. Res. Def. Council, 467 U.S. 837, 842-43 (1984) (holding that if Congress has spoken directly to the disputed issue of statutory construction, "that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.")

EPA's pollutant-by-pollutant methodology is also at odds with the legislative history underlying the MACT setting process. See S. Rep. No. 228, 101st Cong., 1st Sess. 169 (1989). As the Senate report on the 1990 Amendments made clear, Congress required "the selection of emissions limitations which have been achieved in practice (rather than those which are merely theoretical) by sources of a similar type or character. An emissions limitation achieved in practice is one based on control technology that works reasonably well (doesn't require frequent and extensive modification or repair) under realistic operating conditions." Id. (emphasis added).

The focus on overall performance is not surprising because in the 1990 CAA Amendments Congress abandoned the MACT process' previous focus on individual pollutant standards, and adopted the technology-based multi-pollutant approach to regulating emissions in use under the Clean Water Act (CWA). See S. Rep. No. 228, 101st Cong., 1st Sess. 133-34 (1989). Thus, if one source can achieve a firm degree of control for one pollutant but not for another there may be no justification for including it in the set of sources from which the floor is calculated. See, e.g., Tanners' Council of America v. Train, 540 F.2d 1188, 1193 (4th Cir. 1976) (deeming CWA effluent limitations guidelines not achievable where plants in EPA's database were "capable of meeting the limitations for some, but not all, of the pollutant parameters").

B. Setting MACT Floors Based on Actual Emission Limitations Achieved at

Existing Sources Supports Economic and Technological Feasibility

By analyzing pollution control measures on a pollutant-by-pollutant basis, EPA establishes a MACT floor that no plant in existence currently meets. This was not the intended goal of setting the MACT floor; rather, the CAA allows that once EPA develops an appropriate floor, the Agency may consider whether it is appropriate to go "beyond the floor" and make the standard more stringent. In doing so, EPA must consider "the cost of achieving such emission reduction, and any non-air quality health, environmental impacts and energy requirements . . .." CAA § 129(a)(2). In comparison, EPA's proposed pollutant-by-pollutant methodology is in effect an end-run around the CAA mandate to weigh economics and other factors in setting MACT standards.

In evaluating the economic cost of achieving emission reductions and looking at one plant's emission control of only one pollutant to the exclusion of all other emission controls produces a disjointed view of cost implications and compliance feasibility. While an individual MACT floor for one pollutant might not appear cost-prohibitive, the total cost implications when combined with all of the other MACT floors for other pollutants, could become especially onerous, potentially forcing some regulated parties out of business, and barring the market entry for other potential entities. This absurd result is compounded when the proposed emission limits cannot be met even after the installation and proper operation of MACT hardware such as scrubbers and baghouses. Some facilities cannot operate certain types of control devices due to local operational constraints and feed material composition. Such a result violates the court's declaration in Nat'l Lime Ass'n 627 F.2d at 443 that under the CAA "EPA has a statutory duty to promulgate achievable standards."

While the CAA was authored with the intent of reducing air pollution, Congress did not intend to disrupt the "productive capacity" of the United States through the promulgation of economically unachievable standards. 42 U.S.C. § 7401(b)(1). By setting MACT floors

individually and ignoring the collective cost implications of the entire rule, EPA would effectively disregard the CAA's requirement that air pollution control be advanced while promoting the nation's "productive capacity." Id. Emissions standards are to be established by taking costs into consideration. 42 U.S.C. § 7429(a)(2). By considering hypothetical sources and promulgating MACT standards that are unachievable, EPA is nullifying these statutory provisions.

C. EPA's Previous Use of a Pollutant-by-Pollutant Analysis was Based on Authorities Not Applicable to the Clean Air Act

EPA previously used a pollutant-by-pollutant methodology to set MACT floors in the context of the Prop. Nat'l Emissions Stds for Haz. Air Pollutants for Hazardous Waste Combustors, 69 Fed. Reg. 21198 (Apr. 20, 2004) (hereinafter HWC NESHAP.) Several parties submitted public comments questioning EPA's approach and pointing to the fact that EPA had failed to cite a single existing source which met the various MACT floor standards. See EPA's Response to Comments on April 20, 2004 HWC NESHAP Proposed Rule, Volume 1: MACT Issues, 126 (Oct. 2008). In response, EPA attempted to defend its practice of establishing pollutant-by-pollutant MACT standards by citing Chemical Mfr. Ass'n. v EPA, 870 F.2d 177, 239 (1989), clarified 885 F.2d 253, 264 (5th Cir. 1989), cert. denied, 495 U.S. 910, (1990), a Fifth Circuit case where the court held that, under the CWA, "best available technology" (BAT) referred to the single best-performing plant on a pollutant-by-pollutant basis.

EPA's reliance on Chemical Mfr. Ass'n is misplaced as the CAA's procedure regarding the selection of MACT technologies differs on a textual basis from the CWA's procedure for identifying best available technology. Under the CWA, BAT standards are to be set based on "the best practicable control technology currently available." 33 U.S.C. § 1311(b)(1)(A)(i). The Court in Chemical Mfr. Ass'n read this provision to allow for pollutant-by-pollutant determinations finding no statutory requirement that all of the BATs actually be achieved by an existing plant, just that each technology be demonstrated available. 885 F.2d at 264. The CAA, on the other hand, more narrowly limits the basis for MACT designation to what has been achieved at existing sources, not what could be hypothetically achievable on a per-pollutant basis, as discussed above.

D. The Proposed Standards Are Technically Interdependent

In the HWC NESHAP, EPA also attempted to support its use of the pollutant-by-pollutant methodology by stating that "EPA believes that because all our standards are not technically interdependent (i.e., implementation of one emission control technology does not prevent the source from implementing another control technology), the fact that sources are not achieving all the standards simultaneously does not indicate a flaw in the methodology." EPA's Response to Comments on April 20, 2004 HWC MACT Proposed Rule, Volume 1: MACT Issues, 126 (Oct. 2008). EPA's conclusion in the HWC NESHAP is inapplicable to the Proposed CISWI Rule. As an example, a problem that has been observed in the municipal solid waste industry using ACI (an EPA-identified technology to reduce mercury emissions) that could also occur in the cement industry has been the formation of additional solid-phase dioxins/furans, thus increasing the emissions of dioxin/furans (which are regulated under the MACT standards). It was reported by Chang and Lin [Footnote: Zygarlicke, C.J.; Galbreath, K.C.; Toman, D.L. Coal Combustion Mercury transformations. In Proceedings of the Air Quality II: Mercury, Trace Elements, and Particulate Matter Conference; McLean, VA, Sept 19–21, 2000.] that the total dioxin/furan concentrations exiting a municipal incinerator were 2.4 times higher than the input level when implementing ACI. This phenomenon was also reported by Schreiber for cement plants burning hazardous waste [Footnote: Schreiber, R.J., Jr.; Kellet, C.D; Joshi, N. Inherent Mercury Controls Within the Portland Cement Kiln System; PCA R&D Serial No. 2841, Portland Cement Association, Skokie, Illinois, USA, 2005, 24 pages.]

These findings call into question EPA's legal justification that control requirements for one pollutant do not impact another.

EPA's use of a pollutant-by-pollutant method to set MACT floors violates the plain language and intent of the CAA. The result is a MACT standard based on no set of emission limitations in use at a single existing source. Congress did not design MACT standards to be unachievable or to be forced upon regulated sources regardless of economic or technological feasibility. See Nat'l Lime Ass'n, 627 F.2d at 443 (stating that, under the CAA, "EPA has a statutory duty to promulgate achievable standards"). Rather, the Act recognizes the competitive nature of business, and only requires emission standards to be set relative to what other operating plants achieve. Accordingly, EPA should comply with § 129(a)(2) and the court directives relating to the MACT setting process, and set the MACT floor on the emissions limitations for all pollutants achieved by the best-performing 12% of real, existing plants.

Response: See preamble Section V. for response on Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 1

Comment: Some, if not most, of the universe of laboratory analysis units and burn-off ovens (particularly part and rack reclamation units) were most likely omitted in the ICR responses. Indeed, there may have been omissions for other types of units as well, such as agricultural waste units and cyclonic burn barrels. In addition, a number of these units would have been located at Section 112 area sources which were not even included in the scope of the ICR. In fact, because of the broad nature of the proposed CISWI changes (i.e., theoretically, CISWI applicability could be triggered by the combustion of a single molecule of solid waste, even if inadvertent or accidental), Dow believes that the number of CISWI at Section 112 area sources may greatly outnumber those at Section 112 major sources. As a result, Dow believes that the data used to develop subcategories and the resultant emission limits is incomplete and flawed.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the responses on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units and rationale for subcategories-burn off ovens.

Commenter Name: Michele E. Pugh
Commenter Affiliation: Flint Hills Resources, LP (FHR)
Document Control Number: EPA-HQ-OAR-2003-0119-2099.1
Comment Excerpt Number: 1

Comment: FHR disagrees with the method used to calculate the CISWI floor. The preamble to the proposed rule EPA states at 75 FR 31952:

For existing sources, we calculated the MACT floor for each subcategory of sources by ranking the emission test results from units within the subcategory from lowest emissions to highest emissions (for each pollutant) and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources. That is, the overall 3-run test average values for each existing unit for each pollutant were compiled and ranked from lowest to highest to identify the best performing 12 percent of sources within the subcategory for each pollutant (i.e., on a pollutant-by-pollutant basis).

EPA justified the pollutant-by-pollutant approach at 74 FR 51380 in the preamble to the Hospital/Medical/Infectious Waste rules [Footnote: Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Hospital/Medical/Infectious Waste Incinerators. 74 FR 51368. October 6, 2009].

EPA, therefore, believes—and has long believed—that the combination of Section 129(a)(4), requiring numerical standards for each enumerated pollutant, and Section 129(a)(2), requiring that each such standard be at least as stringent as the MACT floor, supports, if not requires, that floors be derived for each pollutant based on the emissions levels achieved for each pollutant.

FHR believes that this pollutant-by-pollutant approach is unreasonable. The Clean Air Act ("CAA") states that emission standards should be based on emission controls "...achieved in practice by the best controlled similar unit ..." [emphasis FHR] for new units and the best performing 12% of existing units [Footnote: CAA §129(a)(2)]. In the same section the CAA also states that the Administrator can distinguish between classes, types, and sizes of units. However, it does not state that a distinction can be made by pollutant. Therefore the pollutants emitted should be considered together for a single unit.

A review of the pollutant-by-pollutant methodology detailed in the memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" [Footnote: Huckaby, Jason, Amber Allen, and Kristen James. Memorandum to Charlene Spells, Toni Jones, and Ketan Patel, "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category." April 26, 2010. Docket number EPA-HQ-OAR-2003-0119-0059] Tables B-30 through B-37 (incinerator rankings for individual pollutants) shows that no single unit was used in the floor calculation for all ten of the pollutants. This methodology, does not reflect the emissions achieved in practice by any individual unit. There is no evidence that a single CISWI unit can achieve all the emission limits simultaneously.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 1

Comment: Taking a pollutant-by-pollutant approach to establishing the MACT floor for existing units yields results inconsistent with the Clean Air Act ("CAA"). CAA section 129(a)(2) indicates that the MACT floor for existing facilities should be set by examining the best performing 12 percent of units in a category. Any more stringent requirement must balance cost, other environmental impacts, and energy requirements and be "achievable." Instead of establishing limits at the levels achieved by the best-performing 12% of facilities, the pollutant-by-pollutant approach establishes emissions limits that can be met by far less than 12% of all units in a category. Thus, the pollutant-by-pollutant calculation method cannot be squared with the statutory approach of establishing a MACT floor. The pollutant-by-pollutant calculation method, in contrast, is a "beyond-the-floor" approach, and as such must be balanced against other factors and yield "achievable" limits.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 2

Comment: While MMA supports certain aspects of the proposed rules described below, we remain fundamentally concerned that EPA has proposed standards that are not actually "achievable" or "achieved in practice" by existing "sources," as expressly required by the Clean Air Act. This unfortunate and unworkable result is driven by a series of flawed decisions embedded in the proposed rule. For example, by looking separately at emission data for each hazardous air pollutant, EPA has proposed standards based on hypothetical "best performing" units that demand performance not achieved by any actual sources, rather than using data that are representative of what is actually achieved by real sources. In addition, EPA's reliance on incomplete and defective data has resulted in flawed standards that are biased towards overly-restrictive limits. In order to avoid these results and to conform the rules to the requirements of the Clean Air Act, we request that EPA make significant changes to the proposed rule.

Response: See preamble Section V. for the responses on the MACT floor analysis, including the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 3

Comment: Emission limits in some cases are simply unachievable.

Similar to the Boiler MACT rule, there are significant problems with the data used to establish the CISWI MACT Floor emission limits. As explained further in the ACC and CIBO comments, there are problems with top performer units actually being representative of waste burning units in the CISWI subcategory, as well as data errors and other issues. EPA must fully confirm data accuracy and appropriateness relative to detection levels. In addition, EPA needs to rethink its pollutant by pollutant and statistical determination approach to reflect actual unit performance.

Response: See the Data Amendments and Corrections Following Proposal memorandum in the docket for a discussion on how data were incorporated to address comments. Further, See preamble for responses to Treatment of Detection Levels, Pollutant-by-Pollutant Approach and Alternative Approaches, and Methodology (UL or UPL).

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1

Comment Excerpt Number: 4

Comment: EPA should also consider its proposed MACT rules in light of BACT determinations for similarly situated units and explain why emission limitations deemed "available" as BACT are orders of magnitude more stringent than the ("maximum achievable") MACT standards. A comparison of the proposed standards for new units with those proposed for existing units highlights the issue. The table [see submittal for table provided by commenter] that sets out the differences for waste burning kilns: [Footnote: These differences suggest that the MACT floor for existing units was largely based on emissions from uncontrolled units. They may also be the result of large "variability" calculations. For incinerators and for Energy Recovery Units (except for CO) the differences are much smaller, suggesting that the "best performing units" may have some level of controls. There may also be an error, as the SO2 limit proposed for new Energy Recovery Units is the same as that proposed for existing units.]

A review of EPA's RACT/BACT/LAER clearinghouse reveals a number of BACT decisions for cement kilns that are far more stringent than EPA's proposed limits [Footnote: Many of these decisions are for new units, but are based on technologies suitable for retrofit (albeit at somewhat greater cost).] In addition, EPA's control technologies guidelines for cement kilns, [Footnote: See, http://www.epa.gov/ttn/catc/dir1/cement_updt_1107.pdf See also additional studies by Northeast States for Coordinated Air Use Management (NESCAUM)

http://www.nescaum.org/documents/ici-boilers-20081118-final.pdf/;http://www.nescaum.org/documents/hg-controland-measurement-techs-at-us-pps_201007.pdf/] published under section 108 of the CAA, document the existence of cost-effective retrofit technologies available for control of SO2 and NOx in cement kilns. EPA seems to assume either that there are no cost-effective controls for these pollutants at cement kilns or that the CAA does not require MACT limits to be based on these controls. EPA should explain its rationale in greater detail and set forth a basis for any final decision it makes. There are other proposed floor limits that greatly exceed what would be expected from the application of maximum achievable technology. For example, under the alternate definition of solid waste, EPA's proposed MACT limit for CO emissions from biomass-fired fluidized bed boilers is 10,650 ppm. EPA should review each of its proposed MACT limits to ensure that they reflect the application of maximum achievable technology, not merely the MACT floor. In addition, it would seem that MACT should be more stringent than either GACT or BACT. Accordingly, MACT limits for cement kilns for SO2 and NOx should be at least as stringent as BACT limits for such units.

Response: Section 129 of the CAA prescribes the requirements for MACT for existing and new sources. See preamble Section V. for the responses on the MACT Floor Analysis, rationale for subcategories, and testing and monitoring.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 4

Comment: EPA's HAP by HAP approach to setting the MACT floor violates the Clean Air Act. EPA has proposed MACT standards for industrial boilers and process heaters that are based on individual pollutant-by-pollutant – rather than source-by-source – analyses in patent violation of the Clean Air Act. EPA has set limits for the suite of HAPs that reflect the "best performing source" for each individual HAP. Put differently, EPA has "cherry picked" the best data in setting each HAP standard, without regard for the sources from which the data come. This results in a combined set of standards for purely hypothetical boilers that may never have actually been achieved by any single, real world source. Creating hypothetical "best performing" units that demand performance not achieved by any actual source in the category is arbitrary and capricious and violates the language of § 112, which focuses on actual "sources." See CAA § 112(d)(1), (2), and (3) Rather than focusing on individual HAPs, the Clean Air Act unambiguously directs EPA to set standards based on the overall performance of "sources."

Further, EPA has calculated its proposed MACT floors solely on the basis of emission data. EPA utterly ignored the plain mandate of the Clean Air Act by entirely neglecting to determine whether there was emission control equipment in use in each subcategory that could actually achieve those inordinately strict emission limits, a critical and necessary analysis required by the Clean Air Act.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2101, excerpt 4.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 5

Comment: EPA acknowledges that it did not use any of the emission test reports in state and local permit authority files and provided to it in the summer of 2008 (in the NACAA Model Rule database) in establishing its proposed MACT floors [Footnote: NACAA has formally resubmitted this data to the dockets in these rulemakings.] Instead, EPA based its calculations entirely on its "new" data set that incorporates data collected by emission sources. We believe this is a clear error that will jeopardize the final rule. We acknowledge that the subsequently collected data fills gaps that existed in the NACAA data set and do not object to EPA's use of this additional information. Incorporation of these test results in EPA's MACT floor calculations is not likely to change the calculated floor for many subcategories, but, especially considering the proposed adoption of many small subcategories, this cannot be known or assumed to be true. Exclusion of reference test results merely because they were maintained in the files of the regulatory authorities rather than those subject to regulation is arbitrary.

NACAA believes that its data set is more objective than the subsequent industry testing, since the NACAA testing was often supervised by state or local inspectors and was conducted

without knowledge by the source (or the permitting authority) that the data would be used in developing emission limitations. In contrast, testing conducted as part of EPA's more recent information-gathering activities was almost universally conducted by sources who understood that it was in their interest to obtain high emission levels during the testing and was conducted without oversight by federal, state or local authorities. The regulated community was allowed to

define the operating parameters for the tests [Footnote: We do not assert that there was widespread "gaming" by industry, only that there is no reason to believe that the more recent data is more credible than the information submitted by NACAA. We do note that the Office of Management and Budget (OMB) was extensively involved in the development of the test plan and that NACAA's comments respecting the test plan were largely ignored by EPA and OMB, while industry requests were accommodated. NACAA hereby incorporates its comments to EPA and OMB on the proposed testing in this comment and the administrative record in this matter.] More importantly, the EPA data includes numerous entries where a source was combusting different fuel mixes, which NACAA believes will be difficult to translate into enforceable MACT limitations. While NACAA and EPA data sets often produce generally consistent results, EPA is not free to exclude from the calculation of the top performing 12 percent testing conducted for other compliance purposes as required by state and local permit officials. EPA has asserted that it does not need to consider the information provided to it by NACAA since industry sources "should" have provided this information. This assumption has not been shown to be correct and is insufficient given EPA's obligation to consider all emissions data and the relative ease of determining whether there are any NACAA-provided test results that should be included in the evaluation of the top 12 percent of performing units or any variability analyses that are conducted.

NACAA does not assert that the MACT floor calculations should be based on the data it provided to EPA in lieu of that subsequently collected by EPA, just that EPA must consider all of the emissions data available to it and not ignore the NACAA-provided information. Indeed, the EPA data fills significant gaps in needed knowledge of mercury, HCl and dioxin/furan information.

Response: See preamble Section V. for the responses on the MACT Floor Analysis, rationale for subcategories, and testing and monitoring.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 5

Comment: EPA Should Discard All Proposed Floor Determinations And Calculate

Lawful Floors for the MACT, GACT, and CISWI Source Categories.

The several existing and new source emissions standards proposed in the three regulations suffer three distinct methodology flaws. These flaws invalidate the proposed emissions standards to where EPA must recalculate each standard using appropriate methodologies.

In Sierra Club v. EPA, 479 F.3d 875 (D.C. Cir 2007) ("Brick MACT"), the D.C. Circuit instructed EPA to regulate all HAP emitted from MACT source categories in each MACT standard. Because § 129 standards follow the MACT standard setting process, Brick MACT also applies to CISWI. However, EPA seems to have taken the lessons of Brick MACT further than the Court intended.

In all three proposals, EPA evaluates each source category and subcategory to determine the average of the best performing 12% of sources in accordance with CAA § 112(d)(3)(A). EPA then set the existing source standard for each pollutant at the calculated floor level for that single pollutant. However, in his Brick MACT concurrence, Judge Williams wrote that the "achievable" language at § 112(d)(3) and the "achieved" language at § 112(d)(3) must not conflict in an individual MACT standard. To show that it's calculated "achievable" levels can actually be achieved in practice, EPA is required to show that the average of the best 12% can meet, without further control, the entire existing source MACT standard, not just a MACT standard for an individual pollutant. Likewise, EPA must show that one existing source can meet the entire new source MACT standard. However, EPA fails to identify any sources that it can demonstrate can meet any proposed existing source or new source standard in any of the proposed regulations. Without showing "simultaneous achievability" for all HAP emitted from a process vent, EPA runs afoul of Judge Williams' warning about "achievable" MACT standards not being achieved in practice.

Another flaw in the proposed standards is the use of smaller floor samples. In the Hydrochloric Acid Production ("HCl") MACT standard at 40 CFR 63 Subpart NNNNN, EPA was faced with MACT categories containing less than the standard 30 production units, where 12% of the floor membership constitutes five affected sources. In this rule, as required at § 112(d)(3)(B), EPA used at least five sources to set a floor for a source category. However, EPA inexplicably deviates from their prior MACT setting policy for several CISWI source categories. Any source category calculated with data from less than five units is, by statute, invalid. EPA must recalculate all existing source standards using less than five sources in the floor.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches. Note that the provisions of § 112(d)(3)(B) apply to NESHAP regulatory development. Similar provisions are not found in § 129.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1
Comment Excerpt Number: 6

Comment: EPA simply did not do a responsible job in developing this rulemaking. The air emission limits they have proposed do not include data from a single drum reclamation furnace.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 6

Comment: The best performing sources may not be able to comply with all of the proposed emission limits.

Based on our review of the data used to establish the MACT limits, there does not seem to be a single incinerator which can comply with the limits for all ten pollutants simultaneously. We found a source that could comply with seven of the limits but not all ten. Unless there was data for each pollutant at a single incinerator, the data does not represent the performance that can be achieved by the source.

The CAA did not mandate best performance by referring to individual pollutants but it refers to the "source" as the entity for which best performance needs to be determined. EPA's approach to finding the -best" performance by ranking individual pollutant emissions and using the lowest 12 percent as the basis for the NSPS is a simple and straightforward methodology but not realistic. This approach may be appropriate where sources have consistent feedstocks and where the control of one pollutant does not affect the emission levels that are obtainable for another pollutant. It ignores the reality of the complex pollutant relationships where the collection of mercury (Hg), for instance, is highly dependent upon the availability of PM (as carbon). The formation of PM as carbon could be very dependent upon the CO control methods. Hydrogen chloride and its precursor chlorine may inhibit the adsorption of the mercury by the carbon.

Congress did not provide guidance in defining "performance." When the source involves one or two pollutants, with no interaction between pollutants, the simple ranking of individual pollutants that EPA employs may be reasonable. But when the pollutant interactions are complex EPA needs to consider an alternative approach to defining "performance" and consider the performance of the entire source. not just individual pollutants. Examples of the kinds of approaches EPA might consider when trying to identify best performing sources include initially identifying the 12 percent with the lowest emissions of the most toxic pollutant, or developing a metric based on the lowest 12 percent of some weighted combination of the emissions. These are not the only approaches but two of many that might be considered as part of a more creative means of defining the best performing sources. What has been proposed is clearly not what Congress intended with respect to the MACT being based on best performing sources.

DoD recommends EPA base the determination of a MACT floor on data from units that were able to submit emissions data for all ten regulated pollutants, simultaneously or perform additional testing on units that will be used to establish the limits to ensure the best performing sources can comply with all emission limits.

Response: See preamble Section V. for response on Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 7

Comment: EPA has established MACT floors for PM based on emission test data. This information is collected over a series of three, one-hour runs. These data do not account for variability in PM emissions during start-up, shutdown and unit and/or control device

malfunctions. GPI — Macon Mill believes it is inappropriate to demonstrate compliance with this MACT limit continuously with a CEMS. GPI — Macon Mill asks that EPA analyze PM CEMS data from existing units to establish MACT floors that account for variability and enable continuous compliance.

Response: See preamble Section V. for the responses on the MACT Floor Analysis, testing and monitoring, and start-up, shutdown, and malfunction requirements.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 9

Comment: Continuous emission monitoring system (CEMS) data should be included in the MACT floor analyses:

Eastman notes that EPA did not include CO, SO2, or NOx data from CEMS that was provided by companies and resides in EPA's databases. For example, Eastman submitted CO, NOx, and SO2 data from temporary CEMS units on our Boiler 18 over a one week period of time. After discussions with EPA rule writers in which we were encouraged to gather CEMS data as an alternative to stack test data, we purposefully submitted such data and believe data such as this should be used. It is important that the MACT floor data represent the real-world variability of emissions and CEMS data is clearly superior to stack test data in this regard.

EPA may believe it is not feasible to incorporate CEMS data along with stack test data in its MACT floor analyses due to the method it has chosen to rank and statistically analyze the data. It has chosen to identify top performers by using the lowest 3-run stack test and then use all the run data from the top performers to determine the Upper Limit (UL) of the data set. Eastman believes a better methodology is that used by EPA in the Hazardous Waste Combustor MACT. Here, the Upper Predicted Level (UPL) is determined for each unit using all the test data available, ranking the units by the UPL, and then determining the UPL for that dataset (see the Technical Support Document for that rule, Volume 3 pages 7-6 and 7-7). This methodology would allow CEMS data to be used along with stack test data and the UPL determined for each such unit.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 13

Comment: EPA's approach is a beyond-the-floor one requiring cost analyses. A legally consistent and less burdensome approach, however, would be for EPA to determine the best performers by reviewing the entire suite of emissions from individual incinerators and then

establishing the highest 12% on the basis of aggregated pollutant emissions. Alternatively, EPA may select a surrogate pollutant and establish emission standards on the basis of that (§129(a)(4)).

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 1

Comment: EPA has taken a best-of-the-best approach to setting limits for each of the affected pollutants without regard to how pollution control equipment for each of these pollutants may work in conflicting ways. We have found no supplier that can provide us with a proposal of how to retrofit our boilers and guarantee that their equipment will meet the proposed limits. Furthermore, the proposed limits appear to be based not on data that reflect running a unit every day throughout the year but on selective best case data collected during narrowly run times and conditions. The rules ignore real life variability and exclude the reality of shutdown, startup and malfunctions that occur when equipment is operated throughout the year.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches, control technologies and cost assumptions, and start-up, shutdown, and malfunction requirements.

Commenter Name: Mark Denzler
Commenter Affiliation: Illinois Manufacturer's Association (IMA)
Document Control Number: EPA-HQ-OAR-2003-0119-2381.1
Comment Excerpt Number: 2

Comment: MACT Floor Setting Method Is Flawed, Unrepresentative, and Is Too Stringent

EPA's MACT floor setting methodology is based on the selection of the best performing units on a pollutant by pollutant basis with upper limit calculations only for the pollutant specific test runs for that unit. This results in unrealistically low emission limits for many types of units that will preclude installation of any new units that can combust alternative materials. This outcome is inconsistent with the stated goals of improving energy efficiency and lessening dependence on fossil fuels.

This approach obviously does not recognize the inherent differences in materials properties that in turn are dependent on the source, which obviously cannot represent the best performing similar sources. Furthermore, the EPA estimates no new CISWI sources will be constructed due

to the costs associated with the MACT floor limits in the proposed NSPS. This clearly demonstrates the excessively stringent emission limits resulting from EPA's approach. This analysis needs to be redone in such a way that new facilities can be built.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 2

Comment: A review of sources within Colorado identified approximately 30 incinerators, burn off ovens, and furnaces alone that may meet the proposed CISWI requirements. This equates to 17% of EPA's nation-wide total of 176 units. In addition, it appears that units that burn oil-contaminated soils would also trigger requirements under CISWI as Energy Recovery Units, adding to the total number of CISWI Units in Colorado.

Response: See preamble Section V. for the responses on rationale for subcategories.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 3

Comment: EPA cannot develop a mythical source and deem it the best controlled source in an actual industry

There is nothing in the CAA that directs—or even suggests—an approach for setting the MACT floor using a pollutant by pollutant approach. This "cherry picking" of data leads to a composite floor that is based on a different set of "best performers" for each pollutant or pollutant category. Sources that are "best performers" for one pollutant are typically not the "best performer for another pollutant. This leads to the irrational conclusion that few, if any, actual sources can meet all standards. A plain language reading of the CAA would lead a reader to the belief that at least six percent of all sources (i.e., those above the average of the top 12 percent of sources) should be able to meet the MACT floor for a source category or subcategory. However, EPA's result is quite different- and leads to a composite floor that few if any real sources can meet. Instead, a different group of sources representing the "bottom" 94 percent of all sources would be required to reduce their emissions to meet the limit established for each different pollutant. EPA's ability to identify one or two sources that can meet the floor for all pollutants does not demonstrate that the floor is reasonable. In fact, unless the one or two sources represent at least six percent of all sources in the category, it proves the opposite.

EPA is forgetting that the MACT floor is only the first step in a two-step process for establishing MACT. Congress intended that EPA would establish a minimum level of control (i.e., the floor)

and then consider numerous other factors before establishing the final standard. If the floor were intended by Congress to lead to a result so stringent that virtually no source could ever meet the limits, Congress would not have needed to provide that directive for a second step to establish MACT.

The CAA does allow EPA to differentiate among subcategories or to distinguish among sizes, types, and classes [Footnote: In recent rulemakings, EPA has begun equating the terms "subcategories" and "distinguishing among classes, types, and sizes of sources." These are two distinct ways to subgroup a source category, with differing requirements for each. Subcategories must be rationalized more completely, such as with key differences in emissions or control potential. However, under the CAA, EPA has "discretion" to distinguish among "classes, types, and sizes" as necessary for a reasonable rule. EPA is now apparently hiding behind the "higher hurdle" of subcategories to avoid making simple distinguishing subgroups that could benefit the rulemaking process. This decision has no apparent justification and is to the detriment of a reasonable rule.]

The obvious intent here is to take a larger population of diverse physical sources and group them into more manageable and similar groups for regulation. However, creating a separate MACT floor for each pollutant does not create smaller groups of distinct physical sources. It creates multiple iterations of the same group of sources with a simplistic view of the sources as emitting a single pollutant. It leads to an unreal assessment where the true physical sources are never fully considered. One of the positive moves with the 1990 CAA was the recognition that sources emit more than one pollutant at a time—and that all pollutants should be considered together, rather than a pollutant by pollutant approach. EPA has taken a step back and a step away from evaluating real sources. The unnatural outcome is demonstrated by the Boiler MACT, as well as previously promulgated MACTs (Portland Cement MACT and the Hazardous/Medical/ Infectious Waste Incinerator rules)- that is, the "floors" do not represent any real, physical, emission source. Even if EPA can point to a source or two that meets all limits, it has failed to follow the CAA, which requires that at least 6 percent of all sources (i.e., the average of the top 12 percent of sources) meet the floor, not just one piece of the composite floor.

It appears that EPA is justifying the pollutant-by-pollutant approach because another approach would be more difficult and require EPA to make some value judgments. If EPA starts off with a pollutant-by-pollutant approach because it is an "easier" assessment, EPA still has the burden to demonstrate that the combined result still represents what the best controlled sources in the industry are collectively meeting. The CAA clearly requires that EPA set a MACT floor for a category based on what has been achieved by actual emission sources within the source category. It is not acceptable under common sense or the CAA to establish a limit for each

pollutant and then put the burden on industry to demonstrate that the emission limits cannot be simultaneously met. EPA must demonstrate that the limits are simultaneously achieved by actual sources and that there is no inter-relationship between pollutant levels or control effectiveness.

EPA has the knowledge and ability to determine the best approach for identifying the best controlled sources considering all emissions and the whole source. EPA has had extensive experience making the type of value judgments that would be required for such an approach. Based on its extensive previous experience, EPA could approach it multiple ways. For example, EPA could use a straight average of all HAP or could weight the HAP according to risk (as it did during the initial source category ranking process). EPA cannot abdicate their responsibility by

stating that industry did not answer key issues on the comprehensive approach to assessing the MACT floor.

We recognize that a comprehensive approach that assesses true sources is not as simple as EPA's current pollutant by pollutant approach. But a comprehensive approach is the correct approach. Being simple does not make it correct. While active industry participation is critical to a reasonable rule, EPA has an obligation under the CAA to consider these comprehensive scenarios on their own, as well. EPA should identify the possible approaches [Footnote: A comprehensive approach could require that EPA develop some sort of "weighting" for each pollutant to identify the best overall control. The most basic approach would be to follow the approach used in many of the earlier MACTs, when all HAP were grouped as "total HAP" or "total volatile HAP." If data are available, EPA could create a more complex weighting system. EPA could also consider an approach that would "score" each source based on its rank as "lowest emitting" for each HAP and develop a comprehensive score for each plant to identify the best overall sources. Other options are also possible], identify the impacts of each approach, and make a determination of the one or ones to propose for additional public comment.

Again, the EPA cannot rationalize setting individual floors for each pollutant simply because the alternative would be more difficult. The end result of EPA's "simple approach" is a MACT floor that does not represent, as the CAA mandates, the average emission limitation achieved by the best performing ACTUAL physical sources in the source category. EPA needs to devise a

comprehensive scheme to identify the best overall controlled sources for HAP- these should be physically real sources and not an imagined "what could be if all were perfect" source. The court clearly supports this when they speak about it is not "what could be done", but "what IS being done." A mythical source (or mythical sources) that demonstrates the best control of each individual pollutant is simply not what "is being done" in this source category.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and rationale for subcategories.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 5

Comment: In no case, should EPA use fewer data points that the CAA allows for small source categories (i.e., less than 30 sources), as this clearly is a minimum Congress intended when developing the CAA.

If sufficient non-stack data are available (such as source size, operating schedule, fuel type, air pollution control device, etc), EPA is allowed under the CAA (and supported by numerous court rulings) to estimate emissions from those remaining sources. This is true when a source is one of the better performers—and even when it is not. EPA has the obligation to ensure that the

dataset that they are using "as the top 12 percent" of a category represents 12 percent of the actual source category and not a knowingly skewed dataset. We fully support the position detailed in the comment letter on this rulemaking from the American Petroleum Institute which

details how EPA is misinterpreting the parenthetical phrase "for which the Administrator has emissions information."

Congress clearly established a minimum amount of data that should be used to establish a MACT floor when setting the requirements for categories with fewer than 30 sources. Section 112(d)(B) requires that EPA establish the MACT floor for categories with fewer than 30 sources by looking at the top 5 sources. Clearly, Congress recognized that a minimum of 5 sources would ensure variability of performance could be evaluated by using a minimum of 5 sources. Consider the following example for a source category with fewer than 30 sources:

* Had Congress not established the minimum of 5 requirement, a maximum of 3 sources would have been used if there were 25 sources in the category and only a single source would be used if 8 sources or less were in the category.

* However, the CAA requirement that 5 sources be used allows for up to 20 percent of sources to be used in a category of 25 and up to 62.5 percent of sources in the category with 8 sources. [A MACT floor for a category of 5 or fewer sources would be based on up to 100 percent of the sources.]

It does not make sense that Congress would not want to ensure a minimum number of sources in a larger source category, where variability would likely be far greater. Clearly, Congress would not have intended for large source categories to have something as critical as the floor needlessly established by fewer sources than a category with fewer than 30 sources. We again refer EPA to the API letter on this proposed rule for a more detailed discussion of this point.

Response: See the response to EPA-HQ-OAR-2003-0119-1953.1 excerpt 5.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 9

Comment: MACT Floor Determination and Pollutant-by-Pollutant Approach

The MACT floors are based on pollutant-by-pollutant analyses that rely on a different set of best performing sources for each separate HAP standard. The result is a set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. This approach produces unrealistic and impractical standards.

In addition, Tables 4, 5, and 6 in the preamble (75 FR 31952-31954) summarizing the MACT floors for existing units are misleading and incorrect. For example, for the pollutants Cd, HCl, Pb, Hg, and total dioxins/furans, there are only two burn-off ovens with available data[Footnote: April 26, 2010 ERG Memorandum “MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category”, page 4.], and consequently only two units in the floor, not five units as stated in the tables.

The two burn-off ovens that comprise all the available emissions data for Cd, HCl, Pb, Hg, and total dioxins/furans are only 6% of the 36 sources in the subcategory, not the 12% required by

the regulations. Furthermore, these two burn-off ovens (KSCNH Wichita and NDCNH America) used to set the floor do not meet the proposed PM and CO emission limits, so there is no existing burn-off oven that meets all the proposed emission limits.

EPA has concluded that all existing burn-off ovens will be shut down since none meet the MACT floor (see Comment D). This outcome illustrates the absurd results of the pollutant-by-pollutant MACT floor setting process, and requires EPA to reconsider the CISWI rule in its entirety.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches and the rationale for subcategories-burn off ovens. Further, commenters identified the KSCNHWichita and NDCNHAmerica units as incinerators and therefore EPA moved these units to the incinerator subcategory for the final rule, see preamble for New Data/Corrections to Existing Data.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 11

Comment: Lack of consideration of the criteria identified in section 129(a)(2) in establishing the proposed floors.

Response: See preamble Section V. for the responses on the MACT floor analysis.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 13

Comment: EPA's pollutant-by-pollutant approach has several problems and needs to be reanalyzed.

(a) None of the 40 existing boilers defined by EPA as CISWI energy recovery units are capable of meeting the MACT floor emission levels for all ten CISWI regulated pollutants.

§129 of The Clean Air Act directs EPA to set MACT standards for existing units that

reflect the level of control "achieved in practice" by the "best performing 12%" of units in the subcategory of sources. For new units, the Act requires EPA to set standards that reflect the level of control "achieved in practice" by the single best performing unit in the subcategory. When setting the level of the proposed CISWI standards, EPA selected the best-controlled units on a pollutant-by-pollutant basis for each of the ten CISWI pollutants. EPA's flawed approach results in a collection of pollutant specific standards that are not achieved by any of the 40 existing energy recovery units. Similarly, EPA's technological basis for the proposed levels is a hypothetical suite of control technologies that is not used by any of the 40 existing units in the

energy recovery category. EPA's approach results in the creation of a "super controlled unit" that does not exist in reality nor represent the suite of controls or emission performance of any of the emission units in the category. Establishing floors at emission levels that have not been demonstrated to be achievable in practice by any similar unit and basing those levels on a suite of control technologies that is not used at any facility in the subcategory is inconsistent with the Act and surely not what Congress intended.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 1

Comment: Our comments on the CISWI proposal demonstrate that, even if EPA properly defines secondary materials as fuels and thus not regulated under the CISWI rules, the Agency has inaccurately developed standards for CISWI units based on a flawed database, flawed analysis, and incorrect application of testing and sampling methodologies.

Response: See preamble Section V. for the responses on the MACT Floor Analysis, new data/corrections to existing data, and testing and monitoring requirements.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 1

Comment: EPA's process for setting MACT standards is not the only way for the

Agency to proceed.

In the preamble to the proposed rule EPA sets forth the process that the Agency says it "must" use to set MACT standards. The Agency states: "In promulgating a MACT standard, EPA must first calculate the minimum stringency levels for new and existing solid waste incineration units . . . ." 75 FR 31941. CRWI does not agree.

Under CAA § 129(a)(2), EPA is required to set "achievable" standards. For new sources, these standards cannot be less stringent than the "emission control that is achieved in practice by the best controlled similar source, as determined by the

Administrator." Standards for existing sources cannot be less stringent than "the average emissions limitation achieved by the best performing 12 percent of units

in the category . . . ." These provisions require EPA to set achievable standards and then check to see if they are at least as stringent as the "floor" benchmarks.

It does not require that EPA establish floors first. That was a process choice the Agency made a long time ago when it set the medical waste incinerator MACT standards under § 129, the same authority which governs this rulemaking. See Sierra Club v. EPA, 167 F.3d. 658, 660 (D.C. Cir. 1999) ("Sierra Club). Howeyer, EPA could decide to first determine what standards are "achievable" and then check to see if these standards are as stringent as the floor benchmarks for new and,existing sources. This would mean that the standard setting process would have been more like the process for setting new source performance standards and existing source guideline the Agency follows under Section 111. That different process would be particularly appropriate since § 129 MACT standards are to be established "pursuant to section 111" as well as section 129. CAA § 129(a)(1)(A).

If EPA had adopted this process, EPA's process would be very different than it is now. While the Agency would still have to check to make sure that the achievable standards were as stringent as the "floors," the Agency, might have accomplished two things. First, it might have better reflected the Agency's duties under Section 111 thereby merging its standard setting responsibilities with those of § 129. Second, it might have avoided much of the litigation surrounding the MACT standard setting process that has resulted in the D.C. Circuit Court of Appeals remanding 12 of the 13 MACT rules that it has reviewed.

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Most of the issues in these 13 cases have centered on the court reviewing EPA's floor setting methodologies, with the court reproaching the Agency for not following its interpretations or understanding the difference between a standard

that is "achievable" and one that is based on what has been "achieved."

While we point out some of the difficulties understanding the court's decisions, we note that a different process may have resulted in a different result before the court. instead of EPA constantly defending its floor setting techniques, it may have been able to give the court a fuller understanding of the Agency's statutory authority, i.e., to set standards based on the 'dictates of both § 111 and § 129, and a complete view of how the Agency sets "achievable" standards.

Even if the EPA adopts this process, it will still have to confront "floor issues and battle the perception that any problem with its floor setting methodology deprives the public of mandated protections. However, the floor issue would be cast differently and, perhaps, lead the court to see how EPA makes decisions in light of all factors it has to consider.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 2

Comment: EPA's HAP by HAP approach to setting the MACT floor violates the Clean Air Act. EPA has proposed MACT standards for industrial boilers and process heaters that are based on individual pollutant-by-pollutant – rather than source-by-source – analyses in patent violation of

the Clean Air Act. EPA has set limits for the suite of HAPs that reflect the "best performing source" for each individual HAP. Put differently, EPA has "cherry picked" the best data in setting each HAP standard, without regard for the sources from which the data come. This results in a combined set of standards for purely hypothetical boilers that may never have actually been achieved by any single, real world source. Creating hypothetical "best performing" units that demand performance not achieved by any actual source in the category is arbitrary and capricious and violates the language of § 112, which focuses on actual "sources." See CAA § 112(d)(1), (2), and (3). Rather than focusing on individual HAPs, the Clean Air Act unambiguously directs EPA to set standards based on the overall performance of "sources."

Further, EPA has calculated its proposed MACT floors solely on the basis of emission data. EPA utterly ignored the plain mandate of the Clean Air Act by entirely neglecting to determine whether there was emission control equipment in use in each subcategory that could actually achieve those inordinately strict emission limits, a critical and necessary analysis required by the Clean Air Act.

EPA's focus on individual HAPs has resulted in a failure to recognize the critical interplay between emissions controls and emissions of other pollutants. For example, Manufacturers are concerned that the controls necessary to meet the stringent emissions limitations for CO will result in increased energy usage, with the concomitant increase in emissions of NOx and other pollutants. Further, EPA failed to account for this interrelationship in its economic analysis.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches and control technologies and cost assumptions.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 2

Comment: EPA's MACT floor methodologies are inconsistent with the statute,

Congressional intent, case law, and in some cases, EPA's own policies.

In the proposed rule, EPA chose to use the same methodology, i.e., "emission test data" to calculate the MACT floors," 75 FR 31943, for both new and existing sources, even though the statute indicates that two different bench marks should be used, i.e., "emission control" for new sources and "emissions limitation" for existing sources. The Agency arrayed the emission data in its database for each subcategory from lowest to highest and, for existing sources, established the MACT floor at the numerical average of the test results from the lowest emitting

12% of sources in each category for each pollutant after incorporating a variability factor that was designed to estimate the level that is achievable by the best performing sources. 75 FR 31952. For new sources, EPA set the MACT

floor standard at the lowest emission level for each pollutant, after incorporating a variability factor. 75 FR 31954.

EPA's floor-setting methodology is at odds with the statutory language because:

EPA does not address specific factors it must consider under Section 111;

The Agency merely accepts that this test data reflects levels "achieved" by the sources, i.e., the Agency's took some action that resulted in the emission level; and

The Agency's pollutant-by-pollutant approach is at odds with the statute and EPA's own interpretation of the standard setting provisions.

EPA does not address specific factors it must consider under Section 111 of the Clean Air Act.

Under Section 129 of the Clean Air Act, the emission standards and other requirements EPA establishes are to satisfy the requirements of both section 111 and 129. It states that the

Administrator shall establish performance standards and other requirements pursuant to section 111 of this title and this section for each category of solid waste incineration units. Such standards shall include emissions limitations and other requirements applicable to new units and guidelines (under section 111(d) of this title and this section) and other requirements applicable to existing units.

CAA § 129(a)(1)(A).

The next subsection addresses emission standards. Similarly, it states that "Standards applicable to solid waste incineration units promulgated under section 111 of this title and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that the Administrator,:.

.

determines is achievable."

Thus, these subsections establish that the standards EPA is proposing must meet the requirements of both section 111 and 129.

Under section 111, EPA must establish "standards of performance for new stationary sources" under subsection 111(f). The "guidelines" for existing sources are addressed in subsection 111(d). The difference between the two is that the new source performance standards are federal requirements that apply directly to newly built CSIWI, while the guidelines do not directly govern existing CISVVIs. Instead, they are given effect through a requirement that states adopt rules that are at least as strict as the guidelines.

New source performance standards must be based on the "best system" of emission reduction achievable, taking into account cost and any nonair quality health and environmental impact and energy requirements that have been "adequately demonstrated." This BDT (best demonstrated technology) requirement must be capable of being met under the most adverse conditions reasonably expected to recur. Thus, EPA must show that the standard can be

achieved under the range of conditions that may affect a source anywhere in the country. National Lime Association v. EPA, 627 F.2d 416, 431, n. 46, 433 (D.C. Cir. 1980). ("NLA")

Because EPA must consider these other factors, BDT may not always require the lowest emission standards that are achievable since that standard may create other negative consequences. In Portland Cement Assn. v. Ruckelshaus, 486 F.2d 375, 386, n. 42 (D.C. Cir. 1973), the court noted that, "The standard of the "best system" is comprehensive, and we cannot

imagine that Congress intended that "best" could apply to a system which did more damage to water than it prevented to air."

EPA, of course, must set standards that comply with § 111 and § 129. The question is how to do reconcile competing provisions. First, it is axiomatic that statutory provisions must be read in par materia (in conjunction with each other) and that each statutory provision must be given effect. This has been seen in many environmental statutes where the Administrator must take actions consistent with other provisions. Chemical Manufacturers Association v. EPA, 673 F.2d 507 (D.C. Cir. 1982).

This means that whatever standards EPA promulgates under § 129 must also meet the requirements of § 111, to the extent that they are not in conflict. CRWI believes that none of the provisions in § 111 conflict with § 129. While ,§ 129 provides a level of minimum stringency, th,e process that the statute requires to use in setting the NSPS is •not precluded by the floor provisions. EPA can still go through the process of determining NSPS but check to see if the resulting standard meets the level of stringency required by § 129.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and control technologies and cost assumptions.

Commenter Name: David P. Tenny
Commenter Affiliation: National Alliance of Forest Owners (NAFO)
Document Control Number: EPA-HQ-OAR-2003-0119-1945.1
Comment Excerpt Number: 3

Comment: The proposed emissions limits for biomass units are overly stringent.

EPA's approach to setting the MACT floor is arbitrary and capricious and a violation of the requirements of the CAA. EPA explains that "[f]or each pollutant, we calculated the MACT floor for a subcategory of sources by ranking all the available emissions data from units within the subcategory from lowest emissions to highest emissions, and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources." 75 Fed. Reg. at 32019. This "pollutant-by-pollutant " approach to determining MACT is not appropriate because it results in standards that do not reflect the performance of the best performing boilers for any fuel source.

The CAA requires that EPA set standards based on the performance of actual "sources." Yet EPA's analysis does not reflect the performance of any actual sources. Instead, it is a compilation of the best data, for each pollutant, regardless of which source the data came from. As a result, the proposed rule's limits are unnecessarily stringent. They do not reflect the variability that occurs in real-world. For example, boilers go through warm-ups, shutdowns, load swings, fuel mix and fuel quality changes, control efficiency differences, and performance testing adjustments. By relying on pollutant-by-pollutant test data from a short period of time, EPA overlooks the variability that occurs even at the best-performing boilers. As a result, the standards can not actually be achieved by the best-performing 12 percent of sources, as EPA suggests and as contemplated by the CAA. [See submittal for attachments 1 through 3 provided by commenter showing that the source data shows that no existing facility simultaneously meets all the proposed limits.]

For these reasons, EPA's approach to setting MACT is not within EPA's authority and is arbitrary and capricious. EPA should determine MACT based on data representing what is actually achieved by real sources. EPA should factor into the MACT the variability in operations, fuels, designs and testing performance across the many types of boilers.

Response: See preamble Section V. for the responses on the MACT Floor Analysis including responses on Pollutant-by-Pollutant Approach and Alternative Approaches, and Methodology (UL or UPL).

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 3

Comment: EPA's methodology for setting existing and new unit MACT floors is flawed, evidenced by the fact that EPA could not justify any beyond-the-floor limits. EPA should revise its methodology considering comments provided in this document and derive new floors and emission standards.

EPA's approach and step-by-step methodology for setting MACT floors is described in an April 26, 2010 memorandum from Jason Huckaby, Amber Allen, and Kristen James of ERG to Charlene Spells, Toni Jones and Ketan Patel of USEPA entitled "MACT Floors Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category", Docket Number EPA-HQ-OAR-2003-019-0059 (hereinafter the "ERG Floor Memorandum"). The methodology conflicts with both the language of Section 129 and

established statistical methods. As a result, EPA's proposed MACT floors are not valid and do not meet the achieved in practice requirements of the law. EPA should revise its methodologies in accordance with the Comments 2 through 14 below and derive new MACT floors and emission standards.

Strong evidence of EPA's flawed methodology is the simple fact that in no case was EPA able to justify setting emission standards which went beyond-the-floor. This finding reveals EPA's over-reach of what the law requires in setting the minimum stringency MACT floors. The Clean Air Act (CAA) Section 129, paragraph (a)(2) states:

"Standards applicable to solid waste incineration units...shall reflect the maximum degree of reduction in emissions of air pollutants that the Administrator, taking into consideration the cost of achieving such emissions reductions, and any nonair quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category."

The paragraph goes on to require minimum stringency standards (a.k.a. the MACT floors) based on emissions limitations achieved by the best performing units. For existing units,

"Emission standards for existing units in a category may be less stringent than new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category..."

And for new units,

"The degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emission control that is achieved in practice by the best controlled similar unit, as determined by the Administrator."

Clearly, standards set using the "maximum degree of reduction in emissions" requirement must be at least as stringent as standards set using the minimum stringency requirements based on "average emissions limitation achieved" or "emission control that is achieved in practice". Apparently Congress was concerned that after considering cost, health, environmental, and energy factors the "maximum degree of reduction in emissions" standards may not in all cases reflect emission reductions already being achieved by technology at the best performing existing units, which presumably operate economically in the absence of MACT regulation, so it made sure that the final standards at a minimum reflected these existing emission controls. As such, it would logically be expected that for at least some if not most or all standards, EPA would find it necessary to go beyond the minimum standards reflected by the floor since the emission reductions in place at

existing units would not in all cases meet the more stringent "maximum degree of reduction in emissions" standard that Congress demanded. (If that were not the case it would make no sense to even have the more stringent standard.) Yet, in EPA's CISWI proposal not a single one of the 100 emission limits went beyond the floor. In each and every case EPA rejected beyond-the-floor limits as unreasonable,

"In light of the technical feasibility, costs, energy, non-air quality health and

environmental impacts discussed above, we have determined that it is not reasonable to establish beyond-the-floor limits for existing and new CISWI units." (75 FR 31959).

How does EPA explain that in each and every case its "minimum" standards are sufficient to meet the more stringent "maximum degree of reduction in emissions" standards that Congress required? How could every one of the floors determined from its statistically-based methodology using data from existing commercially operating units coincidentally satisfy both the minimum standard and the higher standard? The answer to these questions seems obvious. EPA's "minimum" standard floors are so strict that more stringent standards cannot be justified even when following the law's "maximum degree of reduction in emissions" requirement. Indeed many of EPA's MACT floors like the 1.1 nanogram per dry standard cubic meter cadmium limit for new energy recovery units are unprecedented and arguably unachievable. It's no wonder that EPA finds no new CISWI units will be constructed (75 FR 31966). The reason no units will be constructed is that EPA's methodology results in standards that are uneconomical, if achievable at all. EPA flipped the law, using a method that went so far astray that the "minimum" floor limits were more stringent than limits required by the higher "maximum degree of reduction in emissions" standard.

This one fact – that EPA could not justify a single beyond-the-floor limit – is a telling indicator that EPA's methodology results in MACT floors that are not valid and contrary to the achieved in practice requirements of the law.

Table 1 summarizes the steps EPA used to set the MACT floors for existing and new units, identifies their legal and technical deficiencies, and summarizes changes EPA should make to each step in order to derive floors that comply with the achieved in practice provisions of the law. The deficiencies and changes are discussed in more detail in the comments which follow.

EPA should make these changes in its floor-setting methodology, re-run the floor determinations, reassess beyond-the-floor limits, and reset the standards.

[See Submittal for Table 1 provided by submitter, summarizing EPA's proposed methodology for setting CISWI MACT floors]

Response: See preamble Section V. for the responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and control technology assumptions for the floor and beyond the floor.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 4

Comment: EPA's HAP by HAP approach to setting the MACT floor violates the Clean Air Act. EPA has proposed MACT standards for industrial boilers and process heaters that are based on individual pollutant-by-pollutant – rather than source-by-source – analyses in patent violation of the Clean Air Act. EPA has set limits for the suite of HAPs that reflect the "best performing source" for each individual HAP. Put differently, EPA has "cherry picked" the best data in setting each HAP standard, without regard for the sources from which the data come. This results in a combined set of standards for purely hypothetical boilers that may never have actually been achieved by any single, real world source. Creating hypothetical "best performing" units that demand performance not achieved by any actual source in the category is arbitrary and capricious and violates the language of § 112, which focuses on actual "sources." See CAA § 112(d)(1), (2), and (3) Rather than focusing on individual HAPs, the Clean Air Act unambiguously directs EPA to set standards based on the overall performance of "sources."

Further, EPA has calculated its proposed MACT floors solely on the basis of emission data. EPA utterly ignored the plain mandate of the Clean Air Act by entirely neglecting to determine whether there was emission control equipment in use in each subcategory that could actually achieve those inordinately strict emission limits, a critical and necessary analysis required by the Clean Air Act.

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches and control technologies and cost assumptions.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 5

Comment: EPA's fundamental approach to setting the MACT floor violates the Clean Air Act and is arbitrary and capricious

EPA's HAP-by-HAP approach violates the Clean Air Act and is arbitrary and

capricious

EPA ignored the record evidence of the performance of actual "sources" when establishing the suite of emissions limits. Instead, for each subcategory, EPA set individual limits for each HAP that reflect the best performing source only for that individual HAP. EPA then combined the HAP limits into a suite of emissions standards for each subcategory. This results in a combined set of standards reflecting purely hypothetical boilers that have never actually been achieved by any single, real world source, and possibly never will. Creating hypothetical "best performing" units that demand compliance with emission standards not achieved by any actual source in a subcategory (let alone the necessary 12% of sources for a true floor) is arbitrary and capricious and violates EPA's statutory obligation to establish limits that are based on actual the performance of "sources."

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 5

Comment: NESCAUM supports EPA efforts to establish a compliance margin such that "complying" units within the "best performing units" group are not in jeopardy of failing a replicate compliance test when operating as they did when their test results were used to form the basis of the MACT floor.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and testing and monitoring.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 5

Comment: In these CAA rules, we believe EPA should use a method to set emissions standards that are based on what real world best performing units actually can achieve. Unfortunately, the Agency's approach which sets standards pollutant-by-pollutant does not reflect what real world units achieve in practice, despite the fact that EPA has the technical and legal discretion to promulgate standards that are much more reasonable.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 5

Comment: The need to use a unit approach rather than a pollutant by pollutant approach is evidenced by the complex interaction of sulfur, chlorides, metals, and mercury in combustion unit exhaust. Fuels and feeds with higher sulfur or chloride contents will form mercury particulates that are more easily captured in particulate control devices, while units burning fuels and feeds with low sulfur and chloride contents will emit mercury in its elemental form, which is more difficult to capture. There is also a large body of research which has documented that, during combustion, there is a complex interaction between fuel chlorine, alkali metal, and sulfur content that determines the amount of hydrochloric acid that is finally produced. Simply explained, when fuels and feeds containing chlorine and alkali metals are burned, HCl and alkali chlorides are formed. During such combustion, the ratio of HCl and alkali chloride is determined primarily by the combustion temperature, with lower HCl being formed at higher combustion temperatures. However, when sulfur is also present in the fuel, the SO2 formed during combustion reacts with alkali chloride to release HCl. [Footenote: Duong, D. N. B., Tillman, D. A. 2009. Chlorine issues with biomass cofiring in pulverized coal boilers: sources, reactions, and consequences – a literature review. Presented at the 34th International Technical Conference on Coal Utilization and Fuel Systems, Clearwater, FL, May 31-June 5. Xu, J., Xie, W., Han, W., Dicken, L. Riley J. T., and Pan, W-P. 1998. The effect of chloride on emissions from atmospheric fluidized bed combustors. Journal of Fuel Chemistry and Technology, 152-156. Liu, V., Che, D., and Xu, T. 2006. Effects of NaCl on the capture of SO2 by CaCO3 during coal combustion. Fuel 85 (2006): 524-531.]

A unit approach would take these factors into account, whereas EPA‘s pollutant-by-pollutant approach ignores these interactions.

We recommend EPA develop overall rankings for each unit in each subcategory based on their emissions of all 9 pollutants and develop floors based on a common set of top performers. The statute unambiguously directs EPA to set standards based on the overall performance of “units.” Section 129 (a)(2) specifies that emissions standards must be established based on the performance of “units” in the category or subcategory and that EPA‘s discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of units. These provisions make clear that standards must be based on actual units, and cannot be the product of pollutant-by-pollutant parsing that results in a set of composite standards that do not necessarily reflect the overall performance of any actual unit. Congress provided express limits on EPA‘s authority to parse units and sources for purposes of setting standards under § 129 and that express authority does not allow EPA to “distinguish” units by individual pollutant as it did in this proposed rule.

When setting floors based on the average of the top performing 12 percent of units in a subcategory and also using a confidence limit to attempt to account for variability, one would assume that at least 6 percent of all units in each subcategory would be able to comply with the emission limits with no further controls. However, the following charts show this is not the case. Note specifically that at least some of the incinerators are already well controlled units. None of

the units in the charts below meet all of the new proposed limits. [See submittal for Tables 1, 2, and 3 provided by commenter showing energy recovery units, incinerators and burn-off ovens that meet the proposed limits.

The CISWI MACT floor memo [Footnote: ERG memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category," April 26, 2010, EPA-HQ-OAR-2003-0119-0059.] Table A-3 indicates that less than 3 percent of energy recovery units will meet each proposed limit.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 37.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 5

Comment: EPA must make sure that floor standards are achievable under the worst circumstance reasonably expected to recur.

CRWI believes that the floor provisions in § 129 are not in conflict with the dictates of § 111. The floor standards require EPA to ensure that they establish minimum standards based on what has been "achieved" by the requisite number of sources. Floor standards certainly can be considered in light of the most adverse circumstances reasonably expected to recur. Hence, these provisions must both be implemented.

Consequently, floor standards must be capable of being met under the most adverse circumstances reasonably expect to recur anywhere in the country. This means that EPA must analyze the floor standard to ensure that they are achievable under worst conditions. There is no evidence in the rule proposal that EPA did that either.

Response: See preamble Section V. for responses on the MACT Floor Analysis.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 6

Comment: Such statements seem to support a lack of achievability of the proposed limits. As the limits are being set using a very small amount of data from a very small number of sources, we are not surprised that EPA has come to these conclusions.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1906.1, excerpt 2. Also, see preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 6

Comment: EPA ignored the record evidence of the performance of actual "units" when establishing this suite of emissions limits. Instead, for each subcategory, EPA set individual limits for each HAP that reflect the best performing unit(s) only for that individual HAP. EPA then combined the HAP limits into a suite of emissions standards for each subcategory. This results in a combined set of standards reflecting purely hypothetical units that do not reflect the performance of real world units. Creating hypothetical "best performing" units that demand compliance with emission standards not achieved by any actual unit in a subcategory violates EPA's statutory obligation to establish limits that are based on the actual performance of "units."

The proposed standards are based on pollutant-by-pollutant analyses that rely on a different set of best performing units for each separate HAP standard. See, e.g., 75 FR 31,952 ("[W]e

calculated the MACT floor for each subcategory of sources by ranking the emission test results from units within the subcategory from lowest emissions to highest emissions (for each pollutant) and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources.")

The statute unambiguously directs EPA to set standards based on the overall performance of "units." Sections 129(a)(1), (2), and (3) specify that emissions standards must be established

based on the performance of "units" "in practice" for the category or subcategory and that EPA's discretion in setting standards for such units is limited to distinguishing among classes, types, and sizes of sources. In particular, Sections 129(a)(2) emphasizes that EPA must focus on what emissions reductions are achievable "in practice" for a "unit."

Standards applicable to solid waste incineration units promulgated under section 7411 of this title and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category. The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards. The degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator. Emissions standards for existing units in a category may be less stringent than standards for new units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category (excluding units which

first met lowest achievable emissions rates 18 months before the date such standards are proposed or 30 months before the date such standards are promulgated, whichever is later).

These provisions make clear that standards must be based on actual units, and cannot be the product of pollutant-by-pollutant parsing that results in a set of composite standards that do not necessarily reflect the overall performance of any actual unit. By focusing on a HAP-by-HAP

approach and ignoring the performance of “units” in crafting the proposed rule, EPA has gone beyond a proper exercise of discretion in this proposal and violated the Clean Air Act.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 6

Comment: The bias in EPA’s subcategories is aggravated by EPA’s pollutant-by-pollutant floor setting methodology. CISWI units which burn a waste having a significant content of one MACT pollutant can be used as a best performer to set the floor for another pollutant which that waste does not even contain. For example, EPA’s energy recovery subcategory could include a unit combusting a pulp and paper waste with significant sulfur content and SO2 and other emissions but negligible cadmium content or emissions, yet because of its grouping with all other energy recovery units it would be selected as a best performer to set cadmium floors for the entire subcategory. If the composite approach was used (see Comment 3) the pulp and paper unit would at least have to be ranked based on performance across all pollutants, and perhaps not be selected as a best performer.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 7

Comment: EPA’s pollutant-by-pollutant basis violates the statute and its own views of the statute.

EPA is proposing to set MACT,floor standards on a "pollutant-by-pollutant" basis. 75 FR at 31592. This approach may result in EPA setting a suite of standards that have not been "achieved" by the best performing sources. This violates the statute.

The provisions for new sources state that floor standards cannot be less stringent than the emission control "achieved in practice" by the "best controlled similar source." Thus, EPA has a duty to find the best source. Sierra Club, supra at 665

(noting "use of the singular in the statutory language suggests" EPA look to the single "unit with the best observed performance").

For existing sources the floor standards cannot be less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources." CRWI asserts that this means all of the top 12 percent sources can meet the proposed standard.

That Congress expected EPA to base the MACT floor on a single source or technology is demonstrated in the legislative history by a colloquy in which Senator Dole asked Senator Durenberger about how EPA will select the best performing sources when confronted with differing technology that reduces different pollutants to different levels. This is a question that would not matter if

EPA was allowed to set standards on a pollutant-by-pollutant basis.

Mr. DOLE. This section also requires the development of standards for a variety of pollutants. It is entirely possible that different technologies may reduce one pollutant better than another. For example, technology A may reduce heavy metals better than technology B while technology B may reduce particulates better than technology A; yet, one would not be compatible with the other. I would assume that EPA would have adequate discretion to balance environmental benefits to determine which technology on the whole represents a better MACT. I would appreciate some discussion on this point as well from my distinguished colleague from Minnesota.

Mr. DURENBERGER. The Senator is correct. Where differing air pollution control technologies result in one technology producing better control of some pollutants and another producing better control of different pollutants but it is technically infeasible according to the MACT definition to use both, EPA should judge MACT to be the technology which best benefits human health and the environment on the whole."

Senate Comm. on Environment and PUblic Works, 103d Cong., A Legislative History of the Clean Air Act Amendments of 1990 at 1118.

In addition, ensuring that the requisite number of best performers can meet their proposed standards avoids what EPA has called an "impermissible" result. As EPA noted in other rules, it is "impermissible" for its methodology to result in standards which would force the best performing source to install upgraded air pollution control equipment because that "amounts to a beyond the floor standard without consideration of the beyond the floor factors: the cost of achieving those

reductions, as well as energy and non-air environmental impacts." 70 FR 59402, 59443 (October 12, 2005). Since EPA's "pollutant-by-pollutant" methodology can result in best performing sources taking actions to meet the standards, it is an unlawful floor setting mechanism.

Finally, the case EPA usually relies upon to justify use of a pollutant-by-pollutant approach, Chemical Manufacturers Association v. EPA, 870 F. 2d 177, 238 — 239 (5th Cir. 1989), cannot save it. That case dealt with an EPA demonstration _ that all standards were "achievable," not that any facility "achieved" the limits as required by the floor provision in section 129(a)(2). Moreover, that case simply said that the court will defer to EPA's judgment to set standards in this fashion, as long as the statute and legislative history does not say otherwise. Here, the statute does say otherwise and EPA has already stated that such an approach leads to an impermissible result under the statute.

Consequently, EPA has set standards that are in excess of its authority.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 8

Comment: EPA Violated the Clean Air Act by Failing to Set Floors that can be Achieved

by Use of Existing Emissions Controls that are Actually in Use Within

Subcategories.

EPA inappropriately set its floors based purely on a review of emissions data, without examining whether there is existing control technology in use and available to meet those floors.

EPA calculated its proposed floors solely on the basis of a limited amount of emission data, without making any effort to evaluate whether technically feasible means of achieving those levels are in actual use and hence generally available to (and thus achievable by) the units within the subcategory. For example, with respect to existing units, EPA stated in the preamble:

[W]e calculated the MACT floor for each subcategory of sources by ranking the emission test results from units within the subcategory from lowest emissions to highest emissions (for each pollutant) and then taking the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources.

75 FR 31,952. Thus, EPA ignored the methodology Congress intended EPA to use in determining the floors for existing and new units, as described in the following subsections.

The Clean Air Act requires the Agency to set standards that can be achieved by existing emissions controls in use within the subcategory.

As written, the language of section 129 shows that Congress intended the regulatory machinery of sections 129 to operate to require EPA to set standards that can be achieved by existing controls in use within the subcategory. Clearly, to implement that Congressional purpose, EPA must base the floors not only on available emissions test data, but also on a determination that some technically feasible means of achieving the floor is generally available to the units within the subcategory, as demonstrated by actual use within the subcategory. Otherwise, if EPA were to base the floors for a particular subcategory only on available test data, without examining technical feasibility and actual usage, it could produce a MACT standard which most – if not all – of units in the subcategory would have no hope of achieving. That would distort Congress‘ vision to identify and spread the use of best controls, while preserving economic vitality, and not to force widespread shutdowns and re-capitalization within industry segments.

Section 129 is replete with textual evidence that Congress authorized EPA to set a floor only at a level which units within a subcategory generally had some means of achieving as a technical matter, as demonstrated by actual usage within the subcategory. In implementing section 112,

EPA must give full effect to that textual evidence. See Whitman v. American Trucking Association, Inc., 531 U.S. 457, 485 (2001) ("The EPA may not construe the statute in a way that completely nullifies textually applicable provisions meant to limit its discretion.").

Key pieces of such evidence are as follows:

Section 129(a)(2) calls on EPA to set the floor for existing units within a subcategory at the average level actually "achieved" by the best "performing" 12 percent. The use of the terms "achieved" and "performing" imply that Congress had in mind a causeand-effect relationship between the actual in-use application of one or more control measures to a piece of HAP-emitting equipment and a resulting actual level of reduced emissions from the equipment. The terms indicate that Congress wanted to identify those measures by which EPA could reliably establish norms of behavior for pieces of equipment of like design. In other words, Congress sought to spread the use of those controls proven to be best by actual practice, but not force changes in the fundamental design of production equipment within an industry segment, e.g., through widespread shutdowns and re-capitalization.

Section 129(a)(2) further provides: "The degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit" and that "Emission standards for existing units ...shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category" The phrases "reduction in emissions," "achieved in practice," and "best controlled" all focus on the application of control measures to HAP-emitting production equipment. This section thus confirms that Congress sought to identify the forms of control that experience showed to be the most effective and that companies could apply in a replicable way without altering the basic design of the production equipment.

Other provisions of the CAA similarly focus on the application of available and "demonstrated" control technology, namely: section 111 (New Source Performance Standards (NSPS)), section 112, section 165 (Best Available Control Technology (BACT) for certain new construction projects), section 172(c)(1) (Reasonably Available Control Technology (RACT) for existing sources as control by State Implementation Plans), and section 173 (Lowest Achievable Emission Rate (LAER) for certain new construction projects). In each case, the common theme is to establish a behavioral norm based on existing control technologies.

Response: See preamble Section V. for the responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 8

Comment: Section 129 of the federal Clean Air Act (the "CAA") establishes the standard for developing emission limits for solid waste incineration units. Generally, these standards are based on the maximum achievable control technology ("MACT"). Specifically, CAA Section 129(a)(2) provides that "[s]tandards applicable to solid waste incineration units . . . shall reflect

the maximum degree of reduction in emission of air pollutants listed under [CAA] section 129(a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category." 42 U.S.C. § 7429(a)(2). For new units, "[t]he degree of reduction in emissions that is deemed achievable . . . in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator. Id. By contrast, for existing units, "[e]mission standards . . . in a category may be less stringent than standards for units in the same category but shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category . . . ." Id.

The United States Court of Appeals for the D.C. Circuit has consistently interpreted the implementation by EPA of the Section 129 requirements for developing MACT standards as consisting of a "two-step process." First, EPA "set[s] the minimum stringency standards required by [CAA] section [112](d)(3) [Footnote: ARIPPA recognizes that the MACT standards in the Proposed Rule are based on CAA Section 129, rather than Section 112. However, Sections 129 and 112 establish the same requirements for developing MACT standards (the only meaningful difference is that Section 129 applies specifically to solid waste incineration units, and Section 112 applies to stationary sources of air pollution generally). Indeed, the D.C. Circuit has indicated that CAA Section 129 is "virtually identical" to Section 112. Cement Kiln, 255 F.3d at 861-62; Nat'l Lime, 233 F.3d at 631. Accordingly, in interpreting Section 129, it is appropriate to consider judicial determinations related to Section 112] for new and existing sources" (these standards are known as the emission "floors"). See, e.g., Nat'l Lime Ass'n v. EPA, 233 F.3d 625, 629 (D.C. Cir. 2000). Second, EPA "determines, considering cost and [non-air quality health and environmental impacts and energy requirements], whether stricter standards are 'achievable' (these standards are referred to as "beyond-the-floor")." Id. (quoting 42 U.S.C. § 7412(d)(2)). See also NRDC v. EPA, 489 F.3d 1250, 1254 (D.C. Cir. 2007); Sierra Club v. EPA, 479 F.3d 875, 877 (D.C. Cir. 2007); Mossville Envtl. Action Now v. EPA, 370 F.3d 1232,1235 (D.C. Cir. 2004); Cement Kiln Coalition v. EPA, 255 F.3d 855, 859 (D.C. Cir. 2001).

In the context of evaluating MACT floors for existing sources, the Court has acknowledged that EPA is required to "make a reasonable estimate of the performance of the top 12 percent of units." Cement Kiln, 255 F. 3d at 861-62 (citing Sierra Club v. EPA, 167 F.3d 658 (D.C. Cir. 1999)). The Court also clarified that "the method the Agency selects must allow a reasonable inference as to the performance of the top 12 percent of units", and "that EPA must show not only that it believes its methodology provides an accurate picture of the relevant sources' actual performance, but also why its methodology yields the required estimate." Cement Kiln, 255 F. 3d at 862.

In terms of evaluating MACT floors for new sources, the D.C. Circuit has reasoned that CAA Section 112(d)(3), which provides that "[t]he maximum degree of reduction in emissions that is deemed achievable . . . shall not be less stringent than the emission control that is achieved in practice" (emphasis added), limits the scope of Section 112(d)(2), which directs EPA to require the "maximum degree of reduction in emissions" that EPA "determines is achievable." Id. at 861. On this basis, the Court found that "[w]hile standards achievable by all sources using the MACT control might also ultimately reflect what the statutorily relevant sources achieve in practice, EPA may not deviate from section [112](d)(3)'s requirement that floors reflect what the

best performers actually achieve by d[eeming] that floors must be achievable by all sources using MACT technology." Id.

Notwithstanding Section 129(d)(3)'s directive that MACT floors for new sources shall be consistent with "the emission control that is achieved in practice," EPA states in the preamble to the Proposed Rule that, due to the stringency of the proposed emission standards, EPA does not expect that any new sources subject to the Section 129 standard would be constructed subsequent to the promulgation of the CISWI standard. (EPA "does not anticipate any new CISWI units to be constructed" (emphasis added). 75 Fed. Reg. 31967.) In making this statement, EPA apparently acknowledges that the MACT floor for new sources under the Proposed Rule is so stringent – i.e., far more stringent than the emission control that is achieved in practice by

the best performing sources – that no new sources would be able to meet it. Because EPA seems to have disregarded the level of control actually achieved in practice, in accordance with Section 129(d)(3), EPA's proposed MACT standards for new sources are arbitrary and capricious. See North Carolina v. EPA, 531 F.3d 896, 906 (D.C. Cir. 2008) (recognizing that an agency action is arbitrary and capricious if it relies on factors that Congress did not intend to be considered).

The Proposed Rule fares no better with respect to existing sources. The proposed emission standards would not be achievable for any existing coal refuse-fired EGU.

EPA has been under criticism in the past regarding the mechanism used to determine the best performing units. Regulated entities have accused EPA of a technique called "cherry-picking" whereby EPA independently reviews the reported emissions on a pollutant by pollutant basis and never considers whether there are technical reasons why an individual source could not simultaneously meet each and every one of the proposed MACT limits.

This proposed rule, by EPA's own admission, shows that the "cherry-picking" process is not authorized by the Clean Air Act. Our rationale for taking this position is EPA's statement in the preamble – "Furthermore, we already estimate no new CISWI sources will be constructed due to the costs associated with the MACT floor limits in the proposed NSPS."

ARIPPA submits that the legislative mandate to require "the maximum degree of reduction that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source" cannot result in a situation where no new sources would be constructed due to the costs. The two positions are irreconcilable and show a clear deviation from the original Congressional intent. We also note that the Legislative definition concerns the best controlled source (i.e. single source).

We realize that the determination of the best controlled source becomes much more subjective and difficult to implement when the "simultaneously achievable" interpretation of the CAA is invoked but the point is that EPA must develop these MACT determinations with an engineering component along with the statisticians' analysis to determine what the best controlled source can achieve in practice. ARIPPA fully supports the CAA concept of making new sources meet the highest standards but these standards must be achievable by a single source for all affected pollutants, and that determination requires engineering analysis beyond simply picking the lowest emission rate for each individual pollutant. And our position extends as well to the 12% of the best controlled existing sources – the actual standards chosen should be met by 12% of the existing facilities in aggregate for all pollutants.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and biased data collection from Phase II ICR testing. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 8

Comment: EPA's proposed limits do not appropriately address the variability in emissions of various HAPs.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2128.1, excerpt 23.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 9

Comment: The method EPA is currently using to develop standards does not result in

a "reasonable estimate" of a sources' performance.

In Sierra Club, the court held that EPA must use floor setting methods that provide a "reasonable estimate" of the performance achieved by the best performers. CRWI does not believe that the methods EPA used in this proposed rule results in a "reasonable estimate" of what these facilities achieve in practice.

A. EPA's method for setting the floor standards is flawed because none of the facilities in the database can simultaneously meet all proposed standards.

CRWI believes that to be a reasonable estimate of what facilities are currently achieving in practice, at least 12% should be able to meet the proposed standard without making additional upgrades in their equipment or modifications to their operating procedures. EPA's current method for establishing standards fails to do this. [See submittal for Table 1 showing that for the burn-off oven category, only one facility comes anywhere close to meeting the new source standards by meeting 6 of the 10 emission standards and this facility is improperly classified (should be an incinerator) provided by commenter.] [See submittal for Table 2 provided by commenter showing that one facility can meet 7 of 10 proposed existing source burn-off oven standards and another can meet 6 of the 10.]

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)

Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 10

Comment: EPA should evaluate and select the best performing units based on their composite performance over all pollutants, and not on the basis of pollutantby-pollutant performance.

Section 129 requires EPA to set emission standards for 10 distinct pollutants. (In the

proposed CISWI rule, EPA has proposed separate standards for dioxins/furans total mass basis and dioxins/furans toxic equivalents basis, making a total of 11.) Section 129 also requires that the MACT floor for existing units be based on "the average emissions limitation achieved by the best performing 12% of units" and for new units be based on "the emissions control achieved in practice by the best controlled similar unit." EPA's proposed MACT floor setting methodology identifies the best performing units for each and every one of the 11 pollutants independently, and then sets each floor based on the performance of these pollutant-by-pollutant best performing units. By "cherry-picking" the best performers on a pollutant-specific basis, EPA's approach ignores emissions variability based on waste composition and fabricates integrated emission control performance that does not exist in practice. EPA's unreasonable and arbitrary approach is selected without regard for the ability of any existing units or proposed new unit to achieve all of the resulting standards.

EPA's emission database shows that the best performing units will not be the same for all 11 pollutants. This is not surprising because different combustion and air pollution control system designs yields distinct performance depending on the pollutant. Even similarly equipped units exhibit distinct performance due to a wide array of variables – operation and maintenance cycles, waste characteristics, seasonal effects, combustion and air pollution control system performance, etc. EPA's pollutant-by-pollutant approach generates emission standards that represent an amalgam of waste types, different technologies, designs and operations not found at any one unit.

EPA's pollutant-by-pollutant approach fails to account for the interrelationships among pollutant emissions. Emissions from combustion/air pollution control systems are interdependent – the presence or control of one can affect the control of others. These interrelationships must be considered in order to assure that unit emission reductions are effective for all pollutants, not just one at time. Examples of these interrelationships are:

Carbon Monoxide (CO) and Nitrogen Oxides (NOx) – CO is a product of incomplete combustion of organic materials and a function of oxygen levels, temperature, air/fuel mixing (turbulence) in the combustion zone, and residence time. NOx formation is dependent on the amount of fuel-bound nitrogen

compounds, air-to-fuel ratio, and flame temperature. Because combustion conditions affect both pollutants, the two are interrelated. Attempts to control CO can lead to increases in NOx and vice versa. In California, biomass-to-energy facility [Footnote: Many biomass-to-energy units would become CISWIs under EPA's proposed solid waste determination rule (75 FR 31844).] operators meet NOx permit limits in part by balancing the combustion process between emissions of CO and NOx with the result that CO emissions are significantly higher than EPA's proposed CISWI standards. Attempts to reduce emissions of CO would result in increases in emissions of NOx, leading to an

untenable situation. These concerns are echoed in a report by the Maine Department of Environmental Protection which analyzed CEM and stack test data from 19 biomass boilers, stating "Test data demonstrated the relationship between NOx and CO. As NOx levels increased CO levels decreased and vice versa." [Footnote: Maine Department of Environmental Protection, "Carbon Monoxide Variability in Maine Wood Fired Boilers, February 2010, page 2. Attachment to letter from James P. Brooks, Bureau Director, State of Maine Bureau of Air Quality to James Eddinger, USEPA, February 4, 2010.] The Maine DEP stated "We are also concerned that EPA may develop standards that do not take into account the NOx controls required for many of the Maine facilities and the effect that controlling for CO, which inversely affects NOx, as well as other pollutants." [Footnote: Letter James P. Brooks, Bureau Director, State of Maine Bureau of Air Quality to James Eddinger, USEPA, February 4, 2010.] See Attachment 1 which includes both the Maine DEP report and letter. [See Submittal for Maine DEP report and letter in Attachment 1 provided by commenter.]

Nitrogen Oxides (NOx), Total Particulate Matter (PM), and Opacity – Selective Non-catalytic Reduction (SNCR) is frequently used for combustion source NOx control. SNCR involves injecting a reagent (urea or ammonia) into the furnace where it reacts within a temperature window to chemically reduce NOx. Control efficiency is limited by reagent/flue gas mixing and reaction kinetics. When pushed to higher performance unreacted ammonia "slip" increases which in the presence of SO3 and HCl in the flue gas forms condensable ammonium sulfate/chloride particulate matter and potentially high opacity stack plumes.

Sulfur Dioxide, Hydrogen Chloride and Mercury – Boilers burning wastes or fuels with significant sulfur and chlorine contents will form mercury species (e.g., mercury chloride) that are easier to collect using carbon adsorption and PM control systems. Boilers burning wastes without sulfur and chlorine emit mercury in elemental form which is harder to collect.

These interrelationships show the technical incompatibility of setting floors on a pollutant-by-pollutant basis.

EPA's use of post-MACT emission data for incinerators subject to the 2000 CISWI rule, which is in and of itself unjustified (see Comment 5), exaggerates the problem with the pollutant-by-pollutant method. Since the lesser performers of the past were either shut down or upgraded to meet the 2000 CISWI MACT standard, currently operating incinerator units are now equipped with improved emission controls and compete on more or less equal footing for best performing status, further decreasing the likelihood

that any one unit will be able to consistently achieve the best performance for each and every pollutant.

A technically-superior approach for selecting the best performing units, and one that is consistent with the law's text, is to use a composite scoring system which considers unitby-unit performance over all MACT pollutants. (This is analogous to selection of best athletes based on a composite score over many physical tests.) Using composite scores, EPA would rank the units, select the best performing 12% of units or best performing single unit, and determine the average emissions limitation achieved for each pollutant by the selected unit(s).

EPA should incorporate a ranking system which selects the best performing 12% units and best performing single unit over all MACT pollutants using a composite performance score. One such approach is as follows. [See Submittal for Equations provided by Commenter].

The units can then be sorted and the best performing units or unit (lowest unit composite performance scores) selected.

In responses to comments to its proposed Hospital/Medical/Infectious Waste Incinerator (HMIWI) MACT rule promulgated in 2009 (74 FR 51368) EPA said it could not use composite scoring due to a lack of complete emission data for all pollutants and all units. First, EPA has ample authority under Section 114 to require testing and reporting of emission data it deems necessary for MACT rulemaking and should not use lack of data as a reason to place the additional burden of the pollutant-by-pollutant floor setting on the regulated community. Second, even if there was a lack of complete data, EPA could use a modified composite scoring method using a % performance ranking concept to account for missing data. As a simplified example, suppose there were 5 units in a category and the task is to select the best performer over four pollutants. Further assume that the emissions were as follows and included data gaps in two of the units. [See submittal for table showing the average emission concentrations for the 5 units provided by commenter].

From these data the best performing unit would be selected as follows (see table below). [See Submittal for table provided by commenter illustrating the best performance analysis].

Calculate the % performance rank for each pollutant where 100% is the best performance and the increments are 100/n where "n" is the number of units with data. In the example, for pollutants having data from five units the best-to-worst ranking increments are 100/80/60/40/20% and for four units the increments are 100/75/50/25%.

Calculate the composite % performance score for each unit which is the average of the % performance ranks.

Rank the units and select the unit with the highest % performance score. In the example this is Unit 5.

Use the data from that unit to set the MACT floors for all pollutants.

If the selected unit does not have data for all pollutants, then go to the next highest ranked unit, and use the data for the missing pollutant from that unit to set the floor. In the example Unit 5 had no data for pollutant C, so use data from Unit 2, the next highest ranked unit, to set the floor for pollutant C. If one were selecting the best 12% performing units one would continue down the list of ranked units until 12% of the total units were represented.

Response: See preamble Section V. for the responses on MACT-on-MACT and Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 11

Comment: Development of MACT limits on a pollutant-by-pollutant basis creates an unrealistic floor, as no individual kiln can meet all the pollutant levels. This is particularly true for the "new source" floors.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 11

Comment: EPA's proposal does not take adequate account of the variability associated with emissions from units over time. EPA's use of short term tests to measure CO, SO2, and NO does not address the varying levels of emissions that can be seen from hour to hour for each of these pollutants. Even EPA acknowledges this fact in the Boiler MACT preamble: "We believe that single short term stack test data (typically a few hours) are probably not indicative of long term emissions performance, and so are not the best indicators of performance over time." In the final rule, EPA must use data to set the standard that are consistent with the form of the standard (e.g., if CEMS are required as the compliance method, CEMS data should be used to set the limits).

Response: See preamble Section V. for the responses on the MACT Floor Analysis and CEMS data to set standards.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 11

Comment: The rules would also benefit significantly from the generation of additional emissions information. EPA's MACT Floor tables indicate that eleven of the thirty MACT Floor emission limitations for existing sources were determined using less than five sources due to a lack of available data [Footnote: See Table 2 and Table 3, 75 Fed. Reg. 32022-32023 (June 4, 2010).] No time was allocated for additional data-gathering. [See DCN:EPA-HQ-OAR-2003-0119-1834.3 and DCN:EPA-HQ-OAR-2003-0119-1834.4 for Comment Extension Request and EPA's Response to Request respectively, as provided by commenter.]

Response: See the response to comment EPA-HQ-OAR-2003-0119-1953.1, excerpt 5. Further, see preamble Section V. for the response on CISWI Promulgation Schedule and 112(c)(6) obligations.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 14

Comment: The purpose of the floor setting procedure is to discover what techniques the "best performers" use to achieve low emissions so that the other, higher emitting sources in the category or subcategory can replicate those actions and achieve those same low levels. 75 FR 31943. As EPA noted in Cement Kiln Recycling Coalition v. Environmental Protection Agency, the intent of the standard setting process is to discover the "objective, duplicable control" techniques so that other performers in the source category could emulate those techniques, reduce their emissions, and achieve those levels. 255 F. 3d 855, 863 (D.C. Cir. 2001). See EPA Response Brief, CKRC v. EPA, at n. 57.

Reproducibility is included in the statute's floor setting provisions as well. Under §112(d)(3), the floor standards must reflect the average emission limit achieved by the best performing sources (for existing sources) or the emission control achieved in practice by "best controlled similar source" (for new sources). Congress clearly intended that the best performers emissions levels and their technique must be capable of being reproduced by others in the source category. Thus, the Agency's floor determination must discover the techniques that the best performers are using to actually "control" emissions, i.e., exercising some degree of management that is duplicable by others. The Agency's analysis, therefore, must determine what is the maximum degree of reduction that the best similar source achieves through methods of control.

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In addition, those top 12% do not represent the diversity of sources and materials combusted in each subcategory population. Therefore, the EPA analysis and floors are inappropriate and biased toward lowest possible emission rates, not achievable emission rates. 75 FR 31952.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches, rationale for subcategories, and control technologies and cost assumptions.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 16

Comment: In order to get the most accurate data to use in calculating the floor limits, it is necessary to run multiple tests, as opposed to the single tests relied upon in the Proposed Rule. Such little data could not be representative of the thousands of units which will be affected by this rule. EPA's data which is relied upon is flawed due to insufficient testing. In the final rule, CIBO recommends running multiple tests as a more reasonable approach for gathering data for CISWI floor determinations.

Response: See preamble Section V. for responses on the MACT Floor Analysis.

Commenter Name: Melvin E. Keener

Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 18

Comment: B. EPA's method for setting the floor standards is flawed because the Agency failed to capture the variability in emissions from these source categories.

In the supporting statement for their Information Collection 'Request (ICR), EPA

addresses variability for boilers and process heaters by gathering one month of

CO CEMs data and additional fuels analysis for mercury hydrogen chloride, ash, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium. The ICR does not appear to contain a comparable section for CISWI units. For CISWI units, it appears that EPA made no attempt to gather data to address any long-term variability in the emissions. As a result, CRWI believes that the data EPA used to develop the standards does not capture the, long-term variability for CISWI units. [See submittal for Tables 7, 8, and 9 developed by CRWI showing the number of test conditions that were used for each top performer for the burn-off oven, energy recovery units, and incinerator categories.]

For most, the proposed standards are developed from a single set of 3-run tests. This limited snapshot of data cannot capture the amount of variability these units

experience over time When a facility conducts a performance test, it makes every effort to minimize variation. Agency observers eXpect such and question differences when they observe them. There is very little guidance on how much

variability is allowed during stack tests. From the Guidance on Setting Permit Conditions and Reporting Trial Burn Results. Volume II of the Hazardous Waste Incineration Guidance Series (EPA/625/6-89/019, January 1989, EPA states on

'page 13: "During eachlest, the replicate runs are performed under as similar conditions as practical; however, a slight variation in the mean temperature is common."

The Texas Commission on Environmental Quality published guidance [See submittal for Appendix A – The Texas Commission on Environmental Quality Guidance on Variability Allowed During Testing provided by commenter] where they suggest that variation of more than +/- 10% from the average operating rate of each run is a reason for requiring a re-test. During a recent test

for a hazardous waste boiler, an EPA observer questioned whether run 3 of a three run test was valid because the feed rate of a particular feed component was 4% lower than in the previous runs. Because of this type of formal and

informal guidance, facilities have made signifiCant efforts to minimize run-to-run variability during individual tests. Because of this required test implementation strategy and its resulting lack of run-to-run variability, EPA cannot state that the results of a single test comprises a "reasonable estimate" of long-term emissions variability from this category.

This flaw in capturing variability is further compounded in requiring compliance with standards at all times, including periods of startup, shutdown, and malfunctiOn. Almost without exception, testing is not done during those periods. In fact, if a malfunction occurs during a test, the facility

suspends sampling until they can remedy the situation. As a result, any variability introduced by these periods would-not have been accounted for since data from those periods are excluded from reported results.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2128.1, excerpt 20.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 20

Comment: EPA's method for setting the CO standard is flawed because the Agency

did not take into account any long-term data when setting the standard.

EPA has CO CEMs data for one CISWI unit (Domtar Industries in Ashdown, AR). This facility was originally classified as a boiler but is now in the energy recovery category of the CISWI rule. The data base has 29 days of either partial or complete hourly data. The-proposed rule requires all energy recovery units to install, maintain, and operate a CO CEMs. EPA states that compliance with the proposed 150 ppmv standard would be based on a 24-hour block average.

While this facility is not a top performer for CO, it is ranked as number 6 (just outside the top performer cutoff). In addition, the average CO emission during its test was 107 ppmv (see Table B-21, MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category memo, April 26, 2010). Its test average (107 ppmv) is well below the proposed limit for existing, sources of 150 ppmv. In an effort to see how this facility would comply over the 29 days, CRWI calculated the daily average CO emissions based on the CEMs data. For this analysis, where hourly data were missing, those hours were ignored and a daily average was calculated from whatever data were available for that day. [See submittal for Table 10 provided by commenter showing that this facility would be able to meet the 150 ppmv standard only 4 days out of 29.] In fact, for most days, the daily average was significantly higher than the proposed standard. The overall hourly average

(based on the CEMs data) was 2624 ppmv. It is difficult to understand how this facility could have an average hourly CEMs reading for the better part of 29 days of over 2600 ppmv and have a short term test reading of 107 ppmv. The CEMs data show that the CO data developed during the test conditions does not come anywhere close to representing the long-term variability experienced by this facility.

Because this is only one facility, it is difficult to draw broad conclusions but it is obvious that the test result of 107 ppmv does not capture the variability that this facility experiences over time. In addition, the use of .a longer averaging period does not address the problem. It would simply increase the time this facility would be out of compliance. For an averaging period to be used to properly address variability, the data used to establish the standard value must capture that variability, and must assess it over a time period similar to that proposed for the averaging time. In this way, the standard addresses both the magnitude and duration of process variability.

Response: See preamble Section V. for the responses on the MACT Floor Analysis including the use of CEMS data.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 21

Comment: EPA Should Not Use One Method to Set Standards and Another Method to Demonstrate Compliance

It appears that EPA is inappropriately using one method to set the standard and a completely different method to demonstrate compliance. We are concerned that EPA is developing standards based on stack test data while requiring compliance based on CEMS. The U.S. Court of Appeals for the D.C. Circuit has ruled that "a significant difference between techniques used by the Agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard." Portland Cement Ass'n v. Ruckelshaus, supra, at 396. We believe that using stack test data to set the standards and then requiring CEMS to show compliance qualifies as "a significant difference between techniques." The primary difference between these two methods will be that the variability experienced during normal operations will not be captured during the stack test but will become apparent as the facility operates a CEMS over time. We believe that if EPA wants to require CEMS to show compliance with the standard, then the standard must be developed using CEMS data.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and testing and monitoring including CEMS data to set standards.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 22

Comment: MACT Floor Analysis Should Include Continuous Emission Monitoring System (CEMS) Data and Use the Hazardous Waste Combustor (HWC) MACT Statistical Methodology

EPA did not include CO, SO2, or NOx data from CEMS that was provided by companies and resides in EPA's databases. For example, Eastman submitted CO, NOx, and SO2 data from temporary CEMS units on their Boiler 18 over a one week period of time. After discussions with EPA rule writers in which affected sources were encouraged to gather CEMS data as an alternative to stack test data, Eastman purposefully submitted such data and CIBO believes data such as this should be used. It is important that the MACT floor data represent the real-world variability of emissions and CEMS data is clearly superior to stack test data in this regard.

Although it is unclear why EPA chose to exclude CEMS data from its MACT floor

determinations, one possibility is that EPA may believe it is not feasible to incorporate CEMS

data along with stack test data in its MACT floor analyses due to the method it has chosen to rank and statistically analyze the data. It has chosen to identify top performers by using the lowest 3-run stack test and then use all the run data from the top performers to determine the Upper Limit (UL) of the data set.

A better methodology is one which was used by EPA in the Hazardous Waste Combustor HWC MACT. In HWC, the Upper Predicted Level (UPL) is determined for each unit using all the test data available, ranking the units by the UPL, and then determining the UPL for that dataset (see the HWC MACT Technical Support Document, Vol. 3 p. 7-6 - 7-7). This methodology would allow CEMS data to be used along with stack test data and the UPL determined for each such unit. EPA should obtain hourly average CEMS data over a suitable period of time (several months or as much data as can be readily obtained) from each source it can identify that either has a permanent CEMS installed on the unit or provided data in its response to the ICR survey or testing program. These hourly averages should then be used to establish the UPL for that unit. This data from these units with CEMS data should be combined with stack test data, all the UPLs determined, and then the top 12 percent performers determined from the UPLs, and the UPL for the subcategory should be determined using the HWC MACT methodology. This procedure should be used for NOx, SO2, and CO, to allow for EPA to more appropriately account for intraunit emission rate variability.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 23

Comment: The lowest emitters are not always the best performers.

CRWI does not believe that the lowest emission method EPA used in this proposed rule results,in a "reasonable estimate" of what these facilities achieve in practice. EPA has faced this issue since the CKRC and National Lime II decisions. In developing the Hazardous Waste Combustor MACT rule (70 FR 59419, October 12, 2005), EPA came to the conclusion that the lowest emitters are not always the best performers (70 FR 59443).

Comment: The commenter states that because MACT floors must reflect the "actual performance" of the relevant best performing hazardous waste combustors, this means that the lowest emitters must be the best performers. The commenter cites CKRC v. EPA, 255 F. 3d at 862 and other cases in support.

Response: As explained in the introduction above, the statute does not specify that lowest emitters are invariably best performers. Nor does the case law cited by the commenter support this position. The D.C. Circuit has held repeatedly that EPA may determine which sources are best performing and may "reasonably estimate" the performance of the top 12 percent of these sources by means other than use of actual data. Mossville Environmental Action, Now v. EPA, 370 F.3d at 1240-41 (DC Cir. 2004) (collecting cases) ("Mossville"). In Mossville, sources had

varying levels of vinyl chloride emissions due to varying concentrations of vinyl chloride in their feedstock. Individual measurements consequently did not adequately represent these sources' performance over time. Not-to-exceed permit limits thus reasonably estimated sources' performance, corroboration being that individual sources with the lowest long-term average performance occasionally came close to exceeding those permit limits. Id. at 1241-42. The facts are similar here, since our examination of best performing sources with multiple test conditions likewise shows instances where these sources would be unable to meet floors established based solely on lowest emissions (including their own). As here, EPA was not compelled to/base the floor levels on the lowest measured emission'levels.

In addition, EPA explains why they used a technology based methodology (which has been upheld in Sierra Club v. EPA 353 F.3d 976 (D.C.' Cir. 2004) (Copper Smelters MACT), and, as we explained above, was implicitly blessed in Brick MACT) to set the MACT standard (70 FR 59448).

b. Why not select the lowest emitters? Although sources with baghouses tended to have the lowest emission levels for particulate matter, this was not invariably the case. There are certain instances when sources controlled with electrostatic precipitators (or, in one instance, a venturi scrubber) had lower emissions in individual test conditions than sources we identified as best performing which were equipped with baghouses.96 Under the commenters approach, we must always use these lowest emitting sources as the best performers.

We again disagree. We do not know if these sources equipped with control

devices other than baghouses with lower emissions in single test conditions

would actually have lower emissions over time than sources equipped with baghouses because we cannot assess their uncontrollable emissions variability over time. Our data suggests that they likely are not better performing sources. We further conclude that our statistical procedures that account for these sources' within test, run-to-run emissions variability underestimates these sources long-term emissions variability. This is not the case for sources equipped with baghouses, where we have completely assessed, quantified, and accounted for, long-term, test-to-test emissions variability through application of the universal variability factor.97 The sources equipped with control devices other than baghouses with lower snapshot emissions data could therefore have low emissions in part because they were operating at the low end of the "uncontrollable" emissions variability profile for that particular snapshot in time The bases for these conclusions, all of which are supported by our data, are found in section 16 of volume III of the technical support document.

We therefore conclude sources equipped with baghouses are the best performers for particulate matter control not only based on engineering judgment, but because we are able to reliably quantify their likely performance over time. The straight.emissions methodology ignores the presence of long-term emissions variability from sources not equipped with baghouses, and assumes without basis that these sources are always better performing sources in instances where they achieved lower snapshot emissions relative to the emissions from baghouses, emissions that have notably already been adjusted to account for long-term emissions variability.

A straight emissions approach also results in inappropriate floor levels for particulate matter because it improperly reflects/includes low ash feed when identifying best performing sources for particulate matter. 69 FR at 21228. For examOle, the MACT pool of best performing liquid

fuel boilers for particulate matter under the straight emissions approach includes eight sources, only one of which is equipped with a back-end control device. These sources have low particulate matter emissions solely because they feed low levels of ash. The average ash inlet loadings for these sources are

well over two orders of magnitude lower than the average ash inlet loading for the best performing sources that we identify with the Air Pollution Control Technology approach. (Of course, since ash loadings are not a proper surrogate for HAP metals, these sources' emissions are lowest for particulate matter but not necessarily for HAP metals.) The straight emissions approach would yield a particulate matter floor level of 0.0025 gr/dscf (with a corresponding design level of 0.0015 gr/dscf). There is not one liquid fuel boiler that is equipped with a back-end control that achieved this floor level,

much less the design level. The best performing source under the air pollution control technology approach, which is equipped with both a fabric filter and HEPA filter, did not even make the pool of best performing sources for the straight emissions approach. Yet this unit has an excellent ash removal efficiency of 99.8% and the lower emitting devices' removal efficiencies are, for the most part, 0% because they do not have any back-end controls. EPA believes that it is arbitrary to say that these essentially_ uncontrolled devices must be regarded as "best performing" for purposes of section 112(d)(3). We therefore conclude that a straight emissions floor would not be achievable for any source feeding appreciable levels of ash, even if they, all were to upgrade with baghouses, or baghouses in combination with HEPA filters, and that a rote selection of lowest emitters as best performers can lead to the nonsensical result of uncontrolled units being classified as best performers.

(Emphasis supplied, footnotes omitted.)

CRWI believes that EPA's conciusions for these decisions are correct. We believe that EPA needs to develop a method that selects facilities that do the best job under the worst conditiqns. Said differently, almost all units will have low emissions when bbrning the cleanest materials. But using this criterion does not define them as the best performers. This would be analogous to defining the best hitter as the ones who can hit softballs instead of a 98 mph fastball. The best hitters are the ones who can consistently hit any type of pitch thrown, not just the easy ones. Just like in baseball, the best performers are the facilities that can consistently handle all materials burned. Control of emissions from combustion sources can be from control of the materials burned, control of the combustion process, and air pollution control systems. All three are viable methods of controlling emissions, and need to be appropriately balanced to identify best performance. Facilities that burn clean materials are essentially only exhibiting one method of control (feed) for some pollutants (e.g., metals, PM, SO2, etc.), and at best only two methods of control (feed and combustion) for others (e.g., CO), while completely ignoring the third method (add-on). To completely ignore one or two of the three methods of control inappropriately biases the identification of best performance to those who control virtually nothing. It is illogical to think that doing nothing is best. We believe that the best performers are not defined by how they perform on the easiest tasks but by how they perform on the hardest tasks.

Response: See preamble Section V. for responses on the MACT Floor Analysis and control technologies and cost assumptions.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 24

Comment: Geometric Mean must be employed.

For any MACT limit derived from log normally transformed data, the performance test or CEM averaging time must be based on the geometric mean and not the arithmetic average or mean. If not then the log normal based limit is meaningless and will lead to violations based on inherent emission variability and distribution that the log normal data transformation for MACT floor setting directly addressed.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 26

Comment: CRWI believes EPA has proposed CO emission limits that are challenges to measure even given the few adjustments that EPA made to Performance Specification 4A and the test methods in the respective Tables for Subparts CCCC and DDDD. We believe that making more adjustments to the Performance Specification or the test methods is not a solution. We are also concerned that EPA has not followed proper procedure by making the Performance Specification and test method adjustments in the middle of a large rulemaking. CRWI believes those adjustments should have been part of a separate rulemaking activity and not as a part of this proposal. CRWI believes that the proposed emission limits are simply too low to be reliably and defensibly measured in such a manner that a unit can comply. CRWI is concerned that EPA is forcing changes to CEMs QA/QC to mathematically support establishing such small CO emissions limits without determining if CO CEMs can actually perform this well. We believe EPA's approach is impractical. Instead, we suggest the Agency should upwardly adjust the emissions limits to reflect the uncertainties (three subcategories in Subpart CCCC and one subcategory in Subpart DDDD) so that the existing Performance Specification and test methods work.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and testing and monitoring.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1

Comment Excerpt Number: 29

Comment: Establishing MACT Floors on a Pollutant-by-Pollutant Basis is Contrary to the Clear Language of the Clean Air Act

For new, modified and reconstructed sources, Section 129(a)(2) provides that the "degree of reduction in emissions that is deemed achievable * * * shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source (emphasis added), as determined by the Administrator". Emission standards for existing units may be less stringent than standards for new units but "shall not be less stringent than the average emission limitation achieved by the best performing 12 percent of units (emphasis added) in the category".

In the proposed rule, EPA employs a pollutant-by-pollutant approach to set MACT floors. By employing a pollutant-by-pollutant approach, EPA is creating a MACT floor that is unachievable by any new or existing source. For new sources, the MACT floor is to be based on the level of emission control achieved by the best controlled similar source. There is no source capable of achieving the MACT floor limits for all eleven requirements. EPA has established a MACT floor based on a compilation of the eleven individual best controlled similar sources. Similarly, for existing sources, the MACT floor is to be based on the average of the best performing 12 percent of units. This would imply that approximately 6 percent of existing units would already comply with the MACT floor. However, because EPA is creating a compilation of eleven best performing 12 percent of units, it is equivalent to 0.1211, or the average of the best performing 0.0000000074 percent of units, which effectively means that no existing unit complies with the proposed MACT floor.

Lafarge also objects to EPA's interpretation that the best controlled similar source and the best performing unit are automatically the lowest emitting source or unit. This simply is not true. As stated on numerous occasions, cement kiln emissions are a function of several factors, but most dominantly from their raw materials. Each kiln has different raw materials and the process to convert these raw materials into a finished product creates unique emission profiles for each kiln.

For example, assume two kilns burning natural gas: Kiln 1 has very high pyritic sulfur in its limestone, while Kiln 2 has none. Kiln 1 will emit very high uncontrolled SO2, while Kiln 2 will emit no SO2. Kiln 1 can apply a control device to reduce SO2 emissions by 98%, but still emit SO2, while Kiln 2 applies no controls and emits no SO2. Kiln 1 is the best controlled source, yet Kiln 2 is the lowest emitting.

In the PCA comments submitted coincidental with Lafarge's comments, a detailed discussion is provided as to why EPA is improperly applying this methodology to establishing floor limits for the CISWI pollutants. Rather than repeat PCA's comments here, Lafarge includes their comments by reference.

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and control rationale for subcaegories-cement kilns.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)

Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 35

Comment: CRWI is concerned that EPA is using one method to develop standards and requiring a different method to show compliance.

CRWI is concerned that EPA is developing a standard for PM based on stack test data while requiring compliance based on a PM CEMs. It appears that EPA is using one method to set the standard and a totally different method to show compliance. The U.S. Court of Appeals for the D.C. Circuit has ruled that "a significant difference between techniques used by the Agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard." Portland Cement, supra, at 396. CRWI believes that using stack test data to set the standards and then PM CEMs to show compliance qualifies as "a significant difference between techniques." The primary difference between these two methods will be that the variability experienced during normal operations will not be captured during the stack test but will become apparent as the facility operates a CEMs over time. CRWI believes that if EPA wishes to use. PM CEMs to show compliance with the standard, then the standard must be developed

using PM CEMs data. The same logic can be applied'to the ,mercury CEMs requirements.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and testing and monitoring.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 51

Comment: CO CEMS & CO Limits. EPA points out that existing energy recovery units require CO CEMS, and has requested comment on whether other units should be required to use CO CEMS. EPA notes that since CO CEMS data is not available, that they are basing CO limits on a 24 hour block average which is applicable to new energy recovery units, as well as existing energy recovery units. However, Table 7 in subpart DDDD shows compliance per M10 with a 3 run average. CIBO would suggest a 30 day rolling average to gain more accurate sample data, as is done in the DDDDD proposal and/or make data not applicable at <50% of the load as in subpart JJJJJJ. 75 FR 31948.

Response: See preamble Section V. for the responses on the Testing and Monitoring and the MACT Floor Analysis including CEMS requirements and the use of CEMS data to set standards.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 1

Comment: Number of potentially affected units: The DEC disagrees with the United States Environmental Protection Agency's (EPA) estimate of the population of potentially affected units (75 FR31951) The proposal lists a population of 176 units nationwide that are potentially affected by this rule, with one such unit located in New York State. However, the DEC is aware of several units in New York State that are not included in this estimate based on the proposed affected subcategories. It appears that EPA may have significantly under estimated the number of potentially affected facilities. How did EPA determine the population of potentially affected sources, and how do they plan to address this discrepancy?

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

4.2 MACT Floor: Methodology: Statistical Analysis

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 6

Comment: Further, it is our belief that the proposed ultra low emission limits have been established using flawed statistical methods, and using inaccurate data that do not represent the universe of boilers and must be corrected.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 15

Comment: EPA has Committed Multiple Statistical Errors and Errors of Data Quality Assurance in Deriving its Proposed Standards

The statistical methods used in the proposal are inconsistent with existing EPA policy and set sources up for an unacceptable failure rate. Basic formulae to address variability, distribution, and confidence limits have been misapplied.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Gary Mellow

Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 11

Comment: For any limit where CEMs are required, CEMs data must be used to develop the emission limits. Our experience with CEMs shows that variability is much higher than what a periodic stack test will show. This is particularly true for CO. Even 30 days of continuous emission monitoring is insufficient. Biomass boilers have seasonal variability that would only be seen over the course of a year or more.

Additionally, EPA should be aware that there may be sources that have CEMs installed for criteria pollutants under other permit requirements when the proposed rule does not require CEMs. This is true particularly for NOx, CO and SO2. Therefore, even if the standard only requires a stack test, there are sources that will be using continuous emission monitors for compliance purposes.

Response: See preamble Section V. for the responses on use of CEMS data and CEMS data to set standards.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 2

Comment: EPA's Use of the Upper Limit Is Arbitrary and Unlawful.

The use of the upper limit ("UL") described in the proposal has several shortcomings. First, EPA fails to explain why a further variability adjustment is required beyond the variability already captured by the average of the top 12 percent of sources, as required by the statute. See id.; 42 U.S.C. § 7429(a). Second, EPA arbitrarily uses the UL to adjust the standards for potential emissions variability without explaining why it uses a different methodology than the upper prediction limit ("UPL") used in the major and area source industrial boiler rules; nor does EPA outline the implications for the CISWI MACT floor standard of using one versus the other. Compare 75 Fed. Reg. at 31,943–44, 52–56 with National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed Rule, 75 Fed. Reg. 32,006, 32,020 (June 4, 2010) and National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers; Proposed Rule, 75 Fed. Reg. 31,896, 31,905 (June 4, 2010) [See DCN: EPA-HQ-OAR-2003-0119-2027.3 and DCN:EPA-HQ-OAR-2003-0119-2027.4 for attachments provided by commenter.]

Third, the use of the UL explicitly contravenes the statutory requirement that the MACT floor be set at a level that is the average of the emissions level achieved by the best-performing 12 percent of sources. 42 U.S.C. § 7429(a). EPA describes the UL calculation as representing -a value that 99 percent of the data in the MACT floor data population [i.e., individual test run

data for the best 12 percent of units] would fall below." 75 Fed. Reg. at 31,952. As the EPA has acknowledged, the UL -is roughly equivalent to the 99th percentile of the actual data distribution for the sample." Memorandum from Amanda Singleton, ERG, to Jim Eddinger, EPA, Re: MACT Floor Analysis (2010) for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants – Major Source (April 2010) (EPA-HQ-OAR-2002-0058-0815), at 5. [See DCN: EPA-HQ-OAR-2003-0119-2027.5] Thus, the UL is neither the "average" of the sample nor a prediction about what the average might be over time. Using the UL ensures that the MACT floor is set at well above the average emissions level of the best-performing 12 percent of sources. If 99 percent of the data from test results falls below the MACT floor standard, then by definition, the MACT floor is set at a level that is above the average of the best-performing 12 percent of sources.

Fourth, EPA does not provide any explanation for its apparent assumption that sources' actual emissions levels will vary to the full extent of the 99th percent UL which, by its nature, reflects the 99th percent worst data in the data set. The UL does not consider an operator's efforts to limit variability in emissions—or at least upward variability—by maintaining and operating the source carefully to control emissions. Yet, as both EPA and the D.C. Circuit have recognized, operator training and care and source maintenance do operate to control emissions.

By using the UL, EPA ignores the effect of operator training and care and source maintenance on emission levels. Doing so is just as unlawful and arbitrary as setting floors that ignore the effects of cleaner fuel use; it results in floors that do not reflect the best sources' actual performance.

The impropriety of using the UL is further demonstrated by the absurd results obtained, such as the HCl standard for incinerators, which is set at a level over 16,000% greater than the average of the best-performing 12 percent of sources, the standard for Dioxin/Furan (total TEQ basis) for waste-burning kilns, which is over 18,000% greater than the average, and many others which are set at anywhere from 200-7,000% of the average. 75 Fed. Reg. at 31,952–53.

The absurd results themselves and the contortions that EPA goes through to develop (unlawful) standards in light of the suspect results confirm that the UL does not accurately estimate the relevant best units' emission levels and should be abandoned.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)
Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 3

Comment: The MACT floor also appears to have been set artificially high. EPA states that it is using the 99 percent upper limit ("UL") to calculate the proposed emission limits, which EPA explains is the figure that 99% of the units would fall below. This approach fails to account adequately, however, for variability, which is not surprising given the exceedingly small sample size and EPA's apparent lack of understanding of the different types of materials pyrolized in burn-off ovens. In fact, the 99 UL will be met only 91% of the time for all pollutants, which is too stringent for a proper MACT floor. Accordingly, short of improving its data set, EPA should

at least use the 99.9% UL initially proposed in the Hospital/Medical/Infectious Waste Incinerator rule. 75 Fed. Reg. 51,367, 51,386-87 (Oct. 6, 2009).

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 7

Comment: The statistical methods used in the proposal are inconsistent with existing EPA policy and set sources up for an unacceptable failure rate. Basic formulae to address variability, distribution, and confidence limits have been misapplied. There is no assurance that EPA has conducted thorough data quality reviews to ensure that the data are representative. EPA has used data to set floors that represent levels at or below

which the testing and analytical methods are truly capable of measuring. In some cases, values of zero are being used in floor calculations, which are not at all appropriate, as there is no control technology capable of reducing emissions to zero since the emissions of a pollutant can only be zero if there is nothing in the fuel or feed to produce emissions of that pollutant. Many of the flaws in these methods could be reduced with better quality and quantity of data.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 11

Comment: EPA has Committed Multiple Statistical Errors and Errors of

Data Quality Assurance in Deriving its Proposed Standards

AF&PA's comments explain in full detail, the statistical methods used in the proposal are inconsistent with existing EPA policy. Basic formulae to address variability, distribution, and confidence limits have been misapplied.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 22

Comment: EPA's statistical approach to variability is technically flawed and a proper approach will show less certainty in the results, much greater emissions variability, and higher floors. The following sections address these elements of the statistical analysis: choice of equation; use of test runs versus stack test averages; normal versus log-normal statistical distributions; and need for additional information on emissions variability.

Choice of Statistical Equation

In the proposed rule, EPA uses a statistical formula (the CISWI formula) shown in Equation 1 [see submittal for equation provided by commenter] to compute a 99th percentile upper limit (UL) for the distribution of test runs in the pool of best performing kilns. 75 Fed. Reg. 31952. EPA states that the formula was used in CISWI because it was used in the predecessor HMIWI rule. Id. at 31943. EPA also solicited comments on whether an alternative formula used in the proposed boiler MACT rule should be used instead.

The CISWI formula gives an inappropriate and incomplete treatment of the variability in emissions and should not be used to develop the floors. The UL calculation treats the pool of best performing kilns as if it were a statistical population, when the identified kilns are actually a sample representing the best performing kilns in the industry. A UPL calculation should be used instead, in order to treat the data as a sample. Further, the CISWI equation considers only the variability that is present in the data used to set the floor. There will be additional variability in the future stack test used to determine compliance that is not accounted for in the CISWI equation. All forms of emissions variability and uncertainty must be accounted for in the statistical equation used to develop the floors.

In place of the CISWI formula, EPA should adopt the formula used in the Proposed Boiler MACT Rule [Footnote: National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers; Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units. 75 Fed. Reg. 32020 (June 4, 2010)] [see Boiler MACT equation provided by commenter.] The Boiler MACT formula computes a UPL, using the floor data as a sample representing the best performers in the industry. The Moiler MACT formula considers all forms of variability that will affect a compliance determination, including the variability that is present in the floor data and the variability in the future stack test that will determine a unit's compliance. Among the several formulas considered by EPA in recent rulemakings, the Boiler MACT formula is the only one that allows a complete and correct accounting for variability, and it should be used in the Proposed CISWI Rule.

Improper Use of Test Runs to Represent Emissions Variability

In its floor analysis, EPA treated each test run as being an independent data point in applying the CISWI formula, and it treated the results of the floor calculation as providing the allowance for emissions variability required by the statue. If only one stack test is available for a best-performing kiln, the 3 individual test runs are statistically independent only with respect to the

run-to-run variability associated with the test method. The test runs (normally done back to back on the same day) provide no information on operating variability because they share the same operating conditions. If two stack tests are available for a best performing kiln, then the data offer two observations of the emissions profile due to operating variability. However, the six individual test runs that would be performed in those two stack tests are not 6 statistically independent observations, but rather two independent sets of 3 correlated test values.

EPA has a very limited amount of information on operating variability in the database. For units with one stack test, there is no way to determine the import of operating variability on its emissions. One cannot determine whether the unit's emissions are inherently low or the unit was merely tested on a day when its emissions were uncharacteristically low. Only units with two or more stack tests provide any information about emissions and operating variability. It is not possible to determine the emissions variability of the kilns identified as best performers in the CISWI rulemaking, given that the large majority (56 of 84) have only a single stack test. As EPA did for the PM floor analysis in the Pre-publication Portland Cement NESHAP, it should obtain additional data to have at least three stack tests per kiln. Although confidence limits can be computed for a dataset consisting of 2 data points, a minimum of three data points is the point at which one begins to obtain useful information about variability.

[See submittal for Table A-5 provided by commenter] that summarizes how limited EPA's information is on operating variability in comparison to what is implied by the count of test runs. For only four pollutants (CO, NOx, PM and SO2) does the data for best performers contain more than a dozen stack tests, and these counts are achieved only because certain kilns provide an extended record of tests:

* For CO, the Lafarge Seattle kiln reports 13 of the 22 stack tests

* For NOx, the Lafarge Seattle kiln reports 13 of the 22 stack tests

* For PM, the Lehigh Evansville 121 kiln reports 5 of the 13 stack tests

* For SO2, the Lafarge Harleyville 2 kiln reports 8 of the 15 stack tests.

Thus, where the sample is at least modest in size, it is because a large part of the sample comes from a single kiln, making the dataset unbalanced and not representative of the industry.

In all other instances, the database contains 10 or fewer stack tests. Given that there are 7 best performing kilns for each of these pollutants, only 1 to 3 kilns have multiple stack tests and the largest number of tests per kiln is only 2. In these instances, the dataset is both small and lacking in adequate information to assess emissions variability. For the metals, 4 or 5 kilns (of the 7 kilns in the floor) have only a single stack test depending on pollutant, while only 2 or 3 of the kilns have at least 2 stack tests.

In sum, EPA does not have adequate information in its database used to develop the proposed floors to adequately account for the effect of operating variability on the emission levels of the best performing kilns. Although PCA has added additional stack tests to the database, the existing emissions data for best performing kilns remain too limited in quantity to permit an adequate accounting for variability in developing the emissions floors. Without adequate information, EPA has not met its statutory obligation to set floors based on the emission limitation that the best performing kilns can meet in practice.

Floors Should be Based on Analysis of Stack Test Results

EPA's statistical method for the analysis of the data must properly represent and account for the amount of emissions data that it has and for the effects of both emissions variability and uncertainty. EPA's analysis of individual test run data does not meet this requirement.

In basing its floor analysis on test runs, EPA over-estimates the amount of information it has on operating variability and gives the data the appearance of more statistical power than it actually has. When individual test run data are used, the t-statistic is under estimated because the count of test runs is three times that of stack tests. In addition, the standard deviation for individual test runs is understated because the test runs are more homogenous (every triplet shares the same operating conditions) than are stack tests (which have independent operating conditions).

If EPA expects that compliance with the standards in the Proposed CISWI Rule will be based on the result of a single stack test (e.g., performed annually), then it must develop the CISWI floors and standards based on the analysis of the stack test results themselves (not individual test runs). The count of stack tests is the proper measure for the amount of emissions data that EPA has in its database. The result for a stack test is also statistically independent from other stack test results. Higher floor values necessarily result when the analysis is shifted from individual test runs to independent stack tests. These higher values more accurately represent the emissions limitation that the best performing units can be expected to meet, given the limited

information that EPA has on operating variability. No other basis for the analysis (i.e., using test runs in place of stack tests) should be used when it is possible to conduct the analysis on the same basis on which compliance will be enforced.

EPA Should Assume Log-Normal Distributions for Emissions

EPA should also change its methods for statistical analysis to assume that stack emissions are log-normally distributed, unless a normal (or other) distribution is shown to be the preferred choice by direct evidence. EPA took the reverse approach in its floor analysis, assuming that emissions were normally distributed unless the skewness or kurtosis tests indicated otherwise. The statistical tests for skewness and kurtosis are useful, but (like most tests) they are not very powerful in small samples and can only reject (not prove) a hypothesis. Selecting the correct hypothesis for the distribution of emissions data is critical to obtaining the correct result.

EPA's guidance document on methods for statistical analysis notes that emissions data are frequently right-skewed (meaning toward higher values) and that "[e]nvironmental data commonly exhibit frequency distributions that are non-negative and skewed with heavy or long right tails." [Footnote: U.S. Environmental Protection Agency, Office of Environmental Information, Guidance for Data Quality Assessment: Practical Methods for Data Analysis, EPA/600/R-96/084, at 2-40, 4-7 (July 2000).] We generally see the characteristic, right-skewed distribution of values in the data for all pollutants (except for lead and NOx), [Footnote: Distributional tests were not performed for D/F TMB or TEQ due to the concerns already expressed about the pervasive problems with this data] indicating that the data are not normally distributed. This is the natural outcome of physical processes that result in occasional excursions of emissions to a higher level than those typically encountered. For this reason, the hypothesis should be that emissions data are log-normally distributed, unless the skewness and kurtosis tests demonstrate otherwise.

Further, the correct statistical distribution should be a property of the pollutant and source type in question and should not change because of additions or deletions to the dataset Once EPA takes the step of adding two best performers to the pool under the alternative definition of solid waste, its own analysis adopts the log-normal distribution for all but two pollutants. If the emissions data are log-normally distributed when 9 best performers are considered, then they were log-normally distributed when only 7 best performers were considered, even if the skewness and kurtosis tests could not prove the existence of non-normality.

Selecting the proper statistical distribution is more than a fine point in the floor analysis, because the floors are defined on the basis of the 99th percentile of emissions. This point lies on the far right tail of the distribution, and it is crucial that the chosen distribution fit the data if the estimated percentile is to adequately characterize the emission limit that best performing kilns can meet. Other statistical distributions exist, and it may be important to investigate their use for pollutants such as cadmium that are not properly fit by the log-normal distribution. We have not been able to do so in the limited amount of time allowed for comments.

Further, there needs to be consistency between the emissions distribution chosen for existing units and that for new units. The causes for emissions data to be log-normally distributed operate in the data for individual units in the same way and to the same extent they are present in data for multiple units. Therefore, absent direct evidence to the contrary, the statistical distributions should be the same for both existing and new sources.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 34

Comment: The importance of sample size and variability is enforced by EPA's own analysis of the limits that would be expected under the solid waste definition proposed approach versus the alternative approach. The limits under the alternative approach would be set using data from a larger number of sources and would encompass a larger range of emissions; therefore, they are higher than the limits under the proposed approach and more achievable. Further consideration of variability will improve the achievability of the proposed limits.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 38

Comment: EPA Should Adjust its Statistical Methodology

EPA is using a statistic termed the 99 percent upper limit (UL) to calculate the proposed CISWI emission limits. EPA states in the preamble that this statistic represents the value that 99 percent of the units in the MACT floor would fall below and that it accounts

for variability. However, the number of units the limits are based on is very small, and since the limits are being developed on a pollutant-by-pollutant basis and in no way account for variability of the fuels and wastes being burned, this approach does not capture enough variability in emissions to ensure the limits will be met by the top performers 100 percent of the time. In fact, using a 99 UL approach for 9 pollutants results in only a 91 percent chance of compliance when testing all 9 pollutants, which is not acceptable for top performers. This is too high a probability of failure and facilities should not be subject to this risk. In the HMIWI rulemaking, EPA proposed using 99.9% UL to set MACT floors, but arbitrarily revised it downward to 99% in the final rule in response to a comment (74FR 51386-87).

Table A-3 of the April 26, 2010 ERG memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" [see DCN: EPA-HQ-OAR-2003-0119-0059] (hereinafter, the "floor memo") indicates for example that less than 3 percent of energy recovery units would comply under their current configuration. Clearly the statistical approach proposed does not result in reasonable emission limits if at least 6 percent of the top performers cannot meet them and only 4 existing units over all subcategories will be able to meet the proposed standards.

The appropriateness of the use of the 99 UL over the use of other statistical procedures typically used for censored or limited data sets is not discussed by EPA and although this calculation methodology was used in the HMIWI standard, is not consistent with statistical procedures used to develop other emission standards. For example, the EPA used a complicated statistical approach in the development of the hazardous waste combustor MACT standard to account for intra-unit variability as well as inter-unit variability among the units in the MACT floor. EPA has proposed the use of the 99 percent upper prediction limit for calculating the emission limits proposed in the Boiler MACT. Because EPA is using a limited data set that and in many cases contains predominantly non-detect values to set floors that units must meet at all times, consideration of variability and use of the appropriate statistical approach is crucial to ensuring units can achieve the emission limits. Therefore, in cases of severely limited or censored data sets, EPA should use either the 99.9 percent upper limit or use the upper tolerance limit (UTL), which is meant for use in situations where the amount of data available does not represent the entire population [Footnote: http://www.cee.vt.edu/ewr/environmental/teach/smprimer/intervals/interval.html] If the 99 percent UL is retained, then the approach to calculating this statistic should be adjusted, as the methodology is not appropriate for log-normally distributed data sets. The "floor memo" describes the methodology used by EPA to calculate the emission standards. As explained in this memo, for each pollutant the data from the sources identified as best performers were tabulated and tested to determine whether or not

they were normally distributed based upon skewness and kurtosis tests for normality. If the tests showed that the data were not normal, the data were log transformed and the natural log-transformed data were also tested for normalcy using the skewness and kurtosis tests. If either the original data set or the log-transformed data were determined to be normal, the data were further analyzed as described below. If both the "reported value" data set and the "log-transformed" data sets failed the skewness and kurtosis tests for normalcy, the normally

distributed data set was selected as the basis of the MACT floor for calculating the 99% upper limits (ULs) of the data.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 39

Comment: Skewness and kurtosis tests are inadequate for determining the

distributional form of the sample set

EPA's analysis to characterize data as normal or non-normal is flawed. EPA's analyses allege that a significant portion of emission data distributions are normally distributed. This is at odds with EPA's own publication which indicates that it is more likely that environmental data are distributed non-normally, following a bell-shaped probability curve that is skewed toward higher values. EPA's Guidance Document for Data Quality Assessment provides that the log-normal distribution is "[a] commonly met distribution in environmental work." Likewise, this guidance provides "Environmental data commonly exhibit frequency distributions that are non-negative and skewed with heavy or long right tails," and "the lognormal distribution is a commonly used distribution for modeling environmental contaminant data." U.S. Environmental Protection Agency, Office of Environmental Information, Guidance for Data Quality Assessment: Practical Methods for Data Analysis, EPA/600/R-96/084, at 2-40, 4-7 (July 2000).

However, in this instance, where there is any uncertainty according to EPA's criteria using Excel skewness and kurtosis, EPA has biased its findings on distributions in favor of normality -- the opposite of EPA's own guidance. EPA should only conclude that distributions are normal if there is convincing evidence showing it. In the absence of such data it should default to non-normal. On page 6 of the floor memo EPA arbitrarily selected a normal distribution for incinerator and burn-off oven PM emissions -- an arbitrary finding with no basis in science -- simply because it thought the resulting floor value was too high.

As stated in EPA's guidance for data quality assessment for determining whether or not a data set is normally distributed (EPA 2000), skewness and kurtosis tests are "rarely used as they are less powerful than many alternatives." EPA recommends that nonparametric tests be selected to avoid incorrectly assuming the data are normally distributed when they are not, or when insufficient information is available to test the assumption of normality. The Shapiro-Wilk W test is recommended by EPA as the preferred test for normality when the sample size is less than 50. For sample sizes greater than 50, EPA recommends either Filliben's statistic or the studentized range test; or if critical test values are not available, then EPA recommends Geary's test or the

Lilliefors Kolmogorov-Smirnoff test (EPA 2000). Since EPA is not following its own guidance documents, it should explain the reasons for doing so.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 40

Comment: Normal distribution theory has been incorrectly applied

Normal distribution theory has been incorrectly applied to positively skewed emissions data, which are more frequently described by lognormal distributions. Sample means, upon which ERG has based the calculation of the 99% upper limit (UL), have been incorrectly determined as the arithmetic average of a log-transformed data set, rather than as the mean of a lognormal distribution given by the following formula (Devore 1987): [see submittal for equation provided by commenter]

The result of replacing [see submittal for equation and variables provided by commenter] with is to underestimate the sample mean most of

the time. The underestimation occurs as a result of the skewness of the distribution and is more pronounced for small sample sizes with large [see submittal for variable provided by the commenter] values (Blackwood 1992).

An additional point is that, unlike in a normal distribution which is symmetric about its mean, the probability of an observation occurring a fixed distance from the mean in a lognormal distribution is different in one direction than it is in the other. This lack of symmetry limits the validity of confidence intervals commonly applied in normal theory, which assume that the variance is symmetric about the mean.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 41

Comment: Confidence limits constructed on sample medians do not provide a confidence limit for future means

The formula used by ERG to calculate the 99% UL for normally distributed data sets is shown [see submittal for equation provided by commenter]:

Where [see submittal for variable submitted by commenter] and [see submittal for variable submitted by commenter] are the mean and standard deviation, respectively of the 'reported

value' data set. For logarithmically transformed data sets, the 99% UL is calculated as [see submittal for equation provided by commenter]:

Where [see submittal for variable provided by commenter] and [see submittal for variable provided by commenter] are the mean and standard deviation of the log-transformed data. To construct a confidence interval about [see submittal for variable provided by commenter] is to construct an interval about the sample median rather than the sample mean.

Many authors (Bhaumik and Gibbons 2004; Krishnamoorthy and Mathew 2003; Zhou and Gao 1997; Bhaumik et al. 2008) have evaluated and proposed methods for constructing confidence and prediction intervals about a log-normal mean.

In a study to evaluate coverage error, interval width, and relative bias in four methods for constructing confidence intervals for skewed data distributions, Zhou and Gao found the so-called 'naïve' method (transforming confidence limits constructed on log-transformed data back to the original scale) to be inappropriate. They found the coverage error of confidence intervals so-generated to increase greatly with an increase in [see submittal for variable provided by commenter.] They also found the error to increase with increasing sample size, contrary to common belief. The increased error in the probability that the confidence interval includes the mean for larger sample sizes is a result of the larger sample size allowing increased accuracy in the estimate of [see submittal for variable provided by commenter], the median, coupled with corresponding narrower confidence limits that tend to set the median apart from the mean. Even EPA (2006a) has issued guidance stating that transforming confidence limits computed on log-transformed data back to the original scale produces a biased interval estimate and should be avoided unless the measure of central tendency being estimated is the median.

The recommendations made by Zhou and Gao as a result of their study were to construct confidence intervals for log-normal means based on Cox's method for moderate to large sample sizes and on Angus' bootstrap method for small sample sizes.

In a paper published in Technometrics, Bhaumik and Gibbons (2004) have noted that the technique used by ERG based on logarithmic transformation, "leads to a prediction limit for the median, which can dramatically underestimate the prediction limit for the mean." They have described the details of an alternative procedure for estimating the UPL of log-normally distributed data which is robust and more appropriate. We recommend that EPA should employ the above Bhaumik and Gibbons procedure for calculating the UL of log-normally distributed data.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 74

Comment: EPA Did Not Properly Consider Variability in Establishing The Proposed CISWI Standards

Pursuant to the MACT standard setting process in the CAA, EPA is required to set a MACT floor based on emission limitations that have already been achieved by the best-performing 12% of existing sources. To evaluate the emission limits achieved by existing sources, EPA is required to develop methodologies for estimating the variability associated with all factors that impact a source's emissions, including process, operational, and non-technological variables. See Nat'l Lime Ass'n v. EPA, 627 F.2d at 443. These factors may change on a frequent basis in relation to price fluctuations and availability, such as fuel type, or may only change slowly over time, such as by operational decisions regarding waste management and product specifications. While courts have affirmed EPA's authority to choose a methodology

designed to estimate emissions in setting the MACT floor, the courts have also made clear that the Agency's method "must 'allow a reasonable inference as to the performance of the top 12 percent of units.'" Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 862 (D.C. Cir. 2001) (citing Sierra Club v. EPA, 167 F.3d 658, 663 (D.C. Cir. 1999). Accordingly, the Court of Appeals for the D.C. Circuit has stated that "EPA must show not only that it believes its methodology provides an accurate picture of the relevant sources' actual performance, but also why its methodology yields the required estimate." Cement Kiln Recycling Coalition, 255 F.3d at 862 (emphasis in original).

EPA has a clear policy of considering long-term variability when establishing enforceable emission rates. In considering appropriate enforceable emissions rates in Prevention of Significant Deterioration (PSD) permits under the CAA, the Environmental Appeals Board has held that a permitting authority is not required to set the Best Available Control Technology "emissions limit at the most stringent emissions rate that has been demonstrated" in practice by a facility using similar emission controls. In re Newmont Nevada Energy Investment, 12 E.A.D. 429, 441-42 (EAB 2005) (citing Kendall New Century Dev., 11 E.A.D. 40, 53 (EAB 2003)). The Board has recognized the use of "safety factor[s]" in the calculation of permit limits to take into account both the variability and fluctuation in the expected performance of pollution controls, and the fact that setting emissions limitations for one facility at the highest control efficiency demonstrated at another facility would make violations of the permit unavoidable. Id. at 442. (citing In re Masonite Corp., 5 E.A.D. 551, 560 (EAB 1994)). As stated by the Board:

In essence, Agency guidance and our prior decisions recognize a distinction between, on the one hand, measured "emissions rates," which are necessarily data obtained from a particular facility at a specific time, and on the other hand, the "emissions limitation" determined to be BACT and set forth in the permit, which the facility is required to continuously meet throughout the facility's life. Stated simply, if there is uncontrollable fluctuation or variability in the measured emission rate, then the lowest measured emission rate will necessarily be more stringent than the "emissions limitation" that is "achievable" for the pollution control method over the life of the facility.

Id. For this reason, the policy and common sense approach used by EPA in PSD permitting should also apply in establishing MACT standards.

EPA should not solely rely on short-term data from similar sources and ignore the variability and long term impact of the proposed emission rates. EPA has expressed caution regarding reliance on stack test and short-term emissions data results to derive a MACT floor due to the variability in operating conditions at any facility. In EPA's proposed rule to set a NESHAP for mercury at coal-fired electric utilities, the agency identified a number of factors that contribute to the

variability in emission test data that must be considered, including the (1) emission test method; (2) analytical method; (3) design of the unit and the control device(s); (4) operating conditions of the facility and the control device(s); (5) amount of constituent being tested in the fuel; and (6) composition of the constituents in the fuel or flue gases. Prop. Nat'l Emissions Stds for Haz. Air Pollutants for Electric Utility Steam Generating Units, 69 Fed. Reg. 4652, 4670 (Jan. 30, 2004). EPA should consider these factors in this rulemaking as well.

Furthermore, this policy and common sense approach is recognized and required by the D.C. Circuit. Once the "similar sources" category is established, the EPA must identify the lowest emission limitation that has been "achieved in practice" by these sources. In another MACT case, the D.C. Circuit has held that the phrase "achieved in practice" refers to the performance of the source "under the worst foreseeable circumstances." Sierra Club v. EPA, 167 F.3d 658, 664 (D.C. Cir. 1999). The Court stated:

EPA would be justified in setting the floors at a level that is a reasonable estimate of the performance of the "best controlled similar unit" under the worst reasonably foreseeable circumstances . . .. It is reasonable to suppose that if an emissions standard is as stringent as "the emissions control that is achieved in practice" by a particular unit, then that particular unit will not violate the standard. This only results if "achieved in practice" is interpreted to mean "achieved under the worst foreseeable circumstances." In Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 431 n. 46 (D.C. Cir. 1980), we said that where a statute requires that a standard be "achievable," it must be achievable "under most adverse circumstances which can reasonably be expected to recur." The same principle should apply when a standard is to be derived from the operating characteristics of a particular unit.

Id; see also Mossville Environmental Action Now v. EPA, 370 F.3d 1232, 1242 (D.C. Cir. 2004) (noting that "even the best performing sources occasionally have spikes"). EPA should follow its own common sense approach and the directive of the D.C. Circuit, and develop MACT standards that consider the long term emission variations in portland cement facilities [Footnote: See also Attachment 6 [see submittal for Attachment 6 provided by commenter,] which PCA filed in comments on EPA's December 1, 2008 Hospital/Medical/Infectious Waste MACT proposal. The paper, entitled "Implications of the Brick MACT Decision on EPA's Discretion in Setting MACT Floors," discusses variability at some length.]

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 6

Comment: We offer a caution to EPA and the regulated community regarding the notion of "variability" in compliance with emission limits. NACAA agrees that common sense and several court decisions support the notion of incorporating a reasonable compliance margin in MACT floors. However, this concept is not incorporated in the statute itself and EPA could lose its discretionary authority to incorporate reasonable compliance margins if it continues to accept the ever-more creative arguments put forth by industry for larger and larger determinations of

variability. This is not mere speculation; in the now-vacated rule, EPA had accepted in its final rule an industry argument that a "variability" factor of 16,100 percent should be applied to the MACT floor for a subcategory. In other words, EPA had agreed that the calculated MACT floor should be multiplied by a factor of 161 to account for "variability." We submit that, had the court reached the merits of that provision, it would not have survived and, with its rejection, EPA's ability to provide reasonable compliance margins might have been constrained in

important ways. The latest proposal similarly contains a number of errors that each improperly inflate the variability assigned to the MACT floors and, in combination, lead to excessively high MACT floors for certain subcategories. These errors include the use of differences in performance of units instead of the variability of the performance of each "clean unit," double counting the variability associated with fuel, the use of inconsistent assumptions in standard setting and compliance determinations and the use of inconsistent definitions of "performance" in the MACT floor calculation process. They also include a failure to consider the adverse public health impacts associated with the procedures advocated by industry and a failure to rationally address the statistical impact on variability associated with industry arguments for a large number of subcategories with small numbers of sources [Footnote: One subcategory has but nine units and two data points for establishing a floor.] NACAA anticipates that industry representatives may submit comments suggesting even more creative methods for calculating large variability factors and so, in addition to commenting on issues that appear from the proposed MACT floor calculations.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 7

Comment: NACAA commends EPA for attempting to develop a statistical approach that is sound and that can be broadly applied to numerous different data sets. NACAA agrees with much of EPA's approach, including the use of log normal calculation procedures where the distribution of the data is skewed. However, this theoretical procedure involves a number of decisions where no single approach is "correct." NACAA anticipates that EPA will receive numerous comments arguing for other approaches that will provide MACT floor calculations that are more acceptable to the commenters. NACAA suggests that, as with any other theoretical exercise, whatever process EPA finally relies on must be validated by looking at the result it creates and examining whether the end result is reasonable. Toward this end we recommend a simple test – whether the resulting floor requires a substantial majority of each subcategory to make some degree of emission reduction. This test is based on the overall structure of sections 112 and 129 that require EPA to set a MACT floor at what is nominally the performance of the 94th percentile of the units. A reasonable allowance for performance variability leads to MACT floors that will be somewhat higher, but should not be so high that no unit within the subcategory currently emits at levels greater than the floor. The following charts illustrate the concept. [See submittal for charts provided by commenter.]

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The graph illustrates a standard that does not meet either a reasonable definition of MACT or a reasonable interpretation of variability in establishing a MACT floor. Here, EPA's proposed CO limit for new units is easily met by over 95 percent of existing units. In contrast, NACAA's proposed range is met by one-third of the existing units and occurs at a "step" in the data that distinguishes between the best performing units and the rest of the class.

The CO emissions data [see submittal for figure provided by commenter] highlights a subcategory where application of EPA's calculation methodology does not lead to a reasonable result.

emission level was less than 0.06 ppm – an extremely low level [Footnote: Indeed, this may simply be a reporting error, as one might expect an emission level of 0.06lb/MMBtu (10 ppm) from such units rather than 0.06 ppm] that is below the detection level in most instances. The other two units reported low, but more reasonable levels of 1.3 and 2.2 ppm. Since these latter levels are 20 to 40 times greater than the emission levels of the first three units, the use of inter-unit variability results in a large variability factor [Footnote: Inter-unit variability may simply reflect consistent differences in performance due to differences in the design of units rather than a variation in performance of all units. EPA's procedure claims to round CO test results less than 1 ppm up to 1 ppm, but it does not appear to have done so in this instance] and a MACT floor (90 ppm) that is inconsistent with the average of the top performing units.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 7

Comment: EPA's analysis failed to properly address the variability of the data, as well as emissions associated with startup, shutdown and malfunction. Thus, EPA's proposed limits do not appropriately address the variability in emissions of various HAPs. In addition, EPA's proposed limits are unduly impacted by issues associated with the limits of detection. Fundamentally, numerical limits should be based on quantifiable and reproducible test results consistent with reliable source test methods that have well-established performance. Limits should not be based on tests and methods that raise issues of significant measurement and other uncertainties.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1

Comment Excerpt Number: 8

Comment: EPA has used two (or three) different methods for establishing the "performance" of average of the best-performing 12 percent. In selecting the units to be included in the top 12 percent EPA assumed that the performance of those units was demonstrated by the best test result. Thereafter, in calculating the average of the selected units EPA assumes that the performance of a selected unit is defined by all test results [Footnote: EPA includes all test results of "best performers" in its calculation of the MACT floor for each subcategory. This effectively overweights the contribution of sources that have been tested multiple times compared to those that may have been tested only once] available for that unit. EPA then multiplies these results by a fuel variability factor to establish the final number that it uses to calculate the floor. This fuel variability factor is also different for different units, and so, again, the unit with the lowest single test result is not necessarily the "best performer" as used in EPA's calculations. EPA should use either the best test result for both purposes or use the best average of all test results for both purposes. This use of inconsistent definitions of performance has resulted in at least one MACT floor that is higher than it should be, as units with better average performance over all tests were excluded in favor of other units with a lower individual test result but higher overall emissions. NACAA believes that use of the average of all test results for an individual unit is an appropriate measure of the performance of that unit, provided that the subsequent analysis of variability does not then treat that average as a single test result. One way to address this issue may be to use the average of all test results to identify the best performing units in the calculation of the average of the top 12 percent, but then include all test results of the "best performers" in the determination of the potential variability of that average [Footnote: This is not the same as using the 99th percentile UPL of the individual runs as a factor to multiply the average.] The identification of the "best performers" should be made after all of the variability adjustments have been made to the universe of "candidate best performers." In this way the MACT floor would not be artificially increased by the use of data from sources that are ultimately not the best performers within a subcategory.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 8

Comment: Statistical treatment of data

EPA proposes to use the 99 percent upper predictive limit ("UPL") to accommodate and reflect variability in the operation of the best performers in calculating the MACT floor. The use of the 99 percent UPL calculated on only a small number of sources in a subcategory does not adequately capture variability or serve to predict the MACT floor level achievable by the top performers. In essence, the Agency is using this statistical method in an attempt to overcome the limited amount of emissions data available for top performers. However, this statistical approach cannot overcome the fact that the data are not representative of the entire population of boilers in

each subcategory and that the available data do not reflect the true variability of the top performing sources.

Instead of using the UPL, EPA should use the upper tolerance limit ("UTL"), which is meant for use in situations where the available data does not represent the entire population. In addition, since the proposed 99% confidence interval is applied to all 5 HAPs, the combined probability of achieving the set of limits drops to 95%, which is inappropriately low when facilities must be in compliance 100% of the time. EPA therefore should use a 99.9% confidence limit for all standards.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 9

Comment: Inconsistencies and questionable accuracy of the results of the statistical methods used to derive the proposed numerical limits.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 21

Comment: Aside from the mandates of Section 129 relating to the proper characterization of materials as solid waste and, similarly, the characterization of certain sources as solid waste incineration units, the CAA and prior judicial determinations require that EPA establish emission standards through Section 129 which satisfy Congress's intent that such standards be based on MACT. Although Section 129 sets forth unique MACT standards for new and existing sources, the statute requires that both types of standards be achievable in practice. The standards in the Proposed Rule, however, are contrary to this statutory mandate, because such standards, by EPA's own admission, are so stringent that they are not achievable in practice. Among other considerations, the multiple emission standards addressed in the Proposed Rule could not be simultaneously achieved in practice by most (if any) affected sources.

Moreover, in developing MACT standards, EPA is obligated to ensure that the data upon which it evaluates unit performance is accurate, complete, and representative. However, the database of information used by EPA to develop the Proposed Rule is woefully inadequate, and reflects instances in which the reported data does not accurately reflect emission unit performance under conditions necessary to ensure satisfaction with the standards in the Proposed Rule. This problem

is further complicated by the fact that EPA has simultaneously proposed three related MACT combustion rules, with an alternative proposal which gives four possible permit limits for the same universe of sources. This approach results in a murky set of varying limits that have no apparent correspondence to one another.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 2

Comment: The importance of sample size and variability is demonstrated by the limits that would result from the solid waste definition proposed approach, versus the alternative approach. The limits resulting from the alternative approach would be set using data from a larger number of sources and would encompass a larger range of emissions; therefore, the limits are higher than the limits under the proposed approach and more achievable. Consideration of variability will improve the achievability of the proposed limits.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 4

Comment: EPA's upper limit (UlA and upper predictive limit (UPL} calculations do not properly account for emissions variability. EPA should correct these calculations to account for both intra-unit and inter-unit variability, similar to procedures EPA used in the Portland Cement and Hazardous Waste Combustor MACT rules.

EPA solicited comments on whether it should use an alternate statistical metric, the upper predictive limit (UPL), instead of the upper limit (UL) to set MACT floors. (75 FR 31955). ERC believes that the UPL could be used, but EPA's calculation of both UL and UPL are incorrect. In its UL and UPL calculations EPA has used the square root of sample variance instead of the total variance. By substituting sample variance for total variance EPA has not properly accounted for total variability. Total variability is the sum of both within (intra) and between (inter) unit variability. Inter-unit variability is an additive value because the variance in emissions from each of the top performing sources is independent of one another and dependent on each individual unit's waste composition, combustor type, air pollution control types, test conditions and sample matrix. Intra-unit variability is the variability observed in test results from the same unit due to differences in waste composition, and process and air pollution control operation conditions during each test run.

As such, if total variability is not addressed MACT floors will not represent achieved limitations. If EPA were to adopt the UPL approach to determining MACT floors it should use the modified UPL that accounts for total variability as used the Portland Cement rule [Footnote: Development of the MACT Floor for the Proposed NESHAP for Portland Cement, April 2009. EPA-HQOAR-2002-0051-2011 .pdf] and the HWC MACT Rule [Footnote: Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September 2005, Pages 7-5 to 7-7. EPA-HQ-OAR-2004-0022-0453.pdf]. For the same reasoning if EPA's continues to use the UL statistic to set MACT floor, it should abandon the use of the sample variance and use the total variance. EPA has offered no explanation of why it diverged from this approach in the CISWI MACT proposal. The HWC MACT Rule approach is designed to estimate a MACT floor that is achievable by the average of the best performing sources.

The equation for the Modified UPL that addresses total variation is:

UPL = Mean + t V VT

Where, Mean is the average of the best performing MACT unit averages and VT is the total variance determined as the sum of the within (intra) source variance and the between (inter) source variance.

Total Variance of VT = VB + Vw,

Where, VB is the variance of the average of the best performing unit averages. As described above VB is additive because the variance of each unit is independent of one another and dependent on individual units waste composition, combustor type, air pollution control type and sample matrix affects when sampling. Vw is the within or intra source variance and is calculated as the sum of the variances of individual runs within each of the best performing sources since individual unit test results will vary with waste composition, and process and air pollution control operation conditions during each test run.

Using the Modified UPL outlined in the HWC MACT Rule results in significantly different MACT floors for energy recovery units as summarized in the following Table. [See submittal for UL and UPL comparison table provided by commenter.]

The cadmium MACT floor increases from 0.00041 mg/dscm using EPA's current UL statistic based on sample variability to 0.00056 mg/dscm using EPA's HWC MACT Modified UPL statistic that accounts for total variability. Similar increase in the MACT floors are seen for lead and PM as total variability is accounted for. In any case the above table indicates EPA's proposed UPL calculations are flawed and does not fully account for variability. If EPA were to adopt a UPL approach the HWC MACT UPL should be used to represent floors that have been achieved in practice. If EPA continues to use the UL approach the EPA should the total variability statistic.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 5

Comment: EPA should select the 99.9% upper limit (and not the 99% upper limit) as representative of achieved emission limitations.

In its proposal EPA determined MACT floor emission limits for existing and new units based on the 99th percent upper limit (UL). From the statistical point of view the 99% UL is the emission value that the unit will meet with 99% probability. While this would seem to suggest a high likelihood of compliance, probability must be viewed from a violation perspective, i.e. that there is a 1% likelihood that a given pollutant test on a given unit will exceed the selected limitation. In this regard the 99% UL is inadequate. EPA requires annual performance tests to demonstrate compliance. For a two unit facility and 11 emission limitations, the probability of passing all 22 pollutant emission tests in an annual performance testing program is (0.99)22 = 80%, i.e. the probability of at least one emission violation is 20%, and this probability does not even include the compliance risk associated with continuous emission monitoring (CEM). These are unacceptable risks to any responsible operator, and should likewise be unacceptable to EPA.

If EPA employs the statistical UL to set MACT floor emission limits it should use the 99.9% UL. This represents a 0.1% probability of a failure for individual tests, or a 2% probability for a 2-unit facility annual performance test program. This value better encompasses unit emissions variability and represents a manageable risk to the responsible facility operator. This is especially important when emissions data is limited.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 6

Comment: NESCAUM concurs with comments by the National Association of Clean Air Agencies (NACAA), and supports analysis of the variability of the units that currently meet the proposed emissions limits.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 7

Comment: Geometric Mean Must Be Employed When Limits Are Based On Log Normally Distributed

For any MACT limit derived from log normally transformed data, the performance test or CEM averaging time must be based on the Geometric Mean not the arithmetic average or mean. If not then the log normal based limit is meaningless and will lead to violations based on inherent emission variability and distribution that the log normal data transformation for MACT floor setting directly addressed.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 9

Comment: EPA Should Adjust its Statistical Methodology

Because EPA is using a limited data set that in many cases contains predominantly non-detect values to set floors that units must meet at all times, consideration of variability and use of the appropriate statistical approach is crucial to ensuring units can achieve the emission limits. Therefore, in cases of severely limited or censored data sets, EPA should use either the 99.9 percent upper limit (UL) or use the upper tolerance limit (UTL), which is meant for use in situations where the amount of data available does not represent the entire population.[Footnote: http://www.cee.vt.edu/ewr/environmental/teach/smprimer/intervals/interval.html]

Instead, EPA is inappropriately using the 99 percent UL statistic to calculate the proposed CISWI emission limits. However, this approach does not capture enough variability in emissions to ensure the limits will be met by the top performers 100 percent of the time. This approach is flawed, given that the number of units the limits are based on is very small, and the limits are being developed on a pollutant-by-pollutant basis in a way that does not account for variability of the fuels and wastes being burned In fact, using a 99% UL approach for 9 pollutants results in only a 91 percent chance of compliance when testing all 9 pollutants, which is not acceptable for top performers. This is too high a probability of failure and facilities should not be subject to this risk.[Footnote: In the HMIWI rulemaking, EPA proposed using 99.9% UL to set MACT floors, but revised it downward to 99% in the final rule in response to a comment. 74 FR 51386-87.] The flaws in this approach are demonstrated by comparing the resulting limits with information about the actual performance of existing units. Table A-3 of the floor memo [Footnote: EPA-HQ-OAR-2003-0119-0059] indicates for example that less than 3 percent of energy recovery units would comply under their current configuration. Clearly the statistical approach proposed does not result in reasonable emission limits if at least 6 percent of the top performers cannot meet them and only 4 existing units over all subcategories will be able to meet the proposed standards.

EPA does not justify the appropriateness of the use of the 99%UL over the use of other statistical procedures typically used for censored or limited data. Further, although this calculation methodology was used in the Hospital/Medical/Infectious Waste Incinerators (HMIWI) standard, it is not consistent with statistical procedures used to develop other emission standards. [Footnote: 74 FR 51367]For example, EPA used a complicated statistical approach in the

development of the hazardous waste combustor MACT (HWC) standard to account for intra-unit variability as well as inter-unit variability among the units in the MACT floor. [Footnote: 70 FR 59402]EPA has proposed the use of the 99 percent upper prediction limit for calculating the emission limits proposed in the June 4, 2010 Boiler MACT.

If the 99%UL is retained, the approach to calculating this statistic should be adjusted, as the methodology is not appropriate for log-normally distributed data sets. According to the "floor memo" for each pollutant the data from the sources identified as best performers were tabulated and tested to determine whether or not they were normally distributed based upon skewness and kurtosis tests for normality. If the tests showed that the data were not normal, the data were log transformed and the natural log-transformed data were also tested for normalcy using the skewness and kurtosis tests. If either the original data set or the log-transformed data were determined to be normal, the data were further analyzed as described below. If both the

"reported value" data set and the "log-transformed" data sets failed the skewness and kurtosis tests for normalcy, the normally distributed data set was selected as the basis of the MACT floor for calculating the 99% upper limits of the data.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 10

Comment: The EPA-proposed UPL statistical formula is improper for setting the CISWI standards because it does not properly treat the overall variance.

EPA misapplied the use of the UPL formula to convert stack test data to continuous data. A more appropriate formula would limit the second term to (1 + 1/n) rather than (1/m + 1/n).

EPA inaccurately used each test run in a stack test as an independent data set

EPA used kilns with a single stack test data to set the floor

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 10

Comment: Skewness and Kurtosis Tests are Inadequate for Determining the Distributional Form of the Sample Set

EPA's analysis to characterize data as normal or non-normal is flawed. EPA's analysis results in a significant portion of emission data distributions that are normally distributed. This is at odds

with EPA‘s own publication which indicates that it is more likely that environmental data are distributed non-normally, following a bell-shaped probability curve that is skewed toward higher values. EPA‘s Guidance Document for Data Quality Assessment states that the log-normal distribution is “[a] commonly met distribution in environmental work.” Likewise, this guidance indicates “Environmental data commonly exhibit frequency distributions that are non-negative and skewed with heavy or long right tails,” and “the lognormal distribution is a commonly used distribution for modeling environmental contaminant data.” [Footnote: U.S. Environmental Protection Agency, Office of Environmental Information, Guidance for Data Quality Assessment: Practical Methods for Data Analysis, EPA/600/R-96/084, at 2-40, 4-7 (July 2000).] Where there is any uncertainty according to EPA‘s criteria using Excel skewness and kurtosis, EPA biases its findings on distributions in favor of normality, the opposite of EPA‘s own guidance. EPA should only conclude that distributions are normal if there is convincing evidence showing a normal distribution. In the absence of such data it should default to non-normal. On page 6 of the floor memo EPA characterized incinerator and burn-off oven PM emissions as distributed normally. We find no basis in the record for this characterization and suspect it was chosen because resulting floor value was “too high.”

As stated in EPA‘s Guidance for Data Quality Assessment, skewness and kurtosis tests are “rarely used as they are less powerful than many alternatives.” EPA recommends that

nonparametric tests be selected to avoid incorrectly assuming the data are normally distributed when they are not, or when insufficient information is available to test the assumption of normality. The Shapiro-Wilk W test is recommended by EPA as the preferred test for normality when the sample size is less than 50. For sample sizes greater than 50, EPA recommends either Filliben‘s statistic or the studentized range test; or if critical test values are not available, then EPA recommends Geary‘s test or the Lilliefors Kolmogorov-Smirnoff test (EPA 2000). EPA must explain why it is not following its own guidance documents in establishing the standard in this rulemaking.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 11

Comment: EPA’s Analysis Incorrectly Applies Normal Distribution Theory

Normal distribution theory has been incorrectly applied to positively skewed emissions data, which are more frequently described by lognormal distributions. Sample means, upon which ERG has based the calculation of the 99% upper limit, have been incorrectly determined as the arithmetic average of a log-transformed data set, rather than as the mean of a lognormal distribution given by the following formula (Devore 1987):

The result of replacing ? with is to underestimate the sample mean most of the time.

The underestimation occurs as a result of the skewness of the distribution and is more pronounced for small sample sizes with large ?2 values (Blackwood 1992).

In addition, unlike in a normal distribution which is symmetric about its mean, the probability of an observation occurring a fixed distance from the mean in a lognormal distribution is different in one direction than it is in the other. This lack of symmetry limits the validity of confidence intervals commonly applied in normal theory, which assume that the variance is symmetric about the mean.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 12

Comment: Confidence Limits Constructed on Sample Medians Do Not Provide a

Confidence Limit for Future Means.

The formula used by ERG to calculate the 99% UL for normally distributed data sets is shown below. [See submittal for equation used by ERG to calculate the 99% UL for normally distributed data sets provided by commenter.] where μ and ? are the mean and standard deviation, respectively of the ?reported value‘ data set. For logarithmically transformed data sets, the 99% UL is calculated as. [See submittal for 99% UL equation for logarithmically transformed data provided by commenter.]where μ and ? are the mean and standard deviation of the log-transformed data. To construct a confidence interval about eμ is to construct an interval about the sample median rather than the sample mean.

Many authors (Bhaumik and Gibbons 2004; Krishnamoorthy and Mathew 2003; Zhou and Gao 1997; Bhaumik et al. 2008) have evaluated and proposed methods for constructing confidence and prediction intervals about a log-normal mean.

In a study to evaluate coverage error, interval width, and relative bias in four methods for constructing confidence intervals for skewed data distributions, Zhou and Gao found the so-called ?naïve‘ method (transforming confidence limits constructed on log-transformed data back to the original scale) to be inappropriate. They found the coverage error of confidence intervals so-generated to increase greatly with an increase in ?2. They also found the error to increase with increasing sample size, contrary to common belief. The increased error in the probability that the confidence interval includes the mean for larger sample sizes is a result of the larger sample size allowing increased accuracy in the estimate of eμ, the median, coupled with corresponding narrower confidence limits that tend to set the median apart from the mean. Even EPA has issued guidance stating that transforming confidence limits computed on log-transformed data back to the original scale produces a biased interval estimate and should be avoided unless the measure of central tendency being estimated is the median.[Footnote: EPA, Data Quality Assessment: A Reviewer’s Guide, EPA QA/G-9R, EPA/240/B-06/002, February 2006.]

The recommendations made by Zhou and Gao as a result of their study were to construct confidence intervals for log-normal means based on Cox‘s method for moderate to large sample sizes and on Angus‘ bootstrap method for small sample sizes.

In a paper published in Technometrics, Bhaumik and Gibbons (2004) have noted that the technique based on logarithmic transformation, which has been employed by ERG, “leads to a prediction limit for the median, which can dramatically underestimate the prediction limit for the mean.” They have described the details of an alternative procedure for estimating the UPL of log-normally distributed data which is robust and more appropriate. We recommend that EPA should employ the above Bhaumik and Gibbons procedure for calculating the UL of log-normally distributed data.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 14

Comment: EPA’s emissions database is small and does not represent emissions under all operating conditions. EPA’s statistically-based floor setting methodology leads to standards that fail to consider the full range of emissions variability and emissions under the worst foreseeable circumstances. EPA should modify its methodology and statistical analyses to ensure it derives MACT floors that have been achieved in practice, erring on the side of assuring achievability of the standards it sets.

EPA’s MACT protocol employs statistical calculations to quantify emissions variability and derive emission standards. The use of statistics can be an appropriate and pragmatic way to capture the composite effects of emissions performance variables that affect emissions from commercial scale combustion units and would otherwise frustrate concise analysis. These variables include waste characteristics, operation and maintenance cycles including startup/shutdown, combustion and air pollution control system performance, seasonal effects, unit load, etc. However, statistics has obvious limitations, notably the need for representative emission data for the entire unit emissions population being studied, including consideration of the above performance variables. Unfortunately EPA’s scant database fails dramatically in this regard. Frequently a unit’s emission data consists of only a single test over as little as three hours or 0.04% of a typical operating year. Tests generating the emission data are typically conducted when the units are operating at steady-state full-load conditions, ignoring other operating conditions. For biomass units tests do not include an assessment of CO variability due to seasonal effects on biomass moisture and unit load variations.[Footnote: Maine Department of Environmental Protection, “Carbon Monoxide Variability in Maine Wood Fired Boilers, February 2010, page 10. Attachment to letter from James P. Brooks, Bureau Director, State of Maine Bureau of Air Quality to James Eddinger, USEPA, February 4, 2010.] (See Attachment 1.) [See Submittal for Maine DEP report and letter in Attachment 1 provided by commenter.] Many of the best

performing unit emission values are non-detects, frustrating statistical analysis. By its very nature waste has variable combustion and emission characteristics over time yet EPA offers no data or analysis to address this. In short, EPA's database fails to represent emissions fluctuations that occur over time and under the worst foreseeable circumstances and thereby understates the full range of emissions, including those of the selected best performer(s). These shortcomings notwithstanding, EPA steadfastly applies its statistically-based methodology to derive MACT floors as though it reflected all emission conditions, and seemingly without regard to the achievability of results.

Evidence of EPA's over-reliance on its statistical methodology can be seen by comparing the energy recovery subcategory floors for the proposed solid waste definition (75 FR 31945, Table 1) with the floors for the alternative solid waste definition (75 FR 31946, Table 3). The alternative case reflects the re-categorization of a portion of Boiler MACT units into CISWI units because the alternate solid waste definition classifies more secondary materials as wastes. As the Table 2 below shows, the floors derived for the two different solid waste definitions are remarkably different. Existing unit floors for the proposed case are generally one to two orders of magnitude (up to 366 times) more stringent than floors for the alternative case. [See submittal for Table 2: Comparison of MACT Floor Limits - Proposed and Alternative Solid Waste Definition provided by commenter.] New unit floors are up to 20 times more stringent for the alternate case, including metals limits as low as one nanogram per cubic meter. These vast differences don't make sense, clearly showing the flaws in EPA's method and indicating the need to apply caution using statistical tools on EPA's inadequate database.

EPA should acknowledge the inadequacy of its database and amend its floor setting methodology to account for the emissions variability inherent in CISWI units. At this point in the regulatory process EPA may not have the time to acquire all the data necessary for representativeness for all units. In lieu of that data EPA should conduct and utilize any statistical calculations performed with its non-representative database very carefully, assuring that the selected floor values do indeed represent the average emission limitation achieved in practice at the best performing unit(s). EPA must err on the side of achievability; otherwise it risks setting the technology-based MACT standards at levels which technology cannot achieve. At a minimum, EPA should make the changes discussed in Comments 8 through 14 below to reasonably assure that it conforms to the requirement that each MACT floor reflects the emissions limitation achieved under the worst foreseeable circumstances.

EPA should use its authority under the law to go beyond-the-floor in instances where derived floors do not reflect "maximum degree in reduction of emissions" and can also set more stringent standards consistent with the residual risk and five-year review processes. In fact, with its limited emissions database and statistical tools EPA should anticipate that some calculated floor values will seem higher than is ultimately achievable. This is result of these limitations. In such cases EPA should rely on its beyond-the-floor evaluation to set the standards.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 15

Comment: EPA's upper limit (UL) and upper predictive limit (UPL) calculations do not properly account for emissions variability. EPA should correct these calculations to account for both intra-unit and inter-unit variability, similar to procedures EPA used in the Portland Cement and Hazardous Waste Combustor MACT rules.

EPA solicited comments on whether it should use an alternate statistical metric, the upper predictive limit (UPL), instead of the upper limit (UL) to set MACT floors. (75 FR 31955). ERC believes that the UPL could be used, but EPA's calculation of both UL and UPL are incorrect. In its UL and UPL calculations EPA has used the square root of sample variance instead of the total variance. By substituting sample variance for total variance EPA has not properly accounted for total variability. Total variability is the sum of both within (intra) and between (inter) unit variability. Inter-unit variability is an additive value because the variance in emissions from each of the top performing sources is independent of one another and dependent on each individual unit's waste composition, combustor type, air pollution control types, test conditions and sample matrix. Intra-unit variability is the variability observed in test results from the same unit due to differences in waste composition, and process and air pollution control operation conditions during each test run. As such, if total variability is not addressed MACT floors will not represent achieved limitations.

If EPA were to adopt the UPL approach to determining MACT floors it should use the modified UPL that accounts for total variability as used the Portland Cement rule [Footnote: Development of the MACT Floor for the Proposed NESHAP for Portland Cement, April 2009. EPA-HQOAR-2002-0051-2011.pdf.] and the HWC MACT Rule. [Footnote: Technical Support Document for HWC MACT Standards, Volume III: Selection of MACT Standards. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September 2005, Pages 7-5 to 7-7. EPA-HQ-OAR-2004-0022-0453.pdf].For the same reasoning if EPA's continues to use the UL statistic to set MACT floor, it should abandon the use of the sample variance and use the total variance. EPA has offered no explanation of why it diverged from this approach in the

CISWI MACT proposal. The HWC MACT Rule approach is designed to establish a MACT floor that has been achieved by the best performing units.

The equation for the Modified UPL that addresses total variation is. [See Submittal for the modified UPL equation that addresses total variation provided by commenter.]

Where Mean is the average of the best performing MACT unit averages and VT is the total variance determined as the sum of the within (intra) source variance and the between (inter) source variance. [See Submittal for the Total Variance of VT equation provided by commenter.]

Where VB is the variance of the average of the best performing unit averages. As described above VB is additive because the variance of each unit is independent of one another and dependent on individual units waste composition, combustor type, air pollution control type and sample matrix affects when sampling. VW is the within or intra source variance and is calculated as the sum of the variances of individual runs within each of the best performing sources since individual unit test results will vary with waste composition, and process and air pollution control operation conditions during each test run.

The Modified UPL outlined in the HWC MACT Rule results in significantly different MACT floors for energy recovery units as summarized in the following table. [See submittal for UL and UPL Comparison Table provided by commenter.]

The cadmium MACT floor increases from 0.00041 mg/dscm using EPA's current UL statistic based on sample variability to 0.00056 mg/dscm using EPA's HWC MACT Modified UPL statistic that accounts for total variability. Similar increase in the MACT

floors are seen for lead and PM as total variability is accounted for. In any case the above table indicates EPA's proposed UPL calculations are flawed and does not fully account for variability. If EPA were to adopt a UPL approach the HWC MACT UPL should be used to represent floors that have been achieved in practice. If EPA continues to use the UL approach the EPA should the total variability statistic.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 15

Comment: EPA states that the UL computation assumes that the data available represents the entire population of data from the best performing CISWI units used to establish the proposed standards. However, this only represents variability for those units for the test data used, not for all operating conditions which may be typical for those units.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 16

Comment: EPA's methodology biases results in favor of units that have more data. EPA should use the alternate approach presented in Comment 11 which avoids this problem.

In setting MACT standards for existing units, EPA pools and utilizes data from all available test runs for the selected best performing units without regard to the number of data points available for each unit. In most cases the number of test runs varies from unit to unit. Using data in this way biases the statistical results and ultimately the standards by over-weighting the performance of the units with more data. As an example, the EG variability analysis for carbon monoxide in Table C-32 of the ERG Floor Memorandum includes four best performing units having a total of 39 data points, distributed as follows: Unit 1 = 3, Unit 2 = 6, Unit 3 = 18, Unit 4 = 12. Clearly this analysis and the resulting floor value are biased toward the Units 3 and 4 which constitute 77% of the data points even though they make up 50% of the units, and underweight Unit 1

which is 1/4th of the units but only contributes 1/13th of the data. This example shows EPA's floor-setting methodology is scientifically flawed.

EPA can avoid this problem simply by using the alternate approach presented in Comment 11. In this alternate approach each best performing unit's emissions limitation achieved is determined first and then that single value is averaged along with the single values from the other best performing units to determine the floor. All best performing units are thereby weighted equally.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 17

Comment: For the purposes of characterizing emission data distributions EPA must default to non-normal unless sufficient data are available to conduct robust analyses which unambiguously shows the distribution can only be described by normal statistics.

The first step in statistical analysis on a dataset is to determine the type of distribution the data follow, typically characterized as normal or non-normal (log-normal). In its proposed CISWI methodology EPA employs simplistic criteria using two Excel functions (skewness and kurtosis) to decide whether emission data are normally or non-normally distributed. EPA states that its procedure is the same it used in the HMIWI MACT floor setting methodology. (75 FR 31943 footnote 3 and 75 FR 31952 footnote 8). This is incorrect. While the overall methodology is similar EPA's HMIWI methodology used a single criterion to characterize data distribution. As a result the proposed CISWI floors are relatively more stringent than the HMIWI standards.

Using its criteria EPA finds that the data used for CISWI floor determinations follow normal distributions in 33 out of 48 cases (69%) for existing units and 48 out of 48 cases (100%) for new units, or 85% overall. (ERG Floor Memorandum, Tables A-1 and A-2, Option 2a-2e). This finding is inconsistent with both conventional wisdom and EPA's own Guidance for Data Quality Assessment Manual, [Footnote: U.S. Environmental Protection Agency, Office of Environmental Information, "Guidance for Data Quality Assessment: Practical Methods for Data Analysis", EPA/600/R-96/084, July 2000.] (hereinafter referred to as "EPA Guidance for Data Assessment") which hold that it is more likely that environmental data are distributed log-normally. EPA's Guidance for Data Assessment provides that the lognormal distribution is "a commonly met distribution in environmental work." (p. 2-40), also stating "Environmental data commonly exhibit frequency distributions that are non-negative and skewed with heavy or long right tails," (p. 4-7), and "The lognormal distribution is a commonly used distribution for modeling environmental contaminant data." (p. 4-7). It is reasonable to believe that environmental emissions distributions are non-normal, since frequency plots typically show many readings approaching zero and fewer large readings forming a one-tailed distribution. Normal distributions may exist for a pollutant like NOx where the entire dataset is many standard deviations away from zero (two-tailed), CEMS provides copious data, and values are controlled by an air pollution control process with minute to minute feedback and controls.

EPA's characterization approach using Excel functions is not robust. The Guidance for Data Assessment states that skewness and kurtosis tests are "rarely used as they are less powerful than many alternatives." It is therefore reasonable to conclude that EPA's data distribution designations are flawed and that they bias the resulting MACT floor determinations.

Where there is any uncertainty according to EPA's criteria using Excel skewness and kurtosis EPA biases its findings on distributions in favor of normality, the opposite of EPA's own guidance. Examples: 1) where the skewness/kurtosis results were mixed or conflicted EPA selected normal; 2) on page 6 of the ERG Floor Memorandum EPA selected a normal distribution for incinerator and burnoff oven PM emissions simply because it thought the resulting floor value was too high; and, 3) in several other cases EPA selected a normal distribution "to provide a more protective limit" (ERG Floor Memorandum, Table A-4). These are purely arbitrary designations which lack scientific basis and lead to MACT floors which have not been achieved in practice.

Distribution determination is not an exact science, even with datasets that are representative of the entire data population. Graphical methods and mathematical methods such as Shapiro Wilk are frequently employed but can still lead to ambiguous results. Add the additional confounding factor of EPA's small unrepresentative database and the determination becomes highly uncertain. In many cases, new units in particular,

EPA is applying its Excel criteria to as few as three data points. Any conclusion reached from such a cursory analysis must be viewed as highly uncertain and speculative. In addition datasets do not lend themselves to simple black and white normal/non-normal designations, there are shades of grey. EPA's force-fitting analysis belies this fact.

Yet the normal/non-normal designation is too important to be left to chance. In the CISWI proposal MACT floor values differ significantly between normal and non-normal ULs – normal distributions are 2-3 times the best performing unit averages, non-normal are 5-25 times. MACT floors could vary by an order of magnitude or more depending on the distribution assigned. Coupled with the significant uncertainties EPA's criteria lead to a high probability that MACT floors do not represent emissions achieved in practice.

EPA must, by default, assume that emissions data it analyses are log-normally distributed unless rigorous statistical analysis conducted in accordance with EPA guidance unambiguously show otherwise. EPA should not rely on cursory Excel tests and criteria applied to small non-representative dataset to determine distributions. This is reasonable and consistent with the requirement to err on the side of achievability (see Comment 7).

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 18

Comment: EPA's existing unit floor-setting methodology pools all best performing unit emission data for statistical analysis, which does not follow the language of the law. EPA should use an alternate approach which follows the plain language of the CAA Section 129, as discussed below.

For existing units CAA Section 129 states "Emission standards for existing units in a category...shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category". EPA's proposed approach sets a MACT floor for each pollutant from an average of best performing 12% of units and then employs a statistical methodology which accounts for emissions variability to set MACT floor emissions limits.

As the ERG Floor Memorandum explains, EPA distinguishes between a "MACT floor" (an average of emissions from the best performing units), and a "MACT floor emission limit" (the value determined from its variability analysis), as follows:

"For existing sources the MACT floor for each subcategory of sources was calculated by ranking the emission test results from units within the subcategory from lowest emissions to highest emissions (for each pollutant) and then taking

the numerical average of the test results from the best performing (lowest emitting) 12 percent of sources." (ERG Floor Memorandum, page 3, emphasis added)

"...a statistical analysis was conducted to calculate the average and account for the variability in order to determine the MACT floor emission limit" (ERG Floor Memorandum, page 4, emphasis added)

EPA's approach is inconsistent with Section 129, wherein the key phrase "average emissions limitation achieved" directs that the limitation achieved be determined first, and then an average taken to determine the applicable least stringent standard. In EPA's approach there is no averaging of the achieved emissions limitations, an average is only used to select the best performing units and set a "MACT floor" value before considering variability.

EPA should employ an alternate approach which determines the emissions limitation achieved for each best performing unit first, and then averages these limitations to determine the least stringent standard, or MACT floor. This method conforms to the plain meaning of the phrase "average emissions limitation achieved". The following table shows the difference between the EPA and alternate approaches. [See submittal for table showing the difference between the EPA and alternate approaches provided by commenter.]

The alternate approach conforms with findings from the Mossville case as explained in EPA's proposed National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, And Institutional Boilers, "...EPA may consider emission variability in estimating performance achieved by the best performing sources and may set the floor at level that best-performing source can expect to meet 'every day and under all operating conditions' " (75 FR 31905, emphasis added). The key phrase is "set the floor" where the floor level includes the effect of variability. In EPA's method the "floor" is the average of the best performing units before variability is considered. EPA then adjusts for the variability effects. In the alternate approach the floor value already considers variability.

From a statistical analysis perspective the alternate is also superior. EPA's approach pools all test run results from the best performing units for the statistical calculations which leads to biased results from 1) over-weighting the effect of units that have more data (six or more test runs for

some units and only three runs for others), and 2) running statistical calculations on a pool of data from units representing distinct data populations due to differences in design, feed, operating characteristics, and emission controls. The

alternate approach avoids both these problems; data from each unit is given equal weight (one emissions limitation achieved per unit) and statistical calculations are run using data from only one unit (distinct population) at a time.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 19

Comment: In its statistical calculations EPA should select the 99.9% upper limit (and not the 99% upper limit) as representative of achieved emission limitations.

In its proposal EPA determined MACT floor emission limits for existing and new units based on the 99th percent upper limit (UL). From the statistical point of view the 99% UL is the emission value that the unit will meet with 99% probability. While this would seem to suggest a high likelihood of compliance, probability must be viewed from a violation perspective, i.e. that there is a 1% likelihood that a given pollutant test on a given unit will exceed the selected limitation. In this regard the 99% UL is inadequate. EPA requires annual performance tests to demonstrate compliance. For a two unit facility and 11 emission limitations, the probability of passing all 22 pollutant emission tests in an

annual performance testing program is (0.99)22 = 80%, i.e. the probability of at least one emission violation is 20%, and this probability does not even include the compliance risk associated with continuous emission monitoring (CEM). These are unacceptable risks to any responsible operator, and should likewise be unacceptable to EPA.

The consequences of emission limit exceedances are severe. Operators face stiff fines, retesting costs, additional regulatory scrutiny, bad press, and negative public opinion. All diligent operators try to keep emissions well below limits in order to account for emissions variability and thereby avoid violations and their consequences. By setting limits on the basis of a 99% UL (1% exceedance probability per pollutant per test) EPA should recognize that CISWI unit operators will be compelled to set emissions targets even lower in order to create the compliance margin they know they will need to avoid violations.

If EPA employs the statistical UL to set MACT floor emission limits it should use the 99.9% UL. This represents a 0.1% probability of a failure for individual tests, or a 2% probability for a 2-unit facility annual performance test program. This value better encompasses unit emissions variability and represents a manageable risk to the responsible facility operator.

EPA originally proposed using the 99.9% UL in its Hospital/Medical/Infectious Waste Incinerator (HMIWI) MACT rule (73 FR 72962), stating "The 99.9 percent UCL [Footnote: The HMIWI rule used the term upper confidence limit (UCL); however, EPA acknowledged that the term as used in the HMIWI rule is the same as the upper limit (UL) used in the CISWI proposal.

See 75 FR 31943, footnote 3.] is appropriate for use in this analysis because sources must meet the standards at all times,

and as mentioned above, the limited amount of test data introduces a degree of uncertainty." (73 FR 72977). EPA changed its protocol to 99% in the final HMIWI rule in response to public comments, "The 99 percent UCL values are more in line with the highest test runs for the MACT floor units than the other percentiles, indicating that the 99 percent UCL provides a more reasonable compensation for variability." (74 FR 51387). EPA's conclusion is invalid because, like the CISWI unit database, the HMIWI database consisted of scant emission test results, few enough to require EPA to use individual test runs in order to have more data to use in its statistical analyses. With so few data points it is highly unlikely that the highest emissions and full variability would have been observed. Indeed, the inability to capture and describe the full range of emissions and emission distribution is the very reason for relying on statistics to predict upper limits! EPA's conclusion to use 99% in the HMIWI rule therefore has no valid statistical basis and only serves to increase the probability of emissions violations. In the CISWI MACT rule EPA should use 99.9% UL as originally proposed in the HMIWI rule.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 20

Comment: Additional Adjustments are Needed to Capture Emissions Variability

As a general matter, ACC fully supports EPA's proposal to account for variability in emissions from the better performers when determining floor levels of control. Accounting for variability has been upheld as appropriate and lawful by the D.C. Circuit and, in any event, is necessary to fully characterize the performance of the sources used to set standards. However, as discussed below, EPA failed to properly address variability when it set the MACT floors.

In evaluating the emission limits achieved by existing sources, EPA is required to estimate the variability associated with all factors that impact a source's emissions, including process, operational and non-technological variables. See Nat'l Lime Ass'n v EPA, 627 F.2d 416, 443 (D.C. Cir. 1980). Any method used to estimate emissions rather than actually measure them

"must ?allow a reasonable inference as to the performance of the top 12 percent of units,'" and EPA must show "why its methodology yields the required estimate." Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 862 (D.C. Cir. 2001) (emphasis in original) (citing Sierra Club v. EPA, 167 F.3d 658, 663 (D.C. Cir. 1999).

EPA has acknowledged this responsibility and identified a number of factors that contribute to variability in emissions test data, including (1) the emission test method; (2) the emission

analytical method; (3) the design of the unit and the control device(s); (4) operating conditions of the facility and the control device(s); and (5) the composition and relative amounts of fuel

constituents in the fuel or flue gases. See Prop. Nat'l Emissions Std. for Haz. Air Pollutants for Electric Utility Steam Generating Units, 69 FR 4,652, 4,670 (Jan. 30, 2004).

ACC believes additional adjustments to the floor setting methodology are needed here to adequately capture variability of emissions from the best performing units and ensure that top performers really are capable of meeting the proposed standards at all times. Additional variability can be incorporated in several ways: using additional testing and monitoring data; consideration of fuel/feed variability; and use of CEMS data and not stack test data to set standards for pollutants requiring the use of CEMS.

EPA does not have data that adequately represents the full range of actual operating conditions and emissions. For many of the units being regulated by this rule, EPA has obtained only one set of stack test data. One short term stack test does not represent the range of operating conditions and emissions from any unit. Stack tests are typically conducted at maximum normal operating conditions and when the unit is running at steady state. As units are expected to meet the proposed standards under all operating conditions, including startup, shutdown, and malfunction, it is imperative that EPA use as much data as possible from top performers to ensure that achievable standards are being set. (This ignores for the moment that ACC objects to the imposition of numerical standard to SSM periods. ACC strongly believes that work practice standards should be utilized for periods of SSM.) The 2008 ICR only requested the most recent stack test information from each unit. EPA should collect as much stack test information from units as is available.

EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure the effect of fuel/feed variability on emissions is captured. This is important, not only for energy recovery units, but for all subcategories of sources, since there are many unique materials combusted in incinerators. Using a limited number of incinerator units to establish the MACT

floor in no way is representative of units combusting other totally different materials. EPA states in the preamble that "the composition of the materials combusted is highly variable and is a key factor in the profile of emissions" from incinerators. [Footnote: 75 FR 31951.] Therefore, the variability in emissions from the top performing incinerators should be examined and should be taken into account when setting standards. In fact, EPA has recognized the impact of fuel characteristics on variability from units under Boiler MACT by incorporating a fuel variability factor into the calculation of the proposed emission limits under that rule. EPA should likewise incorporate a fuel/feed pollutant content variability adjustment under the CISWI rule. The CISWI database contains fuel analysis data for many units, but it does not appear that this information was used.

It is extremely important that EPA use CO, NOx, and SO2 CEMS data to set emission standards if CEMS are going to be used to demonstrate compliance with the rule and there is no exemption for SSM periods. We discuss this issue in detail below.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Also see preamble Section V. for the responses on use of CEMS data and CEMS data to set standards.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1

Comment Excerpt Number: 23

Comment: MACT Floor Analysis Should Include Continuous Emission Monitoring System (CEMS) Data and Use the Hazardous Waste Combustor (HWC) MACT Statistical Methodology

EPA did not include CO, SO2, or NOx data from CEMS that was provided by companies and resides in EPA's databases. For example, Eastman submitted CO, NOx, and SO2 data from temporary CEMS units on their Boiler 18 over a one week period of time. After discussions with EPA rule writers in which affected sources were encouraged to gather CEMS data as an alternative to stack test data, Eastman purposefully submitted such data and CIBO believes data such as this should be used. It is important that the MACT floor data represent the real-world variability of emissions and CEMS data is clearly superior to stack test data in this regard.

Although it is unclear why EPA chose to exclude CEMS data from its MACT floor

determinations, one possibility is that EPA may believe it is not feasible to incorporate CEMS

data along with stack test data in its MACT floor analyses due to the method it has chosen to rank and statistically analyze the data. It has chosen to identify top performers by using the lowest 3-run stack test and then use all the run data from the top performers to determine the Upper Limit (UL) of the data set.

A better methodology is one which was used by EPA in the Hazardous Waste Combustor HWC MACT. In HWC, the Upper Predicted Level (UPL) is determined for each unit using all the test data available, ranking the units by the UPL, and then determining the UPL for that dataset (see the HWC MACT Technical Support Document, Vol. 3 p. 7-6 - 7-7). This methodology would allow CEMS data to be used along with stack test data and the UPL determined for each such unit. EPA should obtain hourly average CEMS data over a suitable period of time (several months or as much data as can be readily obtained) from each source it can identify that either has a permanent CEMS installed on the unit or provided data in its response to the ICR survey or testing program. These hourly averages should then be used to establish the UPL for that unit. This data from these units with CEMS data should be combined with stack test data, all the UPLs determined, and then the top 12 percent performers determined from the UPLs, and the UPL for the subcategory should be determined using the HWC MACT methodology. This procedure should be used for NOx, SO2, and CO, to allow for EPA to more appropriately account for intraunit emission rate variability.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 24

Comment: EPA requests comment on whether in setting the MACT floor, an alternative statistical approach should be used, if it should evaluate alternative calculations including 99% UPL to see the floor impact, and how additional variability could be applied. 75 FR 31943.

The statistical method used by EPA in setting MACT floors is flawed due to the use of data sets that are not statistically significant. EPA states that they used 99% UL (upper limit). This is the same method as in Hospital, Medical and Institutional Waste Incinerator (HMIWI) MACT, but with a different name. In the HMIWI MACT, the method was called UCL. The floor is calculated from data below 99% of units in MACT floor data population would fall. This sets up an automatic 1% failure rate for the top 12% sources. This must be addressed by using a statistical approach which increases the variability of the dataset.

Response: See preamble Section V. for the responses on the Methodology (UL or UPL) and Statistical Analysis (lognormal vs. normal distribution).

4.3 MACT Floor: Methodology: Non-Detect Values

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 2

Comment: The EPA expresses concern in this section for using data near or below a test method's detection limits. CES feels that:

These low concentrations may be due in part to the source performing at its optimum during these infrequent and scheduled tests.

More representative emission estimates would be obtained using CEMS, which would capture more of the short term variability (highs and lows) in emissions.

If the EPA doesn't require CEMS where they are available, it will be in the same position during the next review cycle; i. e. discussing implications of detection limits instead of reviewing real measurements by CEMS.

Response: See preamble Section V. for the responses on monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS), CEMS data to set standards, and on treatment of detection levels.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 10

Comment: We are concerned that these very low limits are based on either non-detect data or short term stack testing. Affected sources must demonstrate compliance on a continuous basis over the range of normal operations of our sources. We are aware that other organizations have analyzed the data much more closely (e.g., the American Forest & Paper Association [AF&PA]) and support their comments, and urge EPA to review this data. Method detection levels and

variability of test methods must be taken into account. This is particularly true of HCl and dioxin/furan.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 6

Comment: EPA's Treatment of Test Results Below Method Detection Limits Is Arbitrary and Unlawful.

EPA proposes to treat test results below method detection limits as if they were at the method detection limit, then expresses concern that there is not sufficient variability, and then proposes to add a variability factor to make the standard less stringent. 75 Fed. Reg. at 31,944. This approach is unlawful.

The approach systematically inflates the standards to less stringent levels than the average of the emissions levels achieved by the best performing 12 percent of sources required by law. 42 U.S.C. § 7429(a). Arbitrarily assuming that test results below the method detection limit were at the method detection limit does not reflect actual emissions and artificially inflates the average. At no point does EPA claim that the assumed emissions at method detection limits reflect the actual emissions of the best performing sources. See 75 Fed. Reg. at 31,944. Having artificially reduced the variability by narrowing the range of emission test results upwards (i.e., by eliminating the lower part of the range), and having artificially created a mass of data at the method detection level, EPA then worries that an emission limit based on a truncated database or otherwise including values at or near the method detection limit may not adequately account for measurement variability.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 14

Comment: Treatment of Non-Detections in Emissions Data

The interpretation of emissions below the detection limits (ND), or the estimated maximum possible concentration (EMPC), in the emissions tests used by EPA has created incorrect estimates of actual emissions that are biased low. If a stack test measurement is below the detection limit, the actual emissions value can be anywhere between zero and the detection limit. The proper interpretation of test results in this regard must differ when demonstrating compliance with a standard versus when the data are being used to set a standard. One must be conservative in the interpretation of data, but the approach is different in these two instances.

EPA correctly specifies in the compliance demonstration protocol, [Footnote: 40 CFR Part 63, Appendix A. Method 23 - Determination of Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans from Municipal Waste Combustors. Section 9.9] such as the one for dioxin and furans under the cement kiln MACT rule, that any non-detect should be read as zero emissions. This is completely appropriate for a compliance demonstration, because an assumption of any higher level would potentially show non-compliance when compliance has actually occurred. However, just the opposite protocol must be followed when setting a standard. In this instance, non-detects must be interpreted as emissions levels equal to the detection limit, because the emission result might actually be that high. To set a non-detection result to zero (as is proper when performing a compliance test) during standard setting will clearly create a standard below the actual emissions of the units used to set the floor. By taking this approach, EPA is guessing about what is actually "achieved in practice," which is not allowed.

All of the emissions data for kilns derives from compliance testing or from applicability testing, compiled using procedures for compliance testing. In our review of the data, we note that EPA has properly recorded emissions values below the detection limit whenever the 114 filings or stack test report used the terminology "< value." In these cases, the value given reflects the detection limit of the test method and EPA has treated the emissions as being equal to the detection limit. However, EPA does not appear to have systematically screened the emissions data for cases where a detection limit should be applied, and it has erroneously recorded zero values for emissions where those are reported in the original test reports (for example Lafarge Whitehall K2 and K3 for dioxin/furans TEQ).

EPA should review all of its emissions data for best performers and correct wherever this problem occurs. The treatment of non-detects according to the practice of compliance testing is a major problem in the dioxin/furans data, where non-detections may occur for any of the congeners measured in the testing. Because of the attribution errors in the TMB data, PCA conducted a detailed review of the non-detection problem using the D/F TEQ data (where attribution errors should not occur).

Response: See preamble Section V. for the responses on treatment of detection levels and limits for TMB and TEQ for dioxin/furans.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 46

Comment: EPA Should Not use Data Below Detection Limits to Set Standards

The EPA database, which forms the basis for setting the proposed standards for CISWI sources, contains emission test results for particulate matter (PM) using EPA Method 5, carbon monoxide (CO) using EPA Method 10, chlorinated dioxins and furans using EPA Method 23, hydrogen chloride (HCl) using EPA Method 26/26A, and metals using EPA Method 29. However, based on a review of the EPA database, a large fraction of the data that have been used to establish the

MACT floors were below the quantitation and, in some cases, even the detection limits of the test methods. EPA's use of data below method quantitation limits as real values to set the standards makes EPA's analysis invalid, and setting emission standards which are below method quantitation limits would not allow facilities to demonstrate compliance with the standards without taking undue risk of facing non-compliance (e.g., it is possible that the standard could be set so low that detecting any amount of a pollutant would result in non-compliance). We recommend that EPA reanalyze all its data to ensure that (1) where method quantitation limits are known, data below method quantitation limits are properly identified and treated as less than values, and (2) where method detection and quantitation limits are not known, studies are carried out expeditiously so that all the data below method quantitation limits are treated appropriately. We also recommend that no numerical emission standard for a pollutant should be set below the measurement ability of the reference test method, i.e., its quantitation limit.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 74

Comment: Comments on Stack Testing Methods and Requirements

In its ICR guidance EPA requested facilities to report analytical method detection limits and report all values below the method detection limit at the method detection limit. Most analytical laboratories, however, do not use their method detection limits as cut-off points for reporting data. Instead, recognizing that any measurements below the method quantitation limit (LOQ), which is a multiplier of MDL, are not quantifiable, most analytical laboratories only report measurements above LOQ as measured values and measurements below the LOQ as less than the LOQ. EPA should make its reporting requirements consistent with laboratory practices.

EPA has failed to develop and promulgate a procedure for determining method detection and quantitation limits, has not published quantitation limits for air test methods, and, contrary to scientific methods, has used data below estimated method quantitation limits as real values in developing the proposed standards. EPA should develop method detection and quantitation limit information, correct the data in its database, and re-propose revised standards based on proper data analysis.

In its proposal EPA has stated: "In our guidance for reporting pollutant emissions used to support this rule, we specified the criteria for determining test-specific method detection levels. These criteria insure that there is about a 1 percent probability of error in deciding that the pollutant measured at the method detection level is present when in fact it was absent." The facts associated with EPA's data gathering effort related to this rule, however, do not support EPA's claim. As noted earlier, in developing the proposed standard EPA used two sets of data. The first set was obtained through Phase 1 of the ICR in 2008. This data solicitation did not even mention the term "method detection limits." The second set of data was obtained as a result of the 2009 Phase 2 ICR. This ICR asked facilities to conduct tests and report all the results below the method detection limits at the method detection limits. Furthermore, facilities were asked to

provide the details of the procedures used to establish method detection limits. However, contrary to EPA's claim, the ICR did not provide any procedure for determining method detection limits, and it should be noted that the current EPA source air emission test methods do not include any procedures for determining method detection limits.

In addition to failing to promulgate a method for measuring detection limits for air emission test methods, EPA has ignored the issue of errors associated with quantifying source emissions when they are low. As is well documented in the published literature, including EPA reports, all measurements have errors associated with them. These

errors consist of systematic errors, if the method is biased, and random errors. Thus, even in the absence of any systematic errors, random errors cause replicate measurements to vary from run to run, although the average of such random errors is zero when the number of replicates is high. In general, the magnitude of the random error decreases as a fraction of the measured value as the value of the measured parameter increases. In practice, when the measured value of a parameter is much higher than the potential for random error, there is a high degree of confidence in the measured value obtained from a single or a few runs. However, as the measured value decreases, the potential contribution of the random error to the measured value increases, thus decreasing the confidence level in the measured value from a single or a few runs until the point where the measured value cannot be distinguished from the random error.

Analytical chemists have for a long time been concerned about their ability to determine whether or not an analyte is present in a sample and, if it is present, what is its true level. This has given rise to two important concepts: limit of detection and limit of quantitation. In general terms, an analytical method detection limit is defined as the lowest concentration that can be distinguished from the blank at a defined level of statistical significance. The quantitation limit for a method is defined as the smallest concentration of the analyte which can be measured where the accuracy achieves the objectives of the measurement. Thus measurements below the quantitation limit of a method are not reliable and should not be used to set emission standards.

In the current proposal, EPA has erroneously used all measurements above the method detection limit, when available, or all measurements when the method detection limit value was not available, as if such values are true measurements of the pollutant concentrations with no regard for method detection limits. This approach is scientifically invalid and should be replaced with a scientifically valid approach based on knowledge of method detection and quantitation limits.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2092.1, excerpt 56.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 75

Comment: Facilities need clear guidance on handling of non-detect values.

The proposed regulation requires the use of Method 23 for demonstrating compliance but is silent on the treatment of measurements below their detection limits. This should be clarified in

the final rule. EPA should clearly state that Method 23 should be followed in its entirety, including the requirement to report measurements below the DL as zero.

EPA Method 29 provides no guidance on calculating the detection limits of the sub-samples which are below the instrument detection limit. This deficiency of the test method must be corrected prior to promulgating a final CISWI rule.

EPA Method 29 is a complex test method that requires extreme care in source testing and sample recovery. This complexity is further compounded when multiple sample fractions are processed in the laboratory resulting in five sub-samples which have to be analyzed separately. Since the sub-samples have different matrices, their instrument detection limits need to be established separately using appropriate samples. Many analytical laboratories do not develop detection limit data for different matrices but choose to analyze one sample blank and incorrectly use the DL value obtained from such analysis for all the sub-samples.

EPA should rewrite Method 29 to specify that DLs need to be established for each sub-sample using appropriate matrices. Since the mercury sub-sample does not utilize the entire volume of the sub-sample, the determination of the detection limit of the sub-samples requires a volume correction just as it is needed to report sub-sample mercury content when the results are above the detection limit. However, due to a lack of guidance in Method 29, some laboratories fail to correct the detection limit for the sub-sample volume. EPA should write detailed calculation procedures for determining sub-sample detection limits to ensure that the calculations are carried out correctly.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2092.1, excerpt 56.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 6

Comment: A flaw in the proposed standards is the use of data at or below published detection limits of required compliance demonstration methods. Facilities using common testing methods, acceptable in the proposed standards, may not be able to demonstrate compliance with an EPA emissions limit using approved EPA methods described in the proposed rules. In the HCl MACT and the Hazardous Waste Combustion ("HWC")

MACT at 40 CFR 63 Subpart EEE, EPA faced a similar detection limit problem. The common hydrochloric acid test method, 40 CFR 60 Appendix A Method 26a, is published accurate to a 20 parts per million by volume ("ppmv") detection limit. However, EPA proposed several HCl limits far less than 20 ppmv in HCl, HWC, and CISWI. EPA reset several HCl and HWC emissions standards to, or just above, the published detection limit. EPA should reset below detection limit CISWI and Boiler standards to above the detection limits.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Jason Morin

Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 4

Comment: The treatment of non-detects are incorrect resulting in inaccurate low standards

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 6

Comment: EPA treatment of the data for those stack testing that submitted emissions results below the detection limits creates incorrect estimates of emission limits that are biased low.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 17

Comment: EPA Should Not use Data Below Detection Limits to Set Standards

Based on its review of the EPA database, ACC has determined that a large fraction of the data that EPA used to establish the MACT floors were below the quantitation and, in some cases, even the detection limits of the test methods. EPA‘s use of data below method quantitation limits as real values to set the standards invalidates EPA‘s analysis. Further, setting emission standards which are below method quantitation limits would not allow facilities to demonstrate compliance with the standards without taking undue risk of facing non-compliance (e.g., it is possible that the standard could be set so low that detecting any amount of a pollutant would result in non-compliance).

ACC recommends that EPA reanalyze all its data to ensure that (1) where method quantitation limits are known, data below method quantitation limits are properly identified and treated as

less than values, and (2) where method detection and quantitation limits are not known, studies are carried out expeditiously so that all the data below method quantitation limits are treated appropriately. We also recommend that no numerical emission standard for a pollutant should be set below the measurement ability of the reference test method, i.e., its quantitation limit.[Footnote: The EPA database, which forms the basis for setting the proposed standards for CISWI sources, contains emission test results for particulate matter (PM) using EPA Method 5, carbon monoxide (CO) using EPA Method 10, chlorinated dioxins and furans using EPA Method 23, hydrogen chloride (HCl) using EPA Method 26/26A, and metals using EPA Method 29.]

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 55

Comment: Comments On Stack Testing Methods And Requirements

In its Phase 2 ICR guidance EPA requested facilities to report analytical method detection limits and report all values below the method detection limit at the method detection limit. Most analytical laboratories, however, do not use their method detection limits as cut-off points for reporting data. Instead of recognizing that any measurements below the method quantitation limit (LOQ), which is a multiplier of MDL, are not quantifiable, most analytical laboratories only report measurements above LOQ as measured values and measurements below the LOQ as less than the LOQ. EPA should make its reporting requirements consistent with laboratory practices.

EPA has failed to develop and promulgate a procedure for determining method detection and quantitation limits, has not published quantitation limits for air test methods, and, contrary to scientific methods, has used data below estimated method quantitation limits as real values in developing the proposed standards. EPA should develop method detection and quantitation limit information, correct the data in its database, and re-propose revised standards based on proper data analysis.

In its proposal EPA states: "In our guidance for reporting pollutant emissions used to support this rule, we specified the criteria for determining test-specific method detection levels. These criteria insure that there is about a 1 percent probability of error in deciding that the pollutant measured at the method detection level is present when in fact it was absent." The facts associated with EPA's data gathering effort related to this rule, however, do not support EPA's claim. As noted earlier, in developing the proposed standard EPA used two sets of data. The first set was obtained through the Phase 1 ICR. This data solicitation did not mention the term "method detection limits." The second set of data was obtained as a result of the 2009 Phase 2 ICR. This ICR asked facilities to conduct tests and report all the results below the method

detection limits at the method detection limits. Furthermore, facilities were asked to provide the details of the procedures used to establish method detection limits. However, contrary to EPA's claim, the ICR did not provide any procedure for determining method detection limits, and it should be noted that the current EPA source air emission test methods do not include any procedures for determining method detection limits.

In addition to failing to promulgate a method for measuring detection limits for air emission test methods, EPA has ignored the issue of errors associated with quantifying source emissions when they are low. As is well documented in the published literature, including EPA reports, all measurements have errors associated with them. These errors consist of systematic errors, if the method is biased, and random errors. Thus, even in the absence of any systematic errors, random

errors cause replicate measurements to vary from run to run, although the average of such random errors is zero when the number of replicates is high. In general, the magnitude of the random error decreases as a fraction of the measured value as the value of the measured parameter increases. In practice, when the measured value of a parameter is much higher than the potential for random error, there is a high degree of confidence in the measured value obtained from a single or a few runs. However, as the measured value decreases, the potential contribution of the random error to the measured value increases, thus decreasing the confidence level in the measured value from a single or a few runs until the point where the measured value cannot be distinguished from the random error.

Analytical chemists have long been concerned about their ability to determine whether or not an analyte is present in a sample and, if it is present, determining its true level. This has given rise to two important concepts: limit of detection and limit of quantitation. In general terms, an analytical method detection limit is defined as the lowest concentration that can be distinguished from the blank at a defined level of statistical significance. The quantitation limit for a method is defined as the smallest concentration of the analyte which can be measured where the accuracy achieves the objectives of the measurement. Thus measurements below the quantitation limit of a method are not reliable and should not be used to set emission standards.

In the current proposal, EPA has erroneously used all measurements above the method detection limit, when available, or all measurements when the method detection limit value was not available, as if such values are true measurements of the pollutant concentrations with no regard for method detection limits. This approach is scientifically invalid and should be replaced with a scientifically valid approach based on knowledge of method detection and quantitation limits.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 56

Comment: Facilities Need Guidance on Handling of Non-Detect Values.

The proposed regulation requires the use of Method 23 for demonstrating compliance but is silent on the treatment of measurements below their detection limits. This should be clarified in the final rule. EPA should clearly state that Method 23 should be followed in its entirety, including the requirement to report measurements below the DL as zero.

EPA Method 29 Provides No Guidance on Calculating the Detection Limits of the Sub-samples which are Below the Instrument Detection Limit. This Deficiency of the Test Method must be Corrected prior to Promulgating the Final CISWI Rule.

EPA Method 29 is a complex test method that requires extreme care in source testing and sample recovery. This complexity is further compounded when multiple sample fractions are processed in the laboratory resulting in five sub-samples which have to be analyzed separately. Since the sub-samples have different matrices, their instrument detection limits need to be established separately using appropriate samples. Many analytical laboratories do not develop detection limit

data for different matrices but choose to analyze one sample blank and incorrectly use the DL value obtained from such analysis for all the sub-samples.

EPA should rewrite Method 29 to specify that DLs need to be established for each sub-sample using appropriate matrices. Since the mercury sub-sample does not utilize the entire volume of the sub-sample, the determination of the detection limit of the sub-samples requires a volume correction just as it is needed to report sub-sample mercury content when the results are above the detection limit. However, due to a lack of guidance in Method 29, some laboratories fail to correct the detection limit for the sub-sample volume. EPA should write detailed calculation procedures for determining sub-sample detection limits to ensure that the calculations are carried out correctly.

Response: See preamble Section V. for the response on treatment of detection levels.

4.4 MACT Floor: Methodology: Potential Three-times Method Detection Level Approach for Limits

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 7

Comment: EPA proposes to add a variability factor of three times the method detection limit. Essentially, EPA intentionally reduces variability in a way that biases the limits upward to a less stringent level; then, having reduced variability, EPA expresses concern that there is not enough variability; and then it proceeds to adjust the standard to 300% of the method detection limit. So, for a hypothetical dataset of best performing sources that are all emitting below the method detection limit, under its proposed approach, the EPA would set an emissions limit at 300% of the method detection limit to account for variability. This approach is not consistent with the Act's directive to set the MACT floor at the emissions level achieved by the best-performing sources because it allows for facilities to emit at far higher levels than the best-performing sources and is unlawful.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 25

Comment: EPA also is requesting comment on how to account for Detection Limit Limited (DLL) data in determining the floor since truncated data does not account fully for variability. CIBO agrees that this is a problem. The solution is to increase the variability factor. 75 FR 31943-44. EPA proposed a possible 2 step approach to DLL data: 1) identify highest test-specific detection level reported in a data set that is </= floor; and 2) determine the value 3x representative method detection level and compare it to the floor. If the number is less than the floor, then it is okay and if the number is greater than the floor, then 3x the value would be taken as the floor. CIBO supports this as one part of additional considerations that are need to adequately address this issue, but it is important to recognize that this only addresses measurement method variability, not combusted materials or unit variability. Both of those must be addressed through additional subcategories or additional variability factors. 75 FR 31944.

Response: See preamble Section V. for the response on treatment of detection levels and for the responses on rationale for subcategories.

4.5 MACT Floor: Methodology: Dioxin/Furan TEQ ratio method

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 3

Comment: An absurd result of using the UL lead to the setting of improper standards. For dioxins/furans (total TEQ basis), as EPA admits, the UL approach "sometimes resulted in a UL that was greater than that calculated for the associated total mass balance dioxins/furans for the subcategory," a ratio that is "impossible" in reality. Id. at 31,954. Therefore, EPA arbitrarily set floors "based on the total mass balance limit multiplied by 0.078," relying on the ratio between TEQ and total mass balance data, after having eliminated "impossible" ratios and ratios never observed in the physical world. Id. The data EPA used to calculate the multiplier was not limited to the best performing 12 percent of sources. Id. Thus, the approach does not conform to the statute, which requires MACT floors to be set on the basis of the average of the emissions levels actually achieved by the best-performing 12 percent of sources. 42 U.S.C. § 7429(a).

Response: See preamble Section V. for the response on limits for TMB and TEQ for dioxin/furans. Also, see preamble Section V. for the response on MACT Floor Analysis-Methodology (UL or UPL).

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 15

Comment: Errors in the Interpretation and Use of Dioxins/Furans TEQ Data

PCA obtained the assistance of an outside expert to review the engineering and laboratory reports for best performing kilns, in order to establish how non-detections were factored into the proposed floor. The review made an effort to verify how the TEQ were computed by stack testing firms, and the information in the stack test reports was used to compute TEQs using an alternative approach that is better suited for setting an emissions performance floor.

It was verified that non-detected target compounds (i.e., the 17 2,3,7,8-substituted PCDD/F TEF congeners) were treated with a zero concentration in all of the stack test reports. Similarly, target compounds reported by the laboratory as an EMPC were treated with a zero concentration for TEQ calculations. Thus, EPA used TEQs which treated both non-detected

target compounds, as well as those reported as an EMPC, with a zero concentration (i.e., ND=0; EMPC=0).

Several issues arise when using this practice of [ND=0; EMPC=0]. First, such an approach is not consistent with EPA's direction for a performance-based measurement system (PBMS). Indeed, poor laboratory performance (i.e., elevated detection limits) is camouflaged (i.e., the laboratory's responsibility for quality results is unaccounted for because the detection limits of the current analytical methodology). Additionally, if poor performance for detection limits occurs, other performance aspects of these complex assays may be undermined. Second, such a practice biases low the computation of the TEQ for low-emitting facilities where non-detected target compounds are frequent, where ion statistics (i.e., low signal-to-noise ratios) play a significant role in EMPC reporting, and where background contributions from either the stack testing firm or the laboratory (or both) can influence the TEQ in a manner that distorts reality. It is possible that these issues are the basis for EPA experiencing unrealistic situations where the ratio TEQ/TMB was calculated as one or above one, leading EPA to disregard some of the data.

Therefore, an alternative approach, suited for setting standards based on the performance of low-emitting facilities, was considered. The approach consists of treating non-detected target compounds with a concentration corresponding to the sample- and analyte-specific detection limits (as currently defined in EPA Methods 23 and 8290), as well as treating EMPC values at actual concentrations. For the 12 individual tests [see submittal for Table A-2 provided by commenter] and by using the information contained in the stack test reports, new TEQs were calculated and expressed in picograms/dscm. The new values range from a minimum of 0.2 to a maximum of 9.2, with an average of 4.7 (RSD of 57 percent; i.e., 2.5 times better than the RSD associated with determination of the 0.078 TEQ/TMB ratio). The ratio TEQ[ND=DL; EMPC=EMPC] / TEQ[ND=0; EMPC=0] for nine of the data points averages to 3.9. The first three data points in the table were excluded from the calculation, since the ratios were obvious outliers (although the revised TEQs were consistent with the others).

EPA's incorrect assessment of dioxin/furnaces emissions (whether TMB or TEQ) can be corrected to the basis suitable for use in standards setting using the more detailed information contained in the underlying stack test reports. The TEQ data for EPA's identified best performers were corrected during our review and one additional stack test was added to the database.

Response: See preamble Section V. for the response on limits for TMB and TEQ for dioxin/furans.

Commenter Name: Robert D. Bessette

Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 54

Comment: CIBO disagrees with the proposed rule's method of setting the TEQ limits.

Response: See preamble Section V. for the response on limits for TMB and TEQ for dioxin/furans.

4.6 MACT Floor: Methodology: Opacity limits calculation

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 18

Comment: We are particularly concerned about the very low opacity limits EPA proposes. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary. EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. However, EPA's approach is flawed in three ways. First, the correlation between PM and opacity is not demonstrated based on a review of the data in EPA's database. Second, it is not appropriate to apply a ratio of PM to opacity based only on one facility in the incinerator category and apply it to all types of units regulated under this rule. Third, Method 9 cannot be used to measure the very low limits EPA proposed since a Method 9 observer can only measure opacity in increments of 5 percent. EPA must reconsider whether an opacity limit is necessary for CISWI units, and if so, establish the appropriate limit based on actual COMS or Method 9 data for units in each subcategory at a level that Method 9 observers can actually measure.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 7

Comment: The proposed opacity emission standard does not make sense compared to the test method. Visible emission readings are recorded in increments of 5%, and we recommend that the standard be set at no less than 5%.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 13

Comment: The proposed opacity limitation of 1% is not technically feasible and indicates that EPA has not reviewed test method accuracy to the proposed emission limits. EPA Method 9, which is used as one standard for compliance, is only read in increments of 5%. The criteria for becoming a certified Method 9 reader are even less accurate, and include a standard deviation in readings of less than 7.5%. (In other words, someone may routinely read between 5% and 10% high on opacity and still become a certified Method 9 reader.) The other method of compliance, COMs, is also not accurate to 1%. The performance specification for opacity monitors (PS1) is specifically referenced by this rule (as found in 40 CFR 60 Appendix B) and outlines the specification for certification for this equipment. In Section 11.0 a calibration error requirement is less than or equal to 3% opacity and the data recorder must record values to within +/- 2% of the certified value of the attenuator. The zero and upscale calibration drift error must not exceed 2% over a 24-hour period. In other words, a monitor may read 2% opacity when there is no opacity at all, and still pass all certification requirements. Therefore, a 1% opacity limit is inappropriate because there is no available method that is accurate at this level.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 14

Comment: EPA Must Revise the Opacity Limits

AF&PA is particularly concerned about the very low opacity limits EPA proposes. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary. EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. However, EPA's approach is flawed in three ways. First, the correlation between PM and opacity is not demonstrated based on a review of the data in EPA's database. Second, it is not appropriate to apply a ratio of PM to opacity based only on one facility in the incinerator category and apply it to all types of units regulated under this rule. Third, Method 9 cannot be used to measure the very low limits EPA proposed since a Method 9 observer can only measure opacity in increments of 5 percent. EPA must reconsider whether an opacity limit is necessary for CISWI units, and if so, establish the appropriate limit based on actual COMS or Method 9 data for units in each subcategory at a level that Method 9 observers can actually measure.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 26

Comment: PCA believes that it is not appropriate to set a standard for opacity

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 31

Comment: EPA Should Not Establish an Opacity Limit Given EPA's Proposed Stringent PM Limit

As stated in National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, 73 Fed. Reg. 34702, "We previously proposed use of BLD systems for PM as part of our review of the Portland Cement Standards for Performance under section 111 of the Act. Our rationale for extending the requirement to existing kilns is that given the stringent level of the proposed PM emissions limits, we do not believe that opacity is an accurate indicator of compliance with the proposed PM emissions limit. As just noted, were we to adopt this requirement, we would also remove the opacity standard and opacity continuous monitoring requirements for any source that uses a PM CEMS or bag leak detector to determine compliance with a PM standard. (Some opacity requirements, such as those for materials handling operations, would remain in place.)"

EPA acknowledges in that opacity is not an accurate indicator of PM compliance. PCA questions why in this proposed rulemaking the EPA chose to contradict their previous determination. PCA does not agree that an opacity standard is an appropriate indicator of a PM emission limit, or that the EPA has the data to support this theory.

EPA's proposal to develop a ratio of opacity to PM emission limits is technically unsound. Studies have shown that it is impossible to create an industry wide ratio to correlate opacity with an actual PM emission limit for a group of facilities. The ratio of opacity to PM is very site specific, participle size dependent, and relies on steady state conditions. Even when using the most accurate prediction modeling software from numerous single site specific studies the error is 3-8% opacity. This error increases in the 0-10% opacity range which is presently

50% of the NESHAP opacity standard, and 75% of the CISWI proposed standard. The EPA cannot set a ratio for the cement industry based on the correlation between stack tests and

opacity. The PCA disagrees with this approach on the basis that this is scientifically unsound, inaccurate, and cannot be supported by any data.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 56

Comment: EPA has added opacity standards to emission standards for the nine regulated pollutants specified in Section 129. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary.

For the various subcategories (incinerator, waste-burning kiln, burn-off oven, and small remote incinerator), compliance with the opacity limit is proposed to be determined using EPA Method 9. The opacity limits are:

* 1% opacity - incinerators

* 1% opacity - energy recovery units

* 4% opacity - waste-burning kilns

* 2% opacity - burn-off ovens

* 13% opacity - small, remote incinerators

For all categories of units, you can avoid an annual performance test if your previous test result was only 75% of the emissions limit (Section 60.2155 of Subpart CCCC and Section 60.2720 of Subpart DDDD).

EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. For the best performing CISWI unit with available concurrent opacity and PM tests, EPA states the ratio of opacity to PM is 0.053. The opacity limit was calculated by multiplying the PM limit for each subcategory by this ratio. For example, the proposed PM limit for existing energy recovery units

under EPA's preferred solid waste definition is 9.2 mg/dscm at 7% O2, so the limit is 1% (9.2 * 0.053 with rounding).

Appendix G of the floor memo [Footnote: see DCN:EPA-HQ-OAR-2003-0119-0059] contains a table with opacity data for six CISWI units located at four different facilities (WAEmeraldKalama U-2; ILFlintHillsResources HB2301, MB-1012, and NB-800; NCGlaxoSmithKline MWI-2; and SCEastmanColumbia 1560-0008, ID #15). WAEmeraldKalama is the only energy recovery unit; the other five are in the incinerator subcategory. The opacity values were all obtained with visual observations (EPA Method 9) and were all zero except for the units at ILFlintHillsResources. WAEmeraldKalama and NCGlaxoSmithKline did not have concurrent filterable PM tests in the database, although SCEastmanColumbia did (3 run average of 9.1 mg/dscm at 7% O2, test date 12/12/06). For the 3

incinerators at ILFlintHillsResources shown in Table 7.1 [see submittal for table provided by commenter,] ERG calculated the ratio of opacity to PM for three 3-run PM tests and opacity observations. Although it is not clear what period of time the Method 9 observations cover; it is assumed the Method 9 readings were taken during the Method 5 sampling runs:

Since MB-1012 had the lowest average PM concentration, its opacity to PM ratio was selected to apply to all CISWI subcategories.

There are many flaws with this approach for developing opacity limits. First, AF&PA does not believe a meaningful relationship exists between EPA Method 9 observations and filterable particulate matter concentrations in incinerator stack gases. The following graphs of opacity versus filterable PM concentrations for the three Flint Hills Resources incinerators certainly do not show any relationship [see submittal for graphs provided by commenter.]

Given the lack of a clear increasing linear relationship between PM and opacity for MB-1012, applying a ratio based on data for this unit to other PM concentrations to determine opacity limits cannot be justified.

Second, MB-1012 is in the incinerator subcategory and AF&PA believes applying incinerator opacity data to other subcategories is inconsistent and inappropriate.

Third, it is unreasonable to use EPA Method 9 visual observations to set opacity limits where compliance will be evaluated with continuous opacity monitoring system (COMS) data since they are not equivalent. COMS measure flue gas light extinction across a stack, whereas human observers assess plume opacity in the ambient air downwind of the stack release point using Method 9. According to the method, a certified reader is only able to distinguish opacity in increments of 5%. Single digit distinction is beyond the capabilities of the method, so any opacity detection would have to be a minimum of 5%. In setting opacity limits at values less than 5% for four of the subcategories, EPA has essentially set a compliance value of 0%, which conceivably would be a beyondthe-floor limit. Since EPA did not set beyond-the-floor limits, Method 9 would require a minimum opacity value for these four subcategories of at least 5% (although data are needed to show that top performers actually operate at this level over all operating conditions). For small, remote incinerators, a similar problem exists, as its opacity limit is not set at an increment of 5%. Since EPA did not set a beyond-the-floor limit for this sub-category, requiring Method 9 as the compliance method would call for an opacity limit of at least 15%, since an observer is not going to be able to measure opacity at the proposed emission limit of 13%.

Proposed Section 60.2155 of Subpart CCCC and proposed Section 60.2720 of Subpart DDDD are provisions that allow a unit to conduct less frequent testing as long as the test results are less than 75% of the respective limit. By instituting such low opacity values for incinerators, energy-recovery units, waste-burning kilns and burn-off ovens that are beyond the capability of the test method, the reduced testing requirement can never be used for opacity, since Method 9 cannot measure opacities this low.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Walter Tyler

Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 6

Comment: For Method 9 testing, 5% opacity is the minimum opacity that can be read. Therefore, the specification of a 2% opacity limit cannot be directly read by a trained Method 9 reader. INVISTA recommends that the opacity limit be restated as less than 5% in both Table 8 of Subpart CCCC and Table 9 of Subpart DDDD and that the averaging period be clarified to be a 2-hour average pursuant to Method 9.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 7

Comment: The opacity limit for incinerators (1 percent) is difficult if not impossible to accurately measure and the justification for setting this limit is unclear.

The opacity requirement for emissions from these sources of I percent opacity, as measured by performance test Method 9 (visual opacity), is an impractical limit. A value of 1 percent opacity would likely be below the detection limit for visual opacity measurement, and therefore difficult to verify. The certification test itself described in the Method 9 guidance requires a minimum smoke meter calibration error of +3 percent opacity and zero and span drift of +1 percent opacity (30 minutes). Visually determining an opacity of less than 1 percent does not seem feasible when considering that instrumentation has greater potential measurement error than the magnitude of the opacity limit. Furthermore, this limit does not appear to be based on measured opacity data. For test methods that involve sample collection, the detection limits may be improved by lengthening the sample collection time, but for opacity this is not an option.

DoD recommends EPA not establish any emission limit that is below the method detection limit. Setting an opacity limit of less than 3 percent is not supported by the test method cited.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 8

Comment: For the various subcategories (incinerator, waste-burning kiln, burn-off oven, and small remote incinerator), compliance with the opacity limit is proposed to be determined using Method 9 of appendix A-4. The opacity limits are:

* 1% opacity - incinerators

* 1% opacity - energy recovery units

* 4% opacity - waste-burning kilns

* 2% opacity - burn-off ovens

* 13% opacity - small, remote incinerators

* For all categories of units, you can avoid an annual performance test if your previous test result was only 75% of the emissions limit (Section 60.2155 of Subpart CCCC and Section 60.2720 of Subpart DDDD).

At 75 FR 31955, EPA discussed the approach for developing the opacity limits, which involved taking the test data from the facilities that had both PM and opacity, doing a correlation between PM and opacity, and developing a ratio of opacity to PM of 0.053. That ratio was then used to establish the opacity standard for each subcategory. Said differently, the PM standard was based on the average of the best performers which was then multiplied by 0.053 to get the opacity standard. That methodology resulted in opacity values that are not supported by the prescribed test method.

Method 9 is a visual determination by a certified reader. According to the method, a certified reader is only able to distinguish opacity in increments of 5%. Single digit distinction is beyond the capabilities of the method, so any opacity detection would have to be a minimum of 5%. In setting opacity limits at values less than 5% for four of the subcategories, EPA has essentially set a compliance value of 0%, which conceivably would be a beyond-the-floor limit. Since EPA did not set beyond-the-floor limits, Method 9 would require a minimum opacity value for these four subcategories of at least 5%. For small, remote incinerators, a similar problem exists. Since EPA did not set a beyond-the-floor limit for this sub-category, Method 9 would require minimum opacity of at least 15%.

In addition, proposed Section 60.2155 of Subpart CCCC and proposed Section 60.2720 of Subpart DDDD are provisions that allow a unit to conduct less frequent testing as long as the test results are less than 75% of the respective opacity limit. By instituting such low opacity values for incinerators, energy-recovery units, waste-burning kilns and burn-off ovens that are beyond the capability of the test method, EPA has provided provisions that can never be used for opacity, since 75% of zero opacity reading is still zero and a unit could not have a reading below zero. If EPA does really intend for these provisions to have use, then the opacity limits for the respective sub-categories need to be adjusted upwards even further, so that 75% of the limits can be distinguished from the actual limits. Dow believes doing so would result in an opacity limit of 10% for the incinerator, energy-recovery, waste-burning kiln, and burn-off oven subcategories. As a result, the limit for a less frequent test on these units would be 5%, since 7.5% (or 75% of the 10% limit) would not be a distinguishable value. If the small, remote incinerator subcategory were adjusted upward to 15% because of Method 9 capabilities, 75% of that limit would be 11.25% opacity or essentially 10% which is still a distinguishable value, so it may not need further upward adjustment.

In summary and in order to accommodate Method 9 capabilities as well as allowing for less frequent testing, Dow suggests that the opacity limits need upward adjustment as follows:

* 10% opacity - incinerators

* 10% opacity - energy recovery units

* 10% opacity - waste-burning kilns

* 10% opacity - burn-off ovens

* 15% opacity - small, remote incinerators

As an alternative, Dow suggests that emission limits for both opacity and PM is redundant. Although both pollutants are listed in Section 129, it could be reasonable to use one as a surrogate for the other so both are not required. If opacity were chosen as the prescribed emission limits, Dow suggests the proposed values need upward adjustment as explained above.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 11

Comment: The method EPA used to set opacity standards is highly suspect and EPA should use available data from continuous opacity monitoring systems to establish MACT floor standards.

Section IV of the CISWI MACT Floor Memo states that EPA determined the ratio of opacity to particulate matter (PM) emissions for the best performing unit with respect to PM. They then applied this ratio to the PM MACT floor emissions to arrive at opacity standards for all subcategories. EPA's database for opacity is severely lacking. Only five units have opacity data and all five are incinerators and the data is from stack tests. No attempt to account for variability of opacity during transient conditions or startups and shutdowns was made.

As stated elsewhere in these comments, Eastman urges EPA to set standards for coal-fired boilers that burn solid waste. It is well known that coal-fired boilers will experience opacity spikes during startup periods. Solid waste will not even be burned during these periods. If EPA plans to require compliance during startups and shutdowns, then it must account for these periods in the standard setting. One solution is for EPA to require compliance only during periods that solid waste is being burned in the unit.

To furnish EPA with at least some data for energy recovery units, Eastman is providing in Figures 5 and 6 data from a COMS on a stoker coal boiler at our Tennessee facility that burns a solid waste (wastewater treatment sludge) [see submittal for figures provided by commenter.] This data demonstrates that startups do have a significant impact on opacity levels and that a 1 ppm hourly average opacity standard is not achievable for stoker coal boilers. We also question if 1 ppm is within the accuracy range of a COMS.

Before setting an MACT floor opacity limitation, EPA must obtain additional data from COMS that represent normal operation of the top performing units in each subcategory.

Response: See preamble Section V. for the response on opacity limits. Further, See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 3

Comment: Opacity standards are fatally flawed

The opacity standards are based on the PM floor for each subcategory, using the ratio of PM-to-opacity for the one best-performing CISWI unit without regard to the subcategory of the unit. This approach is inappropriate and inconsistent with the regulatory framework for the nine regulated pollutants established by EPA. Opacity limits should be based on the best-performing 12 percent of the sources within each subcategory, using the actual opacity measurements from all the sources in each subcategory. Variability in opacity emissions also must be based on actual measurements of opacity over longer operating periods than the average from three one-hour performance tests. The proposed opacity limits for incinerators, energy recovery units, waste-burning kilns, and burn-off ovens are all less than 5 percent, which is unquantifiable using EPA method 9 as required for compliance demonstrations. As a result, EPA has proposed unjustified and unreasonable opacity limits for which compliance cannot be demonstrated.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 16

Comment: The opacity limit for small energy recovery units is not achievable and must be revised.

The opacity standard for energy recovery units that are not required to use PM continuous monitors is based on extrapolated correlations rather than data measured from the best controlled similar units. EPA inappropriately extrapolated visibility measurements which are only distinguishable and reported in increments of 5 percent to derive a 1% opacity standard.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies

Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 6

Comment: The Opacity Limits Is Not Achievable Nor Enforceable As A Practical Matter.

We are particularly concerned about the very low opacity limits EPA proposes. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary. EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. However, EPA's approach is flawed in several ways: 1) The relationship between opacity and PM is not linear. Opacity is based on optical density or transmittance and is a log normal function that depends on path length (stack diameter) in accordance with the Beer-Lambert relationship; 2) The correlation between PM concentration and opacity is highly dependent on particle size distribution associated with different combustor types, waste composition and particulate control devices. Smaller particle are more reflective/refractive than larger particles and will show higher opacity. Subsequently small particle mass concentrations can be well below the particulate limit while opacity is well above 1%; 3) It is not appropriate to apply a ratio of PM to opacity based only on one facility in the incinerator category and apply it to all types of units regulated under this rule with different air pollution controls and particle size distributions. (See 2 above); 4) Any correlation of PM to opacity would require calibration of the COMS to with Method 5 for PM; 5) The proposed 1% opacity is less than the design and, measurement and recording tolerances for continuous opacity monitor system (COMS) in EPA PS 1 (and by reference ASTM 06216-98) of 40 CFR 60 Appendix B. The design, measurement and accuracy tolerances and daily calibration drift criterion required under PS 1 is + or - 2% opacity or double the proposed limit. Further accuracy criteria for quarterly audits using NIST certified optical density filter is 3% opacity. In absolute terms a facility would be out of compliance based solely on the inherent accuracy limitations of the COMS; and 6) Method 9 cannot be used to measure 1% opacity since a Method 9 observer can only practically measure opacity in increments of 5 percent although trained Method 9 observers are certified using an opacity monitor calibrated within +/- 2 percent (See 40 CFR 60 Appendix A, Reference Method 9, section 3.3.2.5. EPA must reconsider whether an opacity limit is necessary for CISWI units, and if so, establish the appropriate limit based on actual COMS or Method 9 data for units in each subcategory at a level that COMS and Method 9 observers can actually measure accurately.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 13

Comment: EPA proposes opacity emission limits at 1 to 4 percent. It is widely known that opacity measurements for low values (<10 percent) are highly uncertain and may not be representative of actual emissions performance. This is due to design and performance factors,

including cross-stack (mis)alignment, allowable tolerances provided in 40 CFR Part 60, Appendix B, PS-1 for calibration error, zero, and span drift, and compensation for protective window dust accumulation as well as the lack of reliable calibration/audit filters below 6 percent. Thus, while low standards may be attainable, they may not be feasible or practical to maintain below

10 percent opacity. NESCAUM recommends that EPA maintain opacity limits at a level of

10 percent as an indicator of proper boiler performance, but not as a substitute for PM emissions testing or PM continuous emission monitoring systems (CEMS).

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 14

Comment: EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. However, EPA's approach is flawed in three ways. First, the correlation between PM and opacity is not demonstrated based on a review c f the data in EPA's database. Second, it is not appropriate to apply a ratio of PM to opacity based only on one facility in the incinerator category and apply it to all types of units regulated under this rule. Third, Method 9 cannot be used to measure the very low limits EPA proposed since a Method 9 observer can only measure opacity in increments of 5 percent. EPA must reconsider whether an opacity limit is necessary for CISWI units, and if so, establish the appropriate limit based on actual COMS or Method 9 data for units in each subcategory at a level that Method 9 observers can actually measure.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 22

Comment: EPA Must Revise the Opacity Limits.

We are particularly concerned about the very low opacity limits EPA proposes. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary. EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration. However, EPA's approach is flawed in several ways: 1) The relationship between opacity and PM is not linear. Opacity is based on optical density or transmittance and is a log normal function that depends on path length (stack diameter) in

accordance with the Beer-Lambert relationship; 2) The correlation between PM concentration and opacity is highly dependent on particle size distribution associated with different combustor types, waste composition and particulate control devices. Smaller particle are more

reflective/refractive than larger particles and will show higher opacity. Subsequently small particle mass concentrations can be well below the particulate limit while opacity is well above 1%; 3) It is not appropriate to apply a ratio of PM to opacity based only on one facility in the incinerator category and apply it to all types of units regulated under this rule with different air pollution controls and particle size distributions. (See 2 above); 4) Any correlation of PM to opacity would require calibration of the continuous opacity monitoring system (COMS) to Method 5 for PM; 5) The proposed 1% opacity is less than the design, measurement and recording tolerances for the COMS as found in EPA PS 1 (and by reference ASTM D6216-98) of 40 CFR 60 Appendix B. The design, measurement and accuracy tolerances and daily calibration drift criterion required under PS 1 is + or - 2% opacity or double the proposed limit. Further accuracy criteria for quarterly audits using NIST certified optical density filter is 3% opacity. In absolute terms a facility would be out of compliance based solely on the inherent accuracy limitations of the COMS; and 6) Method 9 cannot be used to measure 1% opacity since a Method 9 observer can only practically measure opacity in increments of 5 percent although trained Method 9 observers are certified using an opacity monitor calibrated within +/- 2 percent (See 40 CFR 60 Appendix A, Reference Method 9, section 3.3.2.5). EPA must reconsider whether an opacity limit is necessary for CISWI units, and if so, establish the appropriate limit based on actual COMS or Method 9 data for units in each subcategory at a level that COMS and Method 9 observers can actually measure accurately.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 28

Comment: Should EPA decide to keep the opacity requirement, there are several flaws in this proposed standard. For the various subcategories (incinerator, waste-burning kiln, burn-off oven, and small remote incinerator), complianCe with the opacity limit is proposed to be determined using Method 9 of appendix A-4. The opacity limits are:

* 1% opacity - incinerators

* 1% opacity - energy recovery units

* 4% opacity - waste-burning kilns

* 2% opacity- burn-off ovens

* 13% opacity - small, remote incinerators

* For all categories of units, you can avoid an annual performance test if your previous test result was only 75% of the emissions limit (Section 60.2155 of Subpart CCCC and Section 60.2720 of Subpart DDDD).

At 75 FR 31955, EPA discussed the approach for developing the opacity limits, which involved taking the test data 'from the facilities that had both PM and opacity, doing a correlation between PM and opacity, and developing a ratio of opacity to PM of 0.053. That ratio was then used to establish the opacity standard for each subcategory. Said differently, the PM standard was based on the average of the best performers which was then multiplied by 0.053 to get the opacity standard. That methodology resulted in opacity values that are not supported by the prescribed test method.

Method 9 is a visual determination by a certified reader. According to the method, a certified reader is only able to distinguish opacity in increments of 5%. Single digit distinction is beyond the capabilities of the method. Any opacity detection would have to' be a minimum of 5%. In setting opacity limits at values less than 5% for four of the subcategories, EPA has essentially set a compliance value of 0%, which conceivably would be a beyond-the-floor limit. Since EPA did not set beyond-the-floor limits, Method 9 would require a minimum opacity value for these four subcategories of at least 5%. For small, remote incinerators, a similar problem exists. Since EPA did not set a beyond-the-floor,limit for this sub-category, Method 9 would require minimum opacity of at least 15%.

In addition, proposed Section 60.2155 of Subpart CCCC and proposed Section 60.2720 of Subpart DDDD are provisions that allow a unit to conduct less frequent testing as long as the test results are less than 75% of the respective opacity limit. By instituting such low. opacity values for incinerators, energy-recovery units, waste-burning kilns and burn-off ovens that are beyond the capability of the test method, EPA has provided provisions that can never be used for opacity, since 75% of zero opacity reading is still zero and a unit could not have a reading below zero. If EPA does really intend for these provisions to have use, then the opacity limits for the respective sub-categories need to be adjusted upwards even further, so that 75% of the limits can be distinguished from the actual limits. CRWI believes doing so would result in an opacity limit of 10% for the incinerator, energy-recovery, waste-burning kiln, and burn-off oven subcategories. As a result, the limit for a less frequent test on these units would be 5%, since 7.5% (or 75% of the 10% limit) would not be a distinguishable value. If the small, remote incinerator subcategory were adjusted upward to 15% because of Method 9 capabilities, 75% of that limit would be 11.25% opacity or essentially 10% which is still a distinguishable value, so it may not need further upward adjustment.

In summary, CRWI believes that there is no need to set an opacity standard in the final rule. If the Agency feels compelled to set opacity standards, CRWI'

believes that the opacity limits need upward adjustment as follows:

* 10% opacity - incinerators

* 10% opacity - energy recovery'units

* 10% opacity - waste-burning kilns

10°/0 opacity - burn-off ovens

* 15% opacity - small, remote incinerators

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 32

Comment: Opacity Limits Have Been Improperly Determined

EPA has added opacity standards to emission standards for the nine regulated pollutants specified in section 129. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary.

EPA claims opacity is an appropriate surrogate for PM emissions, and thus using a ratio of PM to opacity would be an appropriate method for determining the opacity that would be associated with a given PM concentration.

There are a number of flaws with EPA's approach for developing opacity limits. First, ACC does not believe a meaningful relationship exists between EPA Method 9 observations and filterable particulate matter concentrations in incinerator stack gases. The following graphs of opacity versus filterable PM concentrations for the three Flint Hills Resources incinerators certainly do not show any relationship.[See submittal for Figure 2, 3, 4, and 5 provided by the commenter showing opacity versus filterable PM concentrations for the three Flint Hills Resources incinerators.]

Since MB-1012 has the lowest average PM concentration, its opacity to PM ratio was selected to apply to all CISWI subcategories. Given the lack of a clear increasing linear relationship between PM and opacity for MB-1012 (or any of the other units above), applying a ratio based on data for this unit to other PM concentrations to determine opacity limits cannot be justified.

Second, MB-1012 is in the incinerator subcategory and ACC believes applying incinerator opacity data to other subcategories is inconsistent and inappropriate.

Third, it is unreasonable to use EPA Method 9 visual observations to set opacity limits where compliance will be evaluated with continuous opacity monitoring system (COMS) data since they are not equivalent. COMS measure flue gas light extinction across a stack, whereas human observers assess plume opacity in the ambient air downwind of the stack release point using Method 9. According to the method, a certified reader is only able to distinguish opacity in increments of 5%. Single digit distinction is beyond the capabilities of the method, so any opacity detection would have to be a minimum of 5%. In setting opacity limits at values less than 5% for four of the subcategories, EPA has essentially set a compliance value of 0%, which arguably would be a beyond-the-floor limit. Since EPA did not set beyond-the-floor limits, Method 9 would require a minimum opacity value for these four subcategories of at least 5% (although data are needed to show that top performers actually operate at this level over all operating conditions). For small, remote incinerators, a similar problem exists, as the opacity limit is not set at an increment of 5%. Since EPA did not set a beyond-the-floor limit for this sub-category, requiring Method 9 as the compliance method would call for an opacity limit of at least 15%, since an observer is not going to be able to measure opacity at the proposed emission limit of 13%.

Proposed Section 60.2155 of Subpart CCCC and proposed Section 60.2720 of Subpart DDDD are provisions that allow a unit to conduct less frequent testing as long as the test results are less than 75% of the respective limit. By instituting such low opacity values that are beyond the capability of the test method for incinerators, energy-recovery units, waste-burning kilns and burn-off ovens, the reduced testing requirement can never be used for opacity, since Method 9 cannot measure opacities this low. EPA should re-evaluate whether opacity limits are needed and if so, set them at measurable levels based on opacity data from top performers.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 55

Comment: Opacity/COMS. EPA is not obligated to implement a opacity limit, as § 129 of the CAA does not necessarily require that. In the proposed rule the opacity limit is based on the opacity/ PM ratio for the best performing unit, multiplied by each of the MACT floor PM limits, and is calculated for each subcategory. EPA has requested comments on the approach and appropriateness of setting opacity limits for this source category. There have been many past white papers and comments elaborating on the inappropriate reliance on opacity as a indicator of PM emissions at various levels, including in cases with a high enough level of PM that opacity could actually be detected. This is a situation in which EPA is dealing in the hypothetical, when calculating opacities in single digits, as PM levels are not high enough for actual readings. This is a unnecessary addition to the regulations which increases costs for no tangible benefit and it should be abandoned. § 129 does not require the regulation of items which can only be hypothetically measured. This amounts to an arbitrary regulation when opacity is measured below detection levels and when it does not correlate with PM at those low levels. 75 FR 31956.

If EPA retains the proposed opacity limit in the final rule, then it must develop a more appropriate way to set it. It is not possible to read more than 5% opacity with Method 9. COMS accuracy is not adequate for very low opacity limits, and there are many contributors to measurement uncertainty for opacity measurements even where the applicable limits are below 10% opacity. M9 stipulates that opacity readings are required to be recorded to the nearest 5%, and in order to be certified must not have an error which exceeds 15% opacity on any one reading and an average error of not more than 7.5% in each category. These methods, which are currently proposed by EPA, are obviously not compatible with a 1% or 2% opacity limit. Again, opacity is not required to be specifically limited by § 129(a)(4) of the CAA; it should only be limited "when appropriate." Since a floor determination indicates 1-2% opacity, it is not appropriate to impose such a limit, and EPA has the authority to not impose it.

The opacity limit proposed is on a 1-hour basis with a 1% limit. EPA states that other source categories with COMS requirements mandate one hour block averages, which is the basis for the proposal for CISWI units. However, this is not the DDDDD proposal, which has a daily block average of 10%. EPA states their intention to apply limits at all times, including start-up/

shutdown period, yet they impose a one-hour opacity limit that is not viable to achieve with energy recover units during those periods, and it is at odds with the DDDDD approach. This

limit needs to be changed to a daily block average basis, and the opacity limit increased to match DDDDD at 10%.

Response: See preamble Section V. for the response on opacity limits. Further, See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 6

Comment: The DEC is concerned about the opacity limits proposed. The proposed limits for new and existing CISWI units range from 1 %to 13%. Compliance is to be determined by performance testing using EPA reference Method 9. It is the understanding of the DEC that Method 9 is only accurate within 5% increments, which will lead to difficulty in accurately determining compliance. Accordingly, the DEC requests that EPA set the opacity limits in increments of five percent.

Response: See preamble Section V. for the response on opacity limits.

4.7 MACT Floor: Opacity: Need for limits?

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 2

Comment: Opacity standards are not necessary

EPA requests comment on the appropriateness of establishing opacity standards for CISWI. As stated in the preamble (75 FR 31956) EPA "believes opacity is an appropriate surrogate for PM emissions." The proposed rules require demonstrating compliance with the PM emission limits, therefore adding compliance requirements for a surrogate of a directly measured parameter is duplicative and unnecessary.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453

Comment Excerpt Number: 13

Comment: We are particularly concerned about the very low opacity limits EPA proposes. Section 129 does not require EPA to set an opacity limit, but states that one may be set as necessary.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 16

Comment: In the NESHAP final rule, EPA eliminated opacity limits after it established a PM standard. EPA should be consistent in CISWI rule and also eliminate the opacity limit.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 27

Comment: Section 129(a)(4) lists the substances or mixtures for which EPA must develop numerical emissions limitations. Opacity is listed but Congress included a parenthetical (as appropriate) for this substance. This gives EPA the option of not setting numerical emission limits for opacity. CRWI does not see any reason for having both a PM and an opacity standard, especially at the PM levels. proposed. Since EPA proposed opacity levels of less than 5% (other than small remote incinerators) and since single digit opacity readings are beyond the capability of a certified reader, opacity should simply not come into play at the PM emission levels proposed. In addition, if any type of wet scrubbing is used, the condensed water vapor will interfere with instrumental opacity readings, making them worthless. In fact, the estimated opacity for this proposed rule is not based on Reference Method 9 but on a ratio of PM to opacity of 0.053. As a result, CRWI sees no reason to include both PM and opacity. CRWI suggests that EPA drop the opacity requirements when the final rule is promulgated.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 33

Comment: Opacity Standards Within the CISWI Rule are Redundant and Unnecessary

EPA has proposed opacity standards for new and existing waste-burning kilns in addition to PM standards. EPA has requested comment on the approach used to establish opacity standards and whether it is appropriate to set opacity limits for the waste-burning kilns source category.

Lafarge is opposed to the CISWI rule establishing opacity limits. Opacity has long been considered a surrogate monitoring methodology for demonstrating continuous compliance with PM standards. However, the proposed CISWI rule requires the application of bag leak detection (BLD) for all fabric filter baghouses on cement kilns and alternative monitoring methods for kilns utilizing electrostatic precipitators. The application of BLDs or comparable monitoring techniques eliminates the need for opacity monitoring.

EPA has taken opposing positions in its §112 NESHAP and its §129 CISWI rulemakings. In the NESHAP proposal (FR Vol. 74, No. 86, p 21157), EPA states that "We are also proposing to eliminate the current requirement of using an opacity monitor to demonstrate continuous requirement with a PM standard for kilns and clinker coolers as use of an opacity monitor would be superfluous under the monitoring regimes we are proposing". The "monitoring regimes" referenced in the NESHAP proposal are BLDs for fabric filter baghouses and alternative methods for ESPs. Further, EPA states that "... given the stringent level of the proposed PM emission limits, we do not believe that opacity is an accurate indicator of compliance with the proposed PM emission limit." (emphasis added). In the final rule (August 6, 2010), EPA did not change it's position and does not require an opacity standard.

The CISWI proposal presents an opposing argument by stating that "Because opacity can be affected by the amount, type and particle characteristics of PM in the gas streams, as well as process operation, we believe that opacity is an appropriate surrogate for PM emissions." (emphasis added).

Lafarge agrees with EPA's conclusions presented in the NESHAP proposal and believes that the requirement for BLDs (baghouses) and other comparable monitoring methods (ESPs) is sufficient to ensure compliance with the PM standards proposed by the CISWI rule. Opacity monitoring is redundant and unnecessary, and should be removed from the proposed rule.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 5

Comment: Opacity limits: EPA requested comment on the appropriateness of setting opacity limits for CISWI units (75 FR 31956). The DEC believes that it is appropriate to set opacity limits for CISWI units.

Response: See preamble Section V. for the response on opacity limits.

4.8 MACT Floor: Results: Existing Units (Proposed Approach)

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 5

Comment: EPA's Choice to Always Round-Up to the Nearest Integer when 12 Percent of a Given Subcategory Is Not an Integer Is Inappropriate.

EPA explains that mathematically the number of units that represent the best-performing 12 percent of the units in a subcategory will not always be an integer. Therefore, EPA proposes to always round up to the nearest integer when 12 percent of a subcategory is not an integer, reasoning that this is necessary "to ensure that each MACT standard is based on at least 12 percent of a given subcategory." 75 Fed. Reg. at 31,952. However, EPA does not offer sufficient justification to depart from normal rules for rounding up or down, and without more, the choice is arbitrary.

The statutory requirement EPA cites as justification does not support EPA's choice to round up. If anything, it better supports the converse. The Act requires the MACT floor to be set at a level "no less stringent" than the average of the best-performing 12 percent of sources in a given subcategory. 42 U.S.C. § 7429(a). Rounding up the number in every instance means that the average always reflects more than 12 percent of the sources in the subcategory. For instance, EPA proposes to treat 4.1 sources (the result of a calculation of the best-performing 12 percent of sources), rounded up, as 5 sources. 75 Fed. Reg. at 31,952. This is less stringent than the statutory requirement. In fact, rounding down would be more acceptable statutorily because it would be more stringent than the statutory requirement. The EPA does not present an acceptable justification for departing from normal rules for rounding up or down, and should revert to the normal rules.

Response: See the emission limit calculation memorandum in the docket for discussion on this topic.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 3

Comment: NESCAUM is concerned with the proposed CISWI emission limits. The proposed numbers, based on statistical analysis of the 99% confidence levels, may not be reasonable to implement. In addition, many of the emission limits are too close to the detection limits of the reference test methods, and do not include an adequate compliance margin that accounts for either test method or fuel variability.

Response: See preamble Section V for responses on the MACT floor analysis.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 7

Comment: NESCAUM requests that emission limits be provided in pounds per million Btu and pounds per hours because many states require emissions to be reported in both manners.

Response: See preamble Section V. for response consistency between other applicable NESHAP limits.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 17

Comment: CRWI believes that at least 12% of the sources should be able to meet all

relevant existing source standards without adding additional controls. If this is not demonstrated, CRWI believes that EPA has not demonstrated that the

proposed standards are, "achieved in practice" as the statute requires. If EPA cannot demonstrate that at least 12% can simultaneously meet all standards, CRWI believes that in effect, EPA has improperly circumvented the § 129 for establishing "beyond-the-floor" standards because the "floor standards would

force industry-wide technological upgrades without consideration of the factors (cost and energy in particular) which Congress mandated for consideration when establishing beyond-the-floor standards." (70 FR at 59448).

Response: See preamble Section V. for response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 21

Comment: EPA should establish emission reduction (percent removal efficiency) standards for sulfur dioxide, hydrogen chloride and mercury as compliance alternatives to the concentration-based standards.

EPA's proposed CISWI emission standards for all pollutants are set as stack discharge emission concentrations, corrected to 7% oxygen. Stack concentration limits are an appropriate component of waste incineration unit standards, but they need not be used exclusively to define "average emissions limitations achieved" or "maximum degree of reduction in emissions" required under Section 129. An emission reduction standard which requires minimum pollutant percent removal efficiency across the air pollution control devices is another legally and technically viable parameter for regulating emissions from incinerators and other combustors.

Precedence for emission reduction standards in EPA's MACT rules includes the New Source Performance Standards and Emission Guidelines for both Large Municipal Waste Combustors and Small Municipal Waste Combustors. These standards contain removal efficiency compliance alternatives for sulfur dioxide, hydrogen chloride and mercury.

Section 129 authorizes EPA to employ an emission reduction requirement. It specifies the kind of parameters EPA can use to set emission standards: "Standards. shall be based on methods and technologies for removal or destruction of pollutants before, during, or after combustion" (Section 129 (a)(3)) and "performance standards. shall specify numerical

emission limitations" (Section 129 (a)(4)). A numerical pollutant removal efficiency standard meets both of these specifications.

Technical rationale supports emission reduction standards for sulfur dioxide, hydrogen chloride and mercury. Waste-related emissions (those due primarily to waste components as opposed to combustion conditions) are subject to significant variability since by their very nature the makeup of wastes is less controlled than products or fuels which are subject to content specifications. During combustion, sulfur, chlorine and mercury in waste form compounds which exist in the gaseous state at flue gas temperatures. Air pollution control equipment removes gaseous pollutants via mass transfer in absorption and adsorption processes that operate under first order reaction rate kinetics, i.e. air pollution controls for these pollutants are inherently efficiency devices. As such it is reasonable and consistent for technology-based MACT standards to have a removal efficiency component.

MACT emission standards should recognize the limitations of efficiency-based air pollution control equipment in commercial-scale applications that involve waste composition variability. An appropriate and often-used regulatory approach is to require compliance with the lesser of stack emission concentration or removal efficiency. For example, the hydrogen chloride NSPS for Large Municipal Waste Combustors is 25 parts per million corrected to 7% oxygen or 95% reduction, whichever is less stringent. This approach demands a minimum emission reduction performance in the event waste chlorine composition fluctuates above a level which prevents the control to the concentration standard. In the CISWI MACT rule, EPA should separately derive emissions limitations achieved both in terms of concentrations and removal efficiencies by evaluating the emissions performance of best performing CISWI unit(s).

In promulgating MACT regulations for Hospital/Medical/Infectious Waste Incinerators (HMIWI) EPA rejected a comment calling for emission reduction standards noting "while commercial HMIWIs face greater challenges controlling the wastes they receive. .they are nonetheless capable of taking steps to educate their customers (i.e., waste generators) regarding waste segregation and should also have some control based on the waste management plans, contract requirements, and waste acceptance protocols they negotiate with their customers." (74 FR 51390). This rationale is not applicable to CISWI units. First, EPA has not proposed and

should not promulgate waste segregation requirements for CISWI units which could receive an array of wastes whose specific compositions within normal ranges are beyond the control of the CISWI operator. Second, waste separation programs are only partially if at all effective and EPA has not

demonstrated that such programs have avoided the degree of waste content and emissions variability that justifies a removal efficiency standard. EPA even acknowledged HMIWIs can control non-technology factors such as waste segregation only "to a limited extent" (74 FR 51390).

Response: See preamble Section V. for responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and the Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 41

Comment: The new MACT floor limits set in the proposed rule are unreasonably and

unnecessarily low.

Response: See preamble Section V. for responses on the MACT floor analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 46

Comment: Achievability of Proposed Limits. The limits proposed by EPA are far too low for the majority of existing sources to achieve. EPA has presented limited evidence that the limits are achievable for most existing sources, yet there is ample evidence that a low number of sources would meet the proposed limits. The proposed limits are unachievable because they were based on an analysis of a very low number of units, which are not representative of what is achievable for most top units. EPA should draw data from a more broad and representatively accurate sample of existing units.

Response: See preamble Section V.B. for responses on the MACT floor analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 49

Comment: In calculating the limits, EPA averaged "zeroes" into the floor. This was not an appropriate calculation, because those zeroes were achieved by units that did not have the element being calculated in their fuel or waste. The use of these weighted numbers skews the calculated limits to a level which is unachievable by the majority of units, and in a way that is an inappropriate use of data.

Response: See preamble Section V. for the response on treatment of detection levels.

4.9 MACT Floor: Results for Existing Units (Proposed Approach): Incinerator subcategory

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Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 9

Comment: In addition to inadequate data to calculate the baselines for these larger categories, EPA has improperly established the baselines on fewer than five sources for the incinerator and the small, remote unit categories, inconsistent with the requirements of Section 112(d)(3)(B) of the Clean Air Act, which specifies a minimum of five sources to be used to establish baselines in categories with fewer than 30 sources.

Response: See response to EPA-HQ-OAR-2003-0119-1953.1 excerpt 5.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 5

Comment: There is not sufficient data for setting a dioxinlfuran (D/F) MACT floor limit for incinerators.

Only four sources had D/F (TEQ basis) source test data and only 12 sources had Total Mass Basis (TMB) source test data. EPA acknowledged the lack of data to set a reasonable TEQ floor by using the TMB relative variability factor to set the TEQ floor. There is no assurance that these sources are representative of all other sources — the data set is too small. It is also important to note that none of the four sources with D/F TEQ data available meet the MACT existing or new source limits for the TEQ basis. Thus, the limit is not supported in the data.

Even the TMB data is highly variable with emissions ranging from 0.07 to 2.07 ng/dscm with the fabric filter or from 0.002 to 0.085 for a wet scrubber. It would appear that there is no control device that can consistently be used to meet the proposed emission limit and therefore there are no controls that are demonstrated in practice, so EPA should not be setting an emission limit.

DoD recommends EPA not set a D/F limit without obtaining further data due to insufficiency of available TEQ data and variability of the TMB data.

Response: See preamble Section V. for responses to Limits for TMB and TEQ for dioxin/furans and the MACT Floor Analysis.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 12

Comment: For units in the incinerator category, EPA selected emission limits that nobody can achieve in practice. We do not believe this is consistent with §129 requirements where EPA is required to establish the limits on the basis of "the average emissions limitation achieved by the best performing 12 percent of units in the category" [emphasis added]. [Footnote: Clean Air Act Amendments of 1990, §129(a)(2).]

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 7

Comment: For the incinerator subcategory, the reason a small number of units are being used to set the limits is that the existing standard caused many units to shutdown. The remaining units likely installed or improved controls in order to comply with the original CISWI standards, effectively resulting in the new limits being set based on the top performers among the already top performers.

Response: See preamble Section V. for the response on MACT-on-MACT.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 12

Comment: EPA should use pre-MACT emission data for those units subject to the 2000 CISWI standards.

EPA's database contains recent emission data from incinerator units subject to the December 1, 2000 CISWI MACT rule (65 FR 75338). In using these data, EPA is conducting a partial MACT-on-MACT floor setting process which is contrary to the CAA. EPA should delete post-

MACT data from its database and instead use pre-MACT emission data for these incinerator units.

RESETTING THE MACT FLOORS FOR A SECOND TIME IN THE 2010 PROPOSED RULE IS CONTRARY WITH THE CLEAN AIR ACT.

The provisions of Section 129 must be interpreted consistent with the purposes of the Clean Air Act. As Congress explained in Section 101(b)(1), the twin goals of the Act are "to promote the public health and welfare and the productive capacity of its population." 42 U.S.C. § 7401(b)(1) (emphasis added). The economic impacts of Clean Air Act programs weighed heavily throughout Congress' debates on the 1990 Clean Air Act Amendments. In particular, Congress carefully considered its approach to regulating hazardous air pollutants under Section 112. This approach was essentially adopted in Section 129 as well. As a result, Congress expressly provided that, after floors are initially set, EPA must consider costs. It further established a regulatory scheme that shifts from this technology-based standard back to a health-based standard that addresses risk. Under this scheme, Congress did not intend to require an inevitable ratcheting of the standard that would impose technology requirements only for technology's sake, without consideration of risk and costs. The 2010 Proposed Rule, however, ignores the scheme imposed by Congress, imposing a technology-based standard that fails to comply with all of the requirements and purposes of the Clean Air Act.

A. The Statute Only Provides for a One-Time Setting of the MACT Floor.

The statute makes clear that the setting of the MACT floor is a one-time requirement. Section 129(a)(1) outlines a specific schedule for the standards that EPA was required to promulgate. 42 U.S.C. § 7429(a)(1). For HMIWI units, the standards were required not later than 24 months after November 15, 1990. Id. § 7429(a)(1)(C). The statute further provides the floors be based on what "is achieved," reflecting that the Administrator is to look at what the emissions limitations the best-controlled sources are achieving in practice at the time the floor-based standards are promulgated. In setting the floors for existing units, EPA must "exclud[e] units which first met lowest achievable emissions rates 18 months before the date such standards are proposed or 30 months before the date such standards are promulgated, whichever is later." Id. § 7429(a)(2) (emphasis added). This language is consistent with a reading that the floor calculations were only intended to occur once based on the situation for regulated sources at the time of the initial promulgation, not at the time of subsequent revisions.

Throughout the Clean Air Act, Congress has made distinctions between the initial "promulgation" of a standard and its "revision." When Congress wanted to give EPA authority to revise standards in the same manner as the initial promulgation it expressly provided that authority. See, e.g., 42 U.S.C. §§ 7409(b)(1) ("Such primary standards may be revised in the same manner as promulgated."); 7409(b)(2) ("Such secondary standards may be revised in the same manner as promulgated."). No such authority is provided here.

Moreover, the legislative history of Section 129 confirms that Congress rejected an approach of resetting the floor based on circumstances at the time of revision. The Senate Committee version of the 1990 Clean Air Act Amendments (S. 1630) expressly required EPA to determine for new sources "the greatest degree of emission limitation achievable through application of the best available control technologies and practices which the Administrator determines at the time of promulgation (or revision, in the case of a revision of a standard) ... has been achieved in practice by a municipal waste incineration unit . . .." S. Rep. No. 101-228, at 568 (1989) (emphasis

added). [Footnote: While this version of the bill did include a review and revise provision for new sources, the review provision did not apply to existing sources. Moreover, the bill included maximum emission limits which the standards could not exceed, indicating that Congress did not intend an ever-ratcheting down of emissions limitations even for new sources.] This requirement was eliminated from the Senate version of the bill, and Section 129(a)(2) refers only to standards "promulgated" not "revised."

The 2010 Proposed Rule provides no legal support for EPA's decision to re-promulgate the standard (i.e., recalculate the floors) under Section 129(a)(2). The statute and legislative history make clear that Congress intended a one-time calculation of the floor based on what sources achieved at the time of the initial promulgation, which, in this case, was 1997. Once this floor determination is made, EPA must then take costs and other factors into account in setting the standard at the level the Administrator deems "achievable." The statute further provides for revising the Administrator's determination of what is "achievable" based on considerations of cost and other factors pursuant to Section 129(a)(5). The Clean Air Act never intended to impose technology for technology's sake every five years with no consideration of costs and risk, as EPA has done here.

B. The Statute Prohibits the MACT-on-MACT Review in the 2010 Proposed Rule. The 2010 Proposed Rule has engaged in impermissible MACT-on-MACT review. MACT-on-MACT refers to resetting the MACT standards based on a recalculation of the floors using data from only the remaining best controlled unit and top 12% of performers collected after the sources in the source category have already made the necessary modifications to come into compliance with the initial MACT standards. MACT-onMACT review results in an increasingly stringent standard based solely on technology with no consideration of cost or risk. Such review is contrary to the statute.

EPA has expressly found that "MACT-on-MACT" review "is not statutorily required by section 129(a)(5)." 73 Fed. Reg. at 72,983. EPA has stated on numerous occasions its belief that the technology reviews in the Clean Air Act were not intended to have "this type of inexorable downward ratcheting effect." 71 Fed. Reg. 27,324, 27,327/3 (May 10, 2006) (Large MWC). See also Hazardous Organic NESHAP (HON) Residual Risk and Review of Technology Standard Rulemaking Summary of Public Comments and Responses, at 17-18 (EPA-HQ-OAR-2005-0475-0164) (Dec. 14, 2006); 69 Fed. Reg. 48,338, 48,351/1 (Aug. 9, 2004), 70 Fed. Reg. 19,992, 20,008/2 (Apr. 15, 2005) (coke oven batteries). This interpretation was affirmed by the D.C. Circuit in its decision in the HON case. NRDC, 529 F.3d at 1084.

More significant, however, is that EPA's approach here is inconsistent with the statute. Section 129(a)(2) provides that emission standards for existing units may be less stringent than standards for new units in the same category, 42 U.S.C. § 7429(a)(2), reflecting that Congress did not intend to establish a system that would inexorably tighten existing units' standards to approach the new unit level every 5 years:

As a result [of MACT-on-MACT], over time, existing sources which had not made any changes in their operations would eventually be subject to essentially the same level of regulation as new sources. Such a result would be unprecedented, particularly in the context of a standard that is established under both sections 129

and 111. Under section 111, an existing source only becomes a new source and thus subject to a new source standard when it is either modified (section 111(a)(2)) or reconstructed (40 CFR

60.15). Given this context, it is not reasonable to assume that Congress intended for existing sources subject to section 129 standards to be treated as new sources over time where their circumstances have not changed.

73 Fed. Reg. at 72,972/2.

EPA does not address how its approach could conceivably include the use of post-2000 emissions data which reflect actions the sources took to meet the 2000 standards, as well as additional improvements over the years. Using these data from the remaining existing units to recalculate the floors for a new MACT standard is clearly the "MACT-onMACT" review prohibited by the Clean Air Act.

C. Resetting of the Floors Allows EPA to Circumvent Statutory Requirements to Consider Costs and Risks.

Congress expressly provided that, after floors are set, EPA must consider costs and other factors to determine whether to set a standard that is beyond the floor. EPA's approach in the 2010 Proposed Rule allows EPA to reset the floors and revise the standard without taking into consideration costs or risks, again undermining the intent of Congress.

First, in proposing the new standards, EPA failed entirely to consider "the costs of achieving such emission reduction" as required by statute. EPA's post hoc economic analysis of the impacts of the new standards, established without regard to costs, does not satisfy this statutory requirement. EPA's approach also circumvents the mandatory risk review requirements of Section 129(h)(3), in violation of the Clean Air Act. By incorporating the Section 112 structure in Section 129, Congress intended the performance standards under Section 129 to develop in a manner similar to Section 112. In amending Section 112, Congress was concerned with EPA's delay in promulgating health-based standards for hazardous air pollutants, and as a result imposed a requirement for interim technology standards until the health-based standards could be developed. Sierra Club, 353 F.3d at 979-80. Similarly, Section 129 includes a technology-based standard like that in Section 112(d), but then requires EPA to promulgate residual risk standards under Section 112(f), as required by that section. 42 U.S.C. § 7429(a), (h)(3). [Footnote: Congress found precedent for the two-phase scheme in its revisions to Section 112 in provisions in the Clean Water Act, which provided for periodic review and revision, if necessary, of standards for toxic pollutants. S. Rep. No. 100-231, at 199-200 (1987). The Clean Water Act provision does not have an equivalent to the MACT floor, though.] As EPA has found with respect to Section 112, the ultimate goal of such emissions

standards is protecting public health with an ample margin of safety. [Footnote: Congress found precedent for the two-phase scheme in its revisions to Section 112 in provisions in the Clean Water Act, which provided for periodic review and revision, if necessary, of standards for toxic pollutants. S. Rep. No. 100-231, at 199-200 (1987). The Clean Water Act provision does not have an equivalent to the MACT floor, though.] 71 Fed. Reg. 76,603, 76,609/1-2 (Dec. 21, 2006) (HON). As with Section 112(d)(6), once EPA establishes residual risk standards, it is within its discretion to find further revisions are not needed due to the efficacy of the standards. 42 U.S.C. § 7411(b)(1)(B) (incorporated by reference in 42 U.S.C. § 7429(a)(5)).

Under the 2010 Proposed Rule's approach, EPA simply recalculated the floors and revised the standard to a more stringent level without any consideration of costs or whether or not the emissions posed any threat to human health or the environment. Thus, EPA ended up imposing

technology requirements solely for technology's sake. Again, this is contrary to the Clean Air Act and the intent of Congress.

Response: See preamble Section V. for the responses on MACT-on-MACT and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 14

Comment: [See submittal for Table 6 provided by commenter for incinerators where two sources can meet 7 of 10 proposed existing source standards.]

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 15

Comment: It should be noted that when EPA moves two units from the burn-off oven category to the incinerator category, the standards for the incinerator category will also need to be recalculated and this analysis will need to be redone.

Response: EPA thanks the commenter for their input. Units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

4.10 MACT Floor: Results for Existing Units (Proposed Approach): Energy Recovery Unit subcategory

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Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 6

Comment: In an attempt to see what equipment would be needed to run our biomass boiler under the new CISWI rules, we have consulted with our engineers and some equipment suppliers. We are told these standards are technically unfeasible.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 51

Comment: [Note: Commenter states that same concerns about data quality in Boiler MACT are also relevant to the CISWI rule.] We ask that EPA use its discretion and identify three broad areas for improving the Boiler MACT rule. First, EPA should set more reasonable limits that reflect the variability of real-world best performing boilers. We believe the proposed Boiler MACT CO limit for boilers burning biomass in conjunction with coal will not be achievable as a practical matter . International Paper has seven boilers that burn biomass with coal in amounts greater than 10 percent that classifies them as "coal" boilers under the proposal that would be subjected to unachievable CO limits. The CO limits for these combination boilers should be the same as the ones for biomass-fired boilers. If we continue to encourage and expand use of renewable, carbon neutral biomass in this country, the rule needs to change dramatically.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 6

Comment: SARUs cannot meet the emissions limitations contained in the proposed CISWI rule.

The proposed CISWI rules appear to presume that it is the actual combustion of commercial and industrial solid waste that is the source of emissions. This is not the case for SARUs. The vast

majority of SO2, HC1, opacity, and PM emissions from SARUs come from the sulfuric acid regeneration process itself, not from the combustion of non-hazardous secondary materials. The recycling of spent sulfuric acid and the combustion of sulfur and other sulfur bearing materials in the SARU industrial furnaces generates SO2, which is converted to SO3, then to virgin sulfuric acid. Sulfuric acid mist is reflected in opacity and PM measurements. The emission standards in the proposed CISWI rules are not based on data from facilities that have SO2 and SO3 in their processes but instead are based on data from facilities that only have small amounts of SO2 and SO3 as products of combustion.

For example, the proposed limit for SO2 of 4.1 ppm (for energy recovery combusters) is far below the 100-150 ppm allowed under the Consent Decree entered between SARUs and the Agency as a result of the enforcement initiative described in Section I.C, supra. The SO2 limit under the Consent Decree is based on the best available control technology. Two of Rhodia's

SARUs have double absorption as best available control technology for SO2. To reduce SO2 emissions from these two non-Part B permitted SARUs to meet the proposed 4.1 ppm SO2 limit would require an additional expenditure of approximately $15 million at each location, and could make continued operation of the non-Part B permitted units uneconomical. The proposed HC1 emission standard of 0.17 ppm is similarly problematic for SARUs because spent sulfuric acid contains chlorides. Rhodia's source testing shows HC1 levels, depending on the chloride content of the spent sulfuric acid, that will be greater than those in the proposed CISWI rule.

Because SARUs are fundamentally different from the facilities the Agency reviewed in developing emission standards for CISWI units, SARUs cannot meet the SO2, HC1, opacity, or PM standards contained in the proposed CISWI rules. SARUs should, therefore, be exempted from the CISWI rule.

Response: See preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs).

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 9

Comment: Proposed emission limitations need to be achievable, and one method of determining achievability is to examine what emission limitations can be guaranteed by equipment vendors for the various types of sources being controlled. The proposed limits for HCl, for example, are lower than what we believe a vendor will guarantee. A facility simply cannot obtain financing for a capital project to upgrade emission control systems if the vendor of the emission control systems cannot guarantee that the investment will result in compliance with the applicable regulations. EPA needs to consider BACT, 112(g) determinations, and available information on the performance abilities of available emission control technologies to determine the achievability of a standard.

Response: See preamble Section V. for the responses the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 7

Comment: EPA has established some of the proposed performance standards using inadequate data, and as such these proposed baselines need to be re-evaluated.

For many of the categories and pollutants, there are not an adequate number of reporting facilities to establish a MACT floor based on the top 12 percent of the source category. In other instances, the number of facilities with test results is inadequate to set a baseline. Examples

include the dioxin/furan TEQ baseline for the energy recovery category, where only three test results are available — less than the five required to satisfy the twelve percent criterion for the 40 sources in this category. Similar situations exist for the waste-burning kiln and energy recovery unit categories under the Options 1 and 2, where an inadequate number of units are available for a proper establishment of a baseline for NO and SO2 for waste-burning kilns, and for NON, SO2, total mass dioxins/furans and TEQ dioxin/furans for energy recovery units.

Response: See the database corrections memorandum in the docket for amendments and corrections to the database since proposal. See discussion in Section V. of the preamble and the emission limit calculation memorandum in the docket for discussion on calculation of the final emission limits.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 21

Comment: Pollutant-by-Pollutant Approach is Not Appropriate for Our

Boilers

The air emissions profile of the many multi-fuel-fired boilers in the pulp and paper industry varies with fuel mix, making it difficult to establish a "typical" emissions profile. Many times boiler operators have emission limits that change based on the fuel fired. The fact that these boilers must often adapt quickly to varying process steam demand and experience frequent load swings also makes characterizing "typical" emissions difficult. Permitting changes to a multi-fuel fired boiler is challenging because predicting projected actual emissions following the change is difficult, as fuel mix can vary based on season, fuel cost, and operation of other equipment at the facility.

Air emissions control studies for multi-fuel-fired boilers can be difficult, as the control strategy and primary compound of concern vary with the fuel mix. Consider a pulp and paper mill boiler that burns fuel oil, biomass, and coal. Coal and biomass might produce the highest particulate emissions, but coal and fuel oil produce the highest SO2

and HCl emissions and biomass may produce the highest CO emissions. Therefore, an ESP might be the most appropriate control device for wood firing, a wet scrubber might be the most appropriate control device for coal and oil firing, and control options like combustion improvements would have to be evaluated to reduce CO emissions from wood firing. It is our hope that future CO, dioxin/furan, and HAP limits are not so low that combustion improvements alone will not be enough to achieve compliance, as there are no add-on emissions controls for these compounds that make sense to implement on our boilers.

Response: See preamble Section V. for the responses the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 51

Comment: CO Variability

The proposed CO emission limit (preferred definition of solid waste) for energy recovery units is 150 ppm at 7% O2. A CO CEMS is required, and 24 hr block averages are to be computed for evaluating compliance.

EPA's approach to developing a CO limit for existing energy recovery units relied only on short-term Method 10 test results, even though several of the 40 units in this category were equipped with CO CEMS and had supplied a 30-day period of daily averages in response to EPA's 2008 ICR. EPA's variability analysis was limited to assessing run-to-run variations in Method 10 results for the five units that had the lowest Method 10 test averages. Tables B-21 and C-22 of the April 26, 2010 ERG floor memorandum summarize the Method 10 test results as extracted from the April 13 CISWI emission database. [See submittal for table provided by commenter that provides the CO data for the five units with the lowest test results, as well as the 3-run average for the next best unit which was really no different than the 5th lowest average.]

The Kimberly-Clark fluidized bed boiler is the only one of the top five units having CO CEMS data. The CISWI database has daily CO averages in ppm for this boiler for the period 8/29/08 to 9/27/08, but it is not clear if the concentrations are adjusted to 3% O2.

The Domtar boiler had an 11/6/07 Method 10 CO test while burning bark, natural gas, TDF, and fuel cubes. The amount of fuel cubes burned during the test was minimal compared to the primary fuels, and would not affect CO emissions. EPA selected this boiler for a 30-day CO/THC test under the 2009 Boiler MACT ICR, apparently because it appeared to be "top performer" for CO in biomass subcategory based on the 2007 test. The Boiler MACT emission database has hourly CO averages for the period 8/12/09 through 9/9/09. The fuel types combusted during this period were bark, natural gas, and TDF, but no fuel cubes. A plot of daily block average CO emissions is shown in Figure 3.1 [see submittal for figure provided by commenter] and clearly shows a single 3-hour test cannot possibly characterize CO emissions variability from a solid fuel boiler. Therefore, AF&PA believes identification of "top performing" boilers is inappropriate using single three hour tests.

Figure 3.1. CO Daily Averages for ARDomtarIndustries Boiler PB1

If EPA wants to develop a 24-hour average CO emission limit for energy recovery units and to base compliance on CEMS data collected at all times, including during startup/shutdown/malfunction conditions, it cannot rely on one-time short-term tests conducted during normal operations.

EPA states that CISWI emission standards must be based only on actual emissions data, and that only data from units in the lowest 12% can be considered when setting a limit for existing sources. In the case of CO, it is unreasonable to determine the "best performers" from short-term

test data that in no way reflect actual performance of these units. For CO, EPA should ignore short-term tests and instead identify best performers based on CEMS data collected over a several month period representing the gamut of fuel mixes and operating loads experienced by energy recovery units.

Of the 40 units in CISWI energy recovery unit subcategory (under EPA's preferred definition of solid waste), the following units have CO CEMS:

CAWheelabratorShasta, Boilers #1, 2, and 3 MEBoralex, Boiler #1

MNFibrominn, EU-001

PAKimberlyClarkChester, Boiler #10

OKIPValliant, Bark Boiler

WAPortTownsendPaper, #10 Power Boiler

EPA should obtain one year's worth of hourly CEMS data for each of these units and then calculate 24-hour block averages for each, as well as a 12-month average. The best performers could be determined from the 12-month averages, or by arraying the highest 24-hour average for each unit from lowest to highest, and the five with the

lowest "highest" value can be identified. Either way, a 24-hour average CO limit could be set equal to the highest 24-hour average recorded at any of top performers. Using the highest 24-hour average would adequately reflect variability over time, and also reflect periods of startup/shutdown/ malfunction conditions in the monitoring records.

Response: See preamble Section V. for the responses the MACT Floor Analysis, rationale for subcategories-energy recovery units, use of CEMS data, and CEMS data to set standards.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 52

Comment: SO2 and NOx Variability

Short term SO2 and NOx tests do not give an accurate picture of variability in energy recovery unit emission rates. This is especially true for units that fire multiple fuels in varying ratios. Many of the energy recovery units have CEMS for these two gases, and EPA should use the CEMS data to establish limits if CEMS are required for compliance. The same procedure suggested above for CO could be used to analyze SO2 and NOx CEMS data and determine appropriate emission limits, using the appropriate averaging time.

Response: See preamble Section V. for the responses the MACT Floor Analysis, rationale for subcategories-energy recovery units, use of CEMS data, and CEMS data to set standards.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 5

Comment: Emission test data from units not burning solid waste should be excluded from the CISWI dataset.

EPA should check the database to ensure all emission test data is representative of the subcategory and was, in fact, from units burning solid waste during the test.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 5

Comment: EPA's focus on individual HAPs has resulted in a failure to recognize the critical interplay between emissions controls and emissions of other pollutants. For example, we are concerned that the controls necessary to meet the stringent emissions limitations for CO will result in increased energy usage, with the concomitant increase in emissions of NOx and other pollutants. Further, EPA failed to account for this interrelationship in its economic analysis.

Response: See preamble Section V. for the responses on the Pollutant-by-Pollutant Approach and Alternative Approaches and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Michael I. Holzman
Commenter Affiliation: M.I. Holzman & Associates, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2102.1
Comment Excerpt Number: 1

Comment: Based on the proposed classification of biomass fuels that do not meet the definitions of "clean biomass" or "traditional fuel" under the proposed NHSM Rule (such as wood obtained from construction and demolition ("C&D") or urban wood sources and tire-derived fuel not meeting legitimacy criteria), use of such fuel in a boiler or process heater would be regulated under the CISWI Rule. Under the proposed CISWI Rule, it would appear that such a unit would be either regulated as an energy recovery unit or potentially exempt under § 60.2020(e) or § 60.2555(e) as a small power production facility. The emission limits applicable to a new or reconstructed

energy recovery unit in Table 6 to Subpart CCCC of Part 60 are considered impossible to meet using currently-available control technology or even to accurately quantify at the levels specified, e.g. for dioxins and metals. In addition, the standards applicable to an existing energy recovery unit in Table 7 to Subpart DDDD of Part 60 are considered difficult to meet with currently-available controls.

Response: See preamble Section V. for the responses the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 6

Comment: The emission test data EPA used to define best performing sources and to set proposed emission limits do not adequately reflect the broad range of typical operating conditions and should not be the only data to establish emission levels that must be achieved "at all times."

The Clean Air Act requires EPA to set emission standards that limit emissions "on a continuous basis" For that reason MACT standards apply at all times irrespective of fuel mix, operating range and fluctuation. Since EPA decided not to propose any SSM provisions, the proposed emission limits apply even during periods of start-up, shutdown and malfunction. The test data upon which the proposed limits are set do not reflect these varying conditions and should not be used to form "never to be exceeded" limits. For the most part EPA has relied on emission performance "snapshots" collected over relatively short time periods (e.g., 3 or 4 hour test periods) while boilers were operating

under normal stack testing conditions. For example, EPA identified boilers at IP's Riverdale, Texarkana, Red River and Valliant mills as best controlled floor units based on results from a single stack test.

Much, if not all, of the emission data used to establish the proposed CISWI energy recovery unit limits are from data collected in response to EPA's Section 114 directive requiring sources to perform tests while burning types of materials that EPA anticipated to be regulated as solid wastes. In that request, EPA required energy recovery units to be tested "at conditions (i.e., load and materials combusted) that reflect typical operation for the unit." The fact is that these units experience a wide range of operating conditions, each of which is considered "typical" operations. Historically, operations

during performance tests have been closely managed to ensure relatively smooth operating conditions, specifically avoiding dramatic operating swings which may occur

due to a variety of real world conditions that can and do happen, even in the "best-performing" units. Failure to maintain relatively smooth operations creates the risk that contracted sampling teams will be unable to meet test method requirements causing

prolonged test programs and additional costs. While these operations are without question "typical," they do not necessarily reflect the entire spectrum of typical operations at these sources.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 7

Comment: In addition to failing to consider the full range of boiler operations, the data used to establish emission limits does not fully consider the range of fuels burned and the range of emissions levels from these different fuels.

Emissions of certain pollutants, such as sulfur dioxide and metals, are significantly influenced by the elemental and physical characteristics of the fuels being burned. Many boilers at pulp and paper mills are also used as either primary or backup control devices for burning off-gases generated from pulping operations and/or condensate stripper systems. Control of these gases is required by the MACT, NSPS and SIP standards for the pulp and paper industry. EPA must recognize that burning of these gases in affected boilers, whether routinely or periodically is "typical" operation and must be accounted for when establishing the SO2 and NOx emission limits. Emissions of CO and NOx can be influenced by the moisture content of the fuels which can vary from day to day and by season based on rainfall and temperature. While testing programs can be designed to

evaluate the highest emission rate expected from a specific pollutant, very few test programs are designed for that purpose due to the number of test scenarios that would

be required and the expense associated with testing. Certainly the emission data submitted by companies responding to the §114 directive, including IP, do not reflect all of these normal influences. For these reasons, we do not believe that the test data and variability factors used by EPA to establish emission standards adequately reflect the full range of emissions expected from all fuels and operating conditions and should not be the sole basis for "never to exceed" limits.

We believe the continuous achievement of the selected limits and, in certain cases, the selected limits themselves are not achievable.

Response: See preamble Section V. for the responses the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 7

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

A technically sound approach to analyzing data that will result in achievable limits based on the top 12% of real world boiler performance

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Brad Cooley
Commenter Affiliation: GDF SUEZ Energy Generation North America, Inc. (GSEGNA)
Document Control Number: EPA-HQ-OAR-2003-0119-2216.1
Comment Excerpt Number: 2

Comment: EMISSION LIMITS: The emissions limits in the proposed rule are unachievable. GSEGNA owns and operates several biomass facilities that co-fire alternative fuels. Though several of these facilities have made significant improvement to their CO emissions in recent years, they still struggle to meet their current permit limits at times. The proposed CO limits (150 ppmv) are significantly lower than their current permit limits and are virtually impossible to meet. Additionally, these limits are not in line with other proposed rules. GSEGNA refers to and supports the extensive comments of CIBO, BPA and Michigan Biomass.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Terry Walmsley
Commenter Affiliation: Fibrowatt LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2118.1
Comment Excerpt Number: 3

Comment: The suite of emission limits set forth in the energy recovery category of the CISWI Rule does not reflect the emissions (and therefore combustion conditions) for purposefully designed energy production units. Rather, they reflect high temperatures achieved in incinerator units for the purpose of complete combustion to destroy pathogens and significantly reduce the waste mass. In particular, the level of CO in the energy recovery category of the proposed CISWI Rule does not reflect boiler technology for energy production. To achieve more complete combustion and low CO emission levels, an incinerator unit must operate at high combustion temperatures and at high air-flow rates. Such high combustion temperatures and complete combustion resulting in low CO are reasonable and achievable in a unit where the primary purpose is not for energy production; i .e . incinerators, but it is not reasonable in units such as Fibrowatt boilers.

Combustion units designed specifically for the purpose of exporting electricity are designed to maximize energy recovery for purposes of exporting energy for external use — i .e . delivery of

useful energy to external users. Part of the maximization of energy efficiency relates to the supplemental use of this energy for purposes of operating the plant, for example the parasitic load for plant use associated with fan operation, air heating, and other fundamental operations at the plant. The low CO emission rate proposed in the CISWI Rule could require Fibrowatt to sacrifice significant energy recovery to heat substantially greater volumes of combustion air and to power larger fans for the supply of excess air.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 4

Comment: Regardless of EPA's determination about which materials are properly characterized as solid waste and which sources are properly characterized as solid waste incineration units for purposes of Section 129, the CAA and

established judicial opinion dictate that EPA must establish emission standards through its Section 129 regulation that meet the Congressional intent of maximum achievable control technology ("MACT"). The standards to constitute MACT for new and existing sources are distinct but clear, and in both cases require that such standards are achievable in practice.

The emission standards identified by EPA through the Proposed Rule, by EPA's own admission, are not achievable in practice, and therefore do not meet the statutory requirement for MACT standards. As to new sources, EPA anticipates that its proposed standards would be so stringent that, as a practical matter, no new CISWI unit would be constructed. Such determination cannot be described as "achievable" under any definition. Even as to existing sources, however, the emission standards identified in the Proposed Rule would not be consistently and simultaneously achievable by the best performing 12 percent of units in the category.

In order to ensure that emission standards are set consistent with MACT requirements, EPA must ensure that the data upon which it evaluates unit performance is accurate, complete and representative. Even a limited analysis of the EPA database in this case reveals many instances in which it is very unlikely that the reported data is accurately reflective of emission unit performance under conditions necessary to ensure that HAP emissions (or surrogate parameters) from the source would simultaneously satisfy the standards identified in the Proposed Rule. Indeed, EPA appears to acknowledge in the Proposed Rule that the information upon which it relied to derive the proposed emission limitations is flawed.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and the preamble Sections V and VI. for a discussion on the projection of new units. Further, see the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 12

Comment: EPA acknowledges that it used inadequate data on which to base realistic standards. In the proposed rule, EPA "recognizes it has imperfect information on the exact nature of the nonhazardous secondary materials which energy recovery units and kilns combust." Nor has EPA taken into account "other issues potentially relevant in a determination as to whether nonhazardous secondary materials are solid waste," as the term has been defined under RCRA. 75 FR 31940.

It is evident from the CISWI Test Data Database memo (dated April 26, 2010 from ERM), that EPA has not properly evaluated the additional data gathered from late 2009. By failing to analyze all the data available, the rule will be flawed in determining which materials are solid waste and which are not, and even which sources are subject to CISWI. Given that, there is a need for more flexibility, alternative standards or more subcategories than are proposed.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 12

Comment: [See submittal for Table 4 provided by commenter showing that one [energy recovery] unit can meet 8 of 10 proposed existing source standards.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 13

Comment: EPA acknowledges that it used inadequate data on which to base realistic standards. In the proposed rule, EPA "recognizes it has imperfect information on the exact nature of the nonhazardous secondary materials which energy recovery units and kilns combust." Nor has EPA taken into account "other issues potentially relevant in a determination as to whether

nonhazardous secondary materials are solid waste," as the term has been defined under RCRA. 75 FR 31940.

It is evident from the CISWI Test Data Database memo (dated April 26, 2010 from ERM), that EPA has not properly evaluated the additional data gathered from late 2009. By failing to analyze all the data available, the rule will be flawed in determining which materials are solid waste and which are not, and even which sources are subject to CISWI. Given that, there is a need for more flexibility, alternative standards or more subcategories than are proposed.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1834.1, excerpt 12.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 15

Comment: The controls necessary to meet EPA's stringent proposed emissions limitations for CO will result in increased energy usage along with increased emissions of other pollutants

EPA's proposed CO emissions limit arbitrarily and capriciously fails to recognize the dependency between CO and other emissions, which makes this rule impossible to implement in either process heaters or boilers. Requiring such extraordinarily low CO levels will have an adverse impact on other emissions such as NOx, PM, greenhouse gases (GHG) and even HAPs. Reducing CO to extremely low levels will require increased excess air levels which reduce efficiency, increasing the amount of fuel that must be fired and therefore increasing the total mass of other pollutants (i.e. HAPs, GHGs, NOx, SO_x, PM, etc.). For example, CO and NOx emissions are both dependent on the residence times and temperatures of the flue gas in the firebox, but in different ways. For most boilers and process heaters achieving low NOx emissions, there is insufficient time at temperature to oxidize CO to 1 ppm. As CO decreases, NOx increases and vice versa, so emissions control in any fired equipment is a trade-off between the two.

Response: See preamble Section V. for the responses on the rationale for subcategories-energy recovery units, the MACT Floor Analysis, and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 19

Comment: No Numeric Emission Standard for Dioxin/Furans (D/Fs) Should be Established at this Time.

EPA has established MACT floor standards for energy recovery units and burn-off ovens for D/Fs from an inadequate dataset and has no sound basis for supporting the assumption that a

control technology is available that has been demonstrated to reduce D/Fs from these units exists.

The EPA has only recently gathered any D/F emissions data from units such as coal-fired boilers and has not yet fully developed an understanding of the variability of D/F emissions over time or an understanding of the cause of D/F emissions in coal-fired boilers. EPA has only one 3-run test from any given boiler from which to establish the MACT floor. Some of the reported emissions of D/F used to set the new source standards are at extremely low levels very close to detection limits. EPA has not established that these levels are repeatable over time or across variations in fuel by the best-performing units. Any given unit (even the top performers) is at great peril of failing the D/F emission limit in the annual performance tests. Such a result may well be the result of normal statistical variability which has not been accounted for in EPA's MACT floor analysis.

Response: See preamble Section V. for the responses on the rationale for subcategories-burn off ovens and energy recovery units. Further, see preamble Section V. for the response on Limits for TMB and TEQ for dioxin/furans and the MACT Floor Analysis.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 22

Comment: CO Variability

EPA's failure to properly account for CO variability is best demonstrated by comparing the short-term data that EPA relied upon to set the emissions limit with available longer-term CEMS. EPA's approach to developing a CO limit for existing energy recovery units relied only on short-term Method 10 test results, even though several of the 40 units in this category were equipped with CO CEMS and had supplied a 30-day period of daily averages in response to EPA's 2008 ICR. Table 4 provides the short-term Method 10 CO data for the five units with the lowest test results, as well as the 3-run average for the next best unit, which is similar to the 5th lowest average. [Footnote: Tables B-21 and C-22 of the April 26, 2010 ERG floor memorandum summarize the Method 10 test results as extracted from the April 13 CISWI emission database.] [See submittal for Table 4 provided by commenter showing CO data for energy recovery unit top performers.]

In comparing the short-term Method 10 test results above for the Dotmar boiler with the longer-term CEMS data for that same boiler, it is readily apparent that the Method 10 results do not reflect the full range of actual CO emissions. [Footnote: The Domtar boiler had an 11/6/07 Method 10 CO test while burning bark, natural gas, TDF, and fuel cubes. The amount of fuel cubes burned during the test was minimal compared to the primary fuels, and would not affect CO emissions. EPA selected this boiler for a 30-day CO/THC test under the 2009 Boiler MACT ICR, apparently because it appeared to be "top performer" for CO in biomass subcategory based on the 2007 test. The Boiler MACT emission database has hourly CO averages for the period 8/12/09 through 9/9/09. The fuel types combusted during this period were bark, natural gas, and

TDF, but no fuel cubes.] A plot of daily block average CO emissions for the Dotmar boiler is shown in Figure 4.1 below and clearly shows a single 3-hour test cannot possibly characterize CO emissions variability from a solid fuel boiler. [See submittal for Figure 4.1 provided by commenter showing a plot of daily block average CO emissions for the Dotmar boiler.] Whereas the short-term Method 10 data for the boiler produced a measurement of just over 100 ppm, the month-long CEMS data shows frequent daily block average CO emissions of over 1000 ppm and several of over 3500 ppm. By comparison, EPA‘s proposed CO emission limit for energy recovery units is 150 ppm at 7% O2.

The Domtar data comparison dramatically underscores the basis for ACC belief that identification of “top performing” boilers is inappropriate using single three-hour tests. If EPA proposes to develop a 24-hour average CO emission limit for energy recovery units and to base compliance on CEMS data collected at all times, including during startup/shutdown/malfunction conditions, it cannot rely on one-time short-term tests conducted during normal operations. Indeed, ACC believes it to be wholly inappropriate to establish limits on that basis, and that EPA

should utilize a 30-day rolling average basis for CO, and utilize work practices for startup, shutdown, and malfunction periods. If that was done, EPA could use more available data to establish more appropriate MACT floors that are more representative of the best performers achieved during normal operation.

EPA states that CISWI emission standards must be based only on actual emissions data, and that only data from units in the lowest 12% can be considered when setting a limit for existing sources. In the case of CO, it is unreasonable to determine the “best performers” from short-term test data that in no way reflect actual performance of these units. For CO, EPA should ignore short-term tests and instead identify best performers based on CEMS data collected over a several month period representing the gamut of fuel mixes and operating loads experienced by energy recovery units.

Of the 40 units in CISWI energy recovery unit subcategory (under EPA‘s preferred definition of solid waste), the following units have CO CEMS:

CAWheelabratorShasta, Boilers #1, 2, and 3 MEBoralex, Boiler #1

MNFibrominn, EU-001

PAKimberlyClarkChester, Boiler #10 OKIPValliant, Bark Boiler

WAPortTownsendPaper, #10 Power Boiler

EPA should obtain one year‘s worth of hourly CEMS data for each of these units and then calculate 24-hour block averages for each, 30-day rolling averages, as well as a 12-month average. The best performers could be determined from the 12-month averages, or by arraying the highest 24-hour or 30-day rolling average for each unit from lowest to highest, and the five with the lowest “highest” value can be identified. Either way, a CO limit could be set equal to the highest average recorded at any of top performers. Using the highest average would adequately reflect variability over time. Actual CO emissions experienced during periods of startup/shutdown/malfunction conditions can then also be determined based on the monitoring records.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 51.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 23

Comment: SO2 and NOx Variability

Analogous to CO, short term SO2 and NOx tests do not give an accurate picture of variability in energy recovery unit emission rates. This is especially true for units that fire multiple fuels in varying ratios. Many of the energy recovery units have CEMS for these two gases, and EPA should collect and use the CEMS data to establish limits if CEMS are required for compliance. The same procedure suggested above for CO could be used to analyze SO2 and NOx CEMS data and determine appropriate emission limits, using the appropriate averaging time.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 52.

4.11 MACT Floor: Results for Existing Units (Proposed Approach): Waste-burning kiln subcategory

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 8

Comment: EPA has established some of the proposed performance standards using inadequate data, and as such these proposed baselines need to be re-evaluated.

For many of the categories and pollutants, there are not an adequate number of reporting facilities to establish a MACT floor based on the top 12 percent of the source category. In other instances, the number of facilities with test results is inadequate to set a baseline. Examples include the dioxin/furan TEQ baseline for the energy recovery category, where only three test results are available — less than the five required to satisfy the twelve percent criterion for the 40 sources in this category. Similar situations exist for the waste-burning kiln and energy recovery unit categories under the Options 1 and 2, where an inadequate number of units are available for a proper establishment of a baseline for NO and SO2 for waste-burning kilns, and for NON, SO2, total mass dioxins/furans and TEQ dioxin/furans for energy recovery units.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1971.1, excerpt 7.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 8

Comment: The database used in the proposed rule does not include emissions data representative of the full range of materials that are being considered as "solid waste" under the companion rulemaking and which will trigger the applicability of the CISWI limits. While the proposed solid waste rule would classify over 1.8 million tons of fuels commonly used in cement kilns as "solid waste", according to 2009 PCA data, the test data reflect only three such fuels that we have found: a large number of units that were firing whole tires; a few units firing tire-derived fuel (which may not be considered solid waste under EPA's current proposed companion rule); and a few firing waste oil. We have found only one unit thus far that was firing waste plastics (Holcim Devil's Slide K1). It appears that EPA solicited emissions data without any knowledge of what would or would not be considered "solid waste."

EPA has no emissions data on ingredients that would be classified as solid waste and does not know if they were in use at the time these units were tested. Further, EPA did not solicit emissions data for units using the alternative ingredients that are now being considered for classification as "solid waste." As a result, EPA has no basis to set floors and then regulate the emissions, when these alternative ingredients are being used. In any event, as PCA has explained at length in its recently-filed comments on the companion RCRA rulemaking, EPA does not have authority to regulate Portland cement kilns' use of materials as ingredients under CAA § 129. PCA's comments are included in the docket to the companion RCRA proposal as document number EPA-HQ-RCRA-2008-0329-1138, filed August 3, 2010, posted August 12, 2010.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1971.1, excerpt 7. To the extent the commenter has provided comments on the NHSM rulemaking, their comments will be responded to there.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 9

Comment: EPA does not have sufficient Information on Long Term Emissions Variability.

EPA must gather more data to have a meaningful assessment of emissions of the population of waste-burning kilns and the variability of emissions for the best performers, which is critical to the standard setting process. As stated earlier, a single stack test provides no information on the emissions variability that will be experienced by the kiln over time.

The emissions variability of cement kilns is known to be significant as a result of changing operating conditions, fuels and raw materials. Stack tests taken at intervals of only a few days or few weeks give, at best, a limited picture of emissions variability and may lead to estimates that are too small to adequately account for the emissions variability that best performing kilns will experience over time. Emissions can be consistent in closely-spaced tests or can be quite variable. Moreover, emissions levels vary substantially over longer periods of time as operating conditions, fuel and raw materials change. EPA does not have emissions tests separated in time by at least one year except for a very small number of cases in setting the floors. This is not an

adequate basis to develop emissions limitations that the best performing kilns can meet in practice.

Response: See preamble Section V. for the responses on the rationale for subcategories-cement kilns and the MACT Floor Analysis.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 10

Comment: Limitations of EPA Database for Waste-burning Kilns

The database that EPA has used to set the floors in the Proposed CISWI Rule for solid waste-burning kilns is too limited to support a meaningful assessment of kilns emissions and variability, both of which must be done to meet EPA's statutory obligation in setting standards. The database [Footnote: CISWI 2009 Alternative Approach Database (EPA-HQ-OAR-2003-1119-0046). Our review covered the best performing kilns classified as solid waste incinerators under the primary or alternate proposed definitions of solid waste.] has too few kilns with multiple emission tests and too limited coverage of the materials being considered for designation as "solid waste." Without this information, EPA does not have adequate information to set emissions limits.

1. Limited Representation of Emissions Variability

EPA has only one stack test for a large majority of the units identified as best performing kilns. There are 84 kiln and pollutant combinations that have been used in the floor determination (considering both the primary and alternate solid waste definitions), and EPA has a single stack test for 56 of them (67%). One stack test provides no information on the emissions variability that a kiln will experience over time due to variations in operating conditions, product

specifications, and the characteristics of fuels used, and raw materials. As a result, EPA cannot meet its regulatory obligation to account for the variability of emissions of the best performing kilns in determining the floor for any of these 56 cases.

EPA recognized this in its Pre-publication Portland Cement NESHAP. For PM emissions, EPA stated on p. 16 "... at proposal we noted that for two of the best performing facilities we had only one emissions test. We did not think that this was enough data to fully characterize variability in emissions. Therefore, we requested these sources to submit additional PM emission test data." The emissions data used in that rulemaking had a minimum of 3 stack tests for each best performing kiln. The same standard of minimum adequacy applies in this rulemaking. One stack test is not enough to characterize variability in emissions for best performing kilns. EPA must obtain additional stack test data before it can characterize variability in emissions for the kilns used to set the floors for these standards.

The use of the results of a single stack test also introduces a bias into the analysis. With only one stack test, there is no way to know whether the kiln was tested on a day with unusually low emissions or on a day with average or high emissions. Given the method of selection, and the fact that 2 out of 3 best-performing kilns have only a single stack test, there is a significant

possibility that the identified best-performers were tested under conditions favoring low emissions. The actual range of normal emissions performance is wider, and without variability reflected in the analysis they are unable to meet the emissions limitations determined in the floor analysis on a continuing basis.

While the result of a single stack test is determined by the average of three test runs, by design, the test runs are not designed to capture emissions variability and they are not a substitute for having multiple stack tests on each best performing kiln carried out over an extended period of time. As specified by EPA, a single stack test is composed of three test runs done consecutively under essentially identical operating conditions and identical specifications for product, fuel and raw materials. Those three test runs capture only run to run variability and offer essentially no information on the emissions variability of the kiln itself, which we know can be very significant. EPA must account for operating variability in determining an emissions limit which a best performing kiln can meet over the full range of operating circumstances.

The fact that EPA has developed its proposed floors from the statistical analysis of test run data compounds the problem by hiding the limited amount of information it has on emissions variability.

2. Limited Representation of "Solid Waste" Usage

The database does not include emissions data representative of the full range of materials that are being considered as "solid waste" under the Proposed RCRA Rule and which will trigger the applicability of the CISWI limits. While the proposed solid waste rule would classify over 1.8 million tons of fuels commonly used in cement kilns as "solid waste," according to 2009 PCA data, the test data reflect only three such fuels that we have found: a number of units that were firing whole tires; a few units firing tire-derived fuel (which may not be considered solid

waste under EPA's Proposed RCRA Rule); and a few firing waste oil. We have found only one unit thus far that was firing waste plastics (Holcim Devil's Slide K1). It appears that EPA solicited emissions data without any knowledge of what would or would not be considered "solid waste."

EPA has no emissions data on ingredients that would be classified as solid waste and does not know if they were in use at the time these units were tested. Further, EPA did not solicit emissions data for units using the alternative ingredients that are now being considered for classification as "solid waste." As a result, EPA has no basis to set floors and then regulate the emissions, when these alternative ingredients are being used. In any event, as PCA has explained at length in its recently-filed comments on the Proposed RCRA Rule, EPA does not have authority to regulate portland cement kilns' use of materials as ingredients under CAA § 129 [see submittal for Attachment 3 provided by commenter.]

Response: See preamble Section V. for the responses on the rationale for subcategories-cement kilns and the MACT Floor Analysis. Also, see the response to comment EPA-HQ-OAR-2003-0119-1903.1, excerpt 8.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 20

Comment: Inconsistent Treatment of Data for Units with In-line Raw Mills

EPA is unclear in its proposed rule how it will handle the raw mill status of waste-burning kilns for compliance purposes. The Proposed CISWI Rule is not clear whether kilns will be required to demonstrate compliance with the mill both on off. The Proposed CISWI Rule states that compliance will be demonstrated for mercury with the raw mill on and off, but it does not specify compliance procedures for the other pollutants. 75 Fed. Reg. 31977. Based on past practice, we believe that EPA may determine that compliance must be demonstrated under the more-adverse operating condition, meaning a pre-selected raw mill state (on or off) that gives the higher emissions.

EPA has been inconsistent in how it has handled emissions data relative to raw mill status in assembling the database, and its proposed floors may not be consistent with how compliance will be determined. EPA's database contains a number of instances where kilns have two stack tests on successive days, representing raw mill on and raw mill off conditions. Examples of this include: Ash Grove Durkee (Cd, Pb, PM, and DF TMB) and Monarch Humboldt K5 for DF TMB. In other instances, EPA has selected emissions representing only one of the raw mill states for inclusion in the data base – in the cases we have seen, the raw mill state (either on or off) that gives higher emissions. If EPA will determine that compliance must be demonstrated under the more-adverse condition, the inclusion of tests with raw mill both on and off inappropriately includes emissions data taken under more favorable conditions and will lead to emissions floors that are biased low.

PCA has not had the time to complete the review of mill status in the corrected database presented below, which has not been corrected for this issue. If EPA expects to require that compliance be determined under the more adverse operating state, then it should re-examine all instances in which the database contains tests with raw mill on and raw mill off for the same kiln and exclude the mill state that gives the lower emissions value.

Response: Raw mill operating status has been accounted for in identifying the top performing waste-burning kilns for particulate matter emissions. See the emission limits calculation memorandum in the docket for more details.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 23

Comment: E. EPA Needs to Obtain More Information on Long Term Emissions Variability

EPA must gather more data to have a meaningful assessment of emissions of the population of waste-burning kilns and the variability of emissions for the best performers, which is critical to the standard setting process. As stated earlier, a single stack test provides no information on the emissions variability that will be experienced by the kiln over time.

The emissions variability of cement kilns is known to be significant as a result of changing operating conditions, fuels and raw materials. Stack tests taken at intervals of only a few days or

few weeks give, at best, a limited picture of emissions variability and may lead to estimates that are too small to adequately account for the emissions variability that best performing kilns will experience over time. [See submittal for Figure 1] that illustrates the variability for CO and NOx emissions for the kiln that provides the longest emissions time series in the EPA database. Emissions can be consistent in closely-spaced tests (as seen for pairs of data points of similar dates) or can be quite variable (as seen for the August 2007 testing.) Moreover, emissions levels vary substantially over longer periods of time as operating conditions, fuel and raw materials change. EPA does not have emissions tests separated in time by at least one year except for a very small number of cases in setting the floors. This is not an adequate basis to develop emissions limitations that the best performing kilns can meet in practice.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 10.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 25

Comment: EPA must restart the Proposed CISWI Rule for waste-burning cement kilns to allow for the data review and development work that will be required to address the many shortcomings of its current emissions database. In particular, we believe that the representation of emissions variability – even with the inclusion of the additional tests we have obtained – is inadequate to meet its statutory obligation to establish emissions limitations that the best performing kilns can meet under reasonably foreseeable, adverse circumstances.

Our analysis uses the corrected emissions data contained in Tables A-4.1 through A-4.10, along with the additional stack test data contained in Tables A-6 [see submittal for tables provided by commenter.] The best-performing kilns identified by EPA have been retained for each pollutant, except in cases where the correction of EPA errors resulted in demoting a kiln from the pool. From this dataset, we have stricken the HCl tests conducted with the disapproved test methods and replaced them with other kilns for which EPA has data. However, due to time limitations, the emissions data for the kilns added to the pool were not reviewed and corrected in the PCA review of data on best performers.

The assessment of floors is based on the analysis of stack test results using the version of the boiler MACT equation that is appropriate for stack tests, as given in [see submittal for Equation 3 provided by commenter.]

When stack tests results (with corrections and extensions to the data) and the Boiler MACT formula are used, much higher floor values are derived. These higher floors accurately reflect the most stringent emissions floors that can be developed using the currently available data, considering both the limited available data on emissions variability and the uncertainty present in the analysis. Alternative floors were developed based on two different approaches, in an effort to maximize the use of the limited information on emissions variability.

Option A is a conventional application of the boiler MACT equation [see submittal for equation provided by commenter] to the emissions stack test data available for each pollutant. For existing units, the average and standard deviation of (stack test) emissions is computed by pooling all of

the data on best performers and using the boiler MACT equation to compute the 99th percentile UPL. In taking this approach to derive the UPL99 for the average best performer, we are implicitly assuming that operating variability, rather than inherent emissions differences, are responsible for the differences seen among kilns in the pool. It is certainly true that operating variability is a much larger contributor to emission differences than any inherent difference in the emissions

performance among kilns. [Foonote: This has been verified through a components of variance analysis conducted on the stack test data for best performers. The analysis partitioned the variance in the data into components associated with variability within units (as seen in multiple stack tests for some kilns) versus variability seen across units. In all instances, the within-unit emissions variability is several to many times the variability apparent across units.]

Therefore, there is no basis for determining that any of the kilns in the pool are lower in emissions than the others. Given this, it is inappropriate to select any one kiln to set the floor for new sources. Instead, EPA should recognize that all of the kilns are equivalent, within the limitations of the available data, and set the new source floor equal to the floor for existing units.

In the event that EPA disagrees with this approach to new units, we have developed floors based on an alternative Option B. It should be clear that the new source floor cannot be determined by a kiln with only one stack test. In this instance, there is literally no information on the emissions variability of the kiln and no statistical limit can be placed on the 99th percentile of its emissions distribution. In this option, the floors are developed using only the kilns for which two or more stack tests are available. The new source floor is set by the UPL99 value for the lowest emitting kiln with 2 or more stack tests. The floor for existing units is set by the UPL99 value for the average of all kilns with 2 or more stack tests.

Alternative Floors Under the Primary Definition of Solid Waste

This section reports the alternative floor values developed by PCA for the best performing kilns under the definition of solid waste as proposed in the Proposed RCRA Rule. The floor values are given in Tables A-6 and A-7 for existing and new units, respectively [see submittal for tables provided by commenter.] PCA believes that it is not appropriate to set a standard for opacity; therefore, no floor value has been calculated.

PCA believes that EPA's dioxin/furans data are unreliable and incorrect. This is due to the inclusion of TEQ data in the dataset for the TMB basis and to the improper treatment of non-detections (according to methods of compliance determination, when the purpose is to set standards). Our review of the TMB data is incomplete for the floor units, and our review of the TEQ data has been limited to the treatment of non-detections for the floor units. All of EPA's dioxin/furans TMB and TEQ data (both best performing and other kilns) need to be reviewed, correctly attributed, and corrected for non-detections before any meaningful analysis can be conducted. Therefore, we did not compute alternative floors for dioxin/furans in the analysis.

For existing units (see submittal for Table A-7 provided by commenter), the alternative floor values are higher, in all cases, than the floors proposed by EPA. This is as a result of removing errors and bias in the EPA database and of correctly accounting for the limited amount of information that is available on emissions variability through the analysis of stack test (not test runs). For some pollutants, the calculated floor values are sufficiently high as to represent emissions limitations that are not meaningful. For example, the calculated floor for cadmium is

nearly 400 mg/dscm, and for SO2 it is in excess of 12,000 ppmvd. In these cases, the table excludes the calculated floor, with an asterisk and footnote indicating that computed floors are too high to be meaningful. These cases result from the inadequacies of the EPA database – a too-small sample of stack tests, too little information on emissions variability and, specifically, too few kilns with 2 or more stack tests. Even where floor values are reported, the analysis suffers from the same limitations. The purpose of the analysis is not to advocate that EPA establish floors at these levels. Rather, the purpose is to emphasize that adequate emissions data do not currently exist to support the establishment of correct and meaningful standards. Furthermore, the only way to collect meaningful data is to first define what solid waste is for the purposes of CISWI, then collect stack test information that will inform establishment of floors based on tests conducted while combusting solid waste.

For new units (see submittal for Table A-8 provided by commenter), the Option A floor values have been set equal to the existing unit floors given in the table for existing units. For Option B, the new unit floors have been determined by the lowest ranked kiln that has at least two stack tests, because no statistical limit can be placed on the emissions of lower ranked kilns that have only a single stack test. As can be seen in the table, only for lead is Option B floor lower than that computed under Option A. Only for CO, lead and NOx emissions is the new unit floor within the range of measured emission values for waste-burning cement kilns. In all other cases, the calculated floor is so high (typically far above the range of measured emission values) that it does not represent a meaningful result, much less a meaningful emissions limitation.

The extreme floor values encountered in Option B reflect the fact that having only two stack tests for the single best performing kiln is an inadequate basis for determining the floor because the variability in emissions has not been characterized. When N=2, the t-statistic for the UPL99 emissions level takes on a value of 32 for N-1=1 degree of freedom and results in a multiple of 32 times the standard deviation being added to the emission level. With this little information, the uncertainty in the analysis is enormous. Even when 4 tests are available for the floor-setting kiln, the emissions variability is still large enough that, when coupled with the certainty associated with 3 degrees of freedom, the resulting floor values are still very large.

Again, the purpose of this analysis is not to argue that EPA should adopt the floors presented in the tables, but rather to indicate in stark terms the inadequacy of the existing database to support floor development. If EPA disagrees and elects to proceed with the establishment of emission floors, it has no basis to set floors for existing and new units below the Option A levels given in Tables A-7 and A-8 [see submittal for tables provided by commenter.] It has no basis to set floors at any level for the pollutants where the calculated floor values have been flagged with asterisks as not meaningful.

If EPA should reject the new source floors computed under Option B, then it cannot bypass the Option A floors for existing units in order to select lower values from Option B. Option A is the conventional application of a UPL formula to the data (in this instance the boiler MACT equation), as EPA has done in this and other rulemakings, and it provides the technically most-credible estimates of the floors for existing units. That Option A sets the new unit floors equal to those for existing units merely recognizes that there is not adequate data to determine

floors for new units, when the lowest ranked kiln often has only 1 stack test and few kilns have more that 2 stack tests.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Section II.C. for a discussion on how the solid waste definition is addressed in the final rule. Also, see "Data Amendments and Corrections Following Proposal" memorandum in the docket for a discussion on how data were incorporated to address comments.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 45

Comment: * Emission data on a plant-by-plant basis across the nine pollutants covered by CISWI is often dated, partial and in some cases, the quality of data is suspect. PCA's search for cadmium emissions data for cement kilns was more than 10 years old and covered only 13 plants.

Response: Please see the database corrections memorandum for details on comments and resulting revisions to the database.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 84

Comment: The units of the standard are not consistent with the PC NESHAP (40 CFR part 63 Subpart LLL) which are in units of lb/ton clinker measured on a continuous basis. EPA should be consistent in its units of the compliance standard for PM.

Response: See preamble Section V. for the response on consistency between other applicable NESHAP limits.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 89

Comment: NOx and SO2

The units of the standard are again not consistent with the PC NESHAP (40 CFR part 63 Subpart LLL) which are in units of lb/ton clinker measured on a continuous basis for new kilns. EPA has

proposed a standard of 1100 ppm and 410 ppm for NOx and SO2 respectively for existing plants. A one-hour Method 7E, 6C test combined would be used to demonstrate compliance.

EPA has proposed a standard of 140 ppm and 3.6 ppm for NOx and SO2 respectively for new plants. The PC NSPS revision requires that new kilns install continuous monitors for NOx and SO2 with standards in units of lb/ton clinker. The lb/ton clinker values correspond roughly to in-stack concentration levels of about 80 ppm and 50 ppm for NOx and SO2 on a 30-day rolling average.

It is unclear how there can be two completely different standards for NOx and SO2 when the same data base (or one similar) must have been used to set the standard. EPA should be consistent in its units of the compliance standard for NOx and SO2.

Response: See preamble Section V. for the response on consistency between other applicable NESHAP limits.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 3

Comment: EPA D/F data are unreliable and incorrect. Some of the toxicity equivalence (TEQ) data is erroneously considered total mass basis (TMB) data.

Response: See preamble Section V. for the response on Limits for TMB and TEQ for dioxin/furans.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 5

Comment: With regards to the development of a MACT floor, EPA recognized in the recently signed National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Portland Cement Manufacturing that the adequate approach to determine variability (when

setting a floor) is to include data from at least three stack tests in order to properly account for emissions variability. This is contrary to the Agency's approach in the CISWI rule in which most of the units were determined to be a "best performer" on the basis of only one stack test.

* EPA failed to consider variations on emissions due to a change in fuels, raw materials,process conditions and product specifications due to the same reason listed above.

* EPA did not consider emissions data from units utilizing alternative ingredients and failed to consider alternative ingredients that may be classified as solid waste under the proposed SWI rule. Therefore, it is inappropriate for EPA to set floors and regulate emissions from units when

these alternative ingredients are used. More fundamentally, EPA lacks the authority to regulate the use of secondary materials as ingredients under CAA Section 129 [see submittal for Attachment A — the comments Holcim (US) submitted on the SWI rule — for a more extensive discussion of this position provided by commenter.]

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 10 and EPA-HQ-OAR-2003-0119-1903.1, excerpt 9.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 30

Comment: EPA Relied on Insufficient Data in Establishing Waste-Burning Kiln MACT Floors

EPA in fact recognizes that the data base it utilized in establishing its proposed MACT floor limits was inadequate. For instance, EPA stated in the CISWI proposed preamble:

EPA recognizes that it has imperfect information on the exact nature of the nonhazardous secondary materials which energy recovery units and kilns combust, including, for example, information as to the provider(s) of the non-hazardous

secondary materials, how much processing the non-hazardous secondary materials may have undergone, if any, and other issues potentially relevant in a determination as to whether non-hazardous secondary materials are solid waste, as the Administrator has proposed to define that term under RCRA. We nevertheless used the information currently available to EPA to determine which

materials are solid waste, the burning of which would subject a unit to CAA Section 129, and which materials are not solid waste [75 Fed. Reg. 31940].

EPA did receive some additional emissions data earlier this year, but due to the court-ordered deadline, we did not have time to review and evaluate that data. We intend to review the data submitted earlier this year from a quality assurance and completeness perspective and incorporate that data into the final standards, as appropriate. To the extent EPA receives additional emissions data during the comment period, EPA will assess that data as it develops the final emission standards [75 Fed. Reg. 31943, footnote 2] EPA must consider available emissions test data to determine the MACT floor. We based the floor calculations on available emissions data. We did receive some additional data earlier this year, but as noted above, due to the court-ordered deadline, we did not have sufficient time to review and evaluate that data. We intend to review and evaluate the data submitted earlier this year and any data received during the comment period, and we intend to include those data in our final analysis, as appropriate [75 Fed. Reg. 31951-2].

EPA attempts to justify its inadequate data base on a “court-ordered deadline.” There is no court order that compels EPA to issue final CISWI standards by any particular date. Moreover, even if there were a court-ordered deadline applicable to final CISWI rulemaking, this would not somehow act to cure fundamental defects in a proposed rule. . See, e.g., American Mining

Congress v. EPA, 907 F.2d 1179, 1191 (D.C. Cir. 1990) ("a court order cannot excuse [EPA's] obligation to engage in reasoned decision making under the APA").

In the PCA comments submitted coincidental with Lafarge's comments, a detailed discussion is provided describing errors EPA made in its data evaluation for setting MACT floors. Rather than repeating these comments here, Lafarge includes PCA's comments on this topic by reference.

In the CKRC comments submitted coincidental with Lafarge's comments, a detailed discussion is provided as to why CISWI limits are unnecessary for cement kilns, recommending that they just be removed from the rulemaking. Rather than repeating these comments here, Lafarge includes CKRC's comments on this topic by reference.

Response: See preamble Section V. for the responses on promulgation schedule, new data/corrections to existing data, and rationale for subcategories-waste burning kilns.

4.12 MACT Floor: Results for Existing Units (Proposed Approach): Burn-off oven subcategory

Commenter Name: Carlton Mann
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-0065
Comment Excerpt Number: 1

Comment: Both the economic impact and the new emission levels were based on the assumption that there were 36 burn-off ovens in the United States (Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units 2010).

In reality, there are probably 4,000 to 5,000 ovens in powder coating, plastics processing and electric motor repair shops around the country. I made this estimate based on the number of ovens sold by two companies that I have worked for. The largest manufacturer, Pollution Control Products Company of Dallas, TX has sold more than 10,000 units in the last 25 years. I'm sure that at least 1/3 of them are still operating. Steelman Industries, Inc. of Kilgore, TX has more than 500 units operating in the US. In addition, there are other manufacturers such as ACE Equipment, Blu-surf, Bayco, and Guspro that have sold thousands of units combined.

When you consider the large number of businesses that will be affected, the statement "burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated " takes on a whole new meaning.

Also, I am certain that the emission level calculations would be much different if a more representative sample size was used.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Mike Canniff

Commenter Affiliation: Guspro Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1092
Comment Excerpt Number: 2

Comment: MACT floor limits

The proposed regulation states that the MACT floor limits were established based on the emissions of the best performing units in each category. What make of ovens were these tests run in? What size oven were these tests run in? What material was being processed in the test runs?

After reviewing the test data collected on our ovens, and consulting with other oven vendors, the general consensus is that the data collected does not reflect the performance of burnoff ovens currently in operation.

The emissions from a burnoff oven increase with the capacity of the oven. If the limits were established based on testing performed in small ovens, they will not reflect the performance of larger ovens. Were ovens of all sizes accounted for in the testing criteria? When the best performing 12 % of ovens was established, was that the 12 smallest ovens tested?

The emissions from an oven change with the application. Painted parts, electric motors, automotive parts, plastic dies/molds, plating racks, and several other applications all produce different emissions. How many different materials were processed to establish these limits? Without testing the emissions from all applications, how can a basis be established for limits?

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Richard Fraser
Commenter Affiliation: SteelMan Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1317
Comment Excerpt Number: 1

Comment: Steelman Industries is the second largest manufacturer of "burn-off' ovens in the U.S. We are very concerned that the emissions requirements in the proposed rules are not achievable and even if they were, the initial and ongoing compliance costs are prohibitive for most companies, particularly the smaller ones. Not only will the proposed rules put us out of business but the impact on our customers will be severe and wide ranging.

If you choose to keep them on the list, however, we would like to see a) the emissions levels set so that "burn-off" ovens could continue to be used economically and b) the compliance requirements set so that they are affordable. The proposed standards appear to be so stringent that no "burn-off" ovens could meet them or afford to use their ovens. If you choose not to remove us from the proposed rules or change the standards, we would like for you to suggest other viable cleaning methods, particularly for the electric motor repair and plastics industries.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: John Carlisle
Commenter Affiliation: Redi Strip Company
Document Control Number: EPA-HQ-OAR-2003-0119-1318
Comment Excerpt Number: 1

Comment: Our experience leads us to believe that the United States Environmental Protection Agency (USEPA) has not properly accounted for the number of burn-off ovens currently in use and that the number of these ovens is much larger than the 36 total existing units that were identified for the development of the MACT Floor. We also believe that the emissions data collected to support the rulemaking is not reflective of the actual emissions from the vast majority of burn-off ovens in use.

Our facility operates 5 units, and our units were not accounted for in the assessment of the total inventory of ovens.

Discussions with the vendors who supply and maintain our ovens as well as our customers and others in the metal refinishing business leads us to believe that the total nationwide inventory of burn-off ovens in use today numbers in the thousands. The MACT floor analysis described in the proposed rule making indicates that USEPA has estimated that there are only 36 bum-off ovens in use. We believe that the USEPA should conduct amore comprehensive analysis of these units and their use.

In addition to the discrepancy in the total number of units in use, we also have concerns that the projected emissions resulting from the operation of a typical burn-off oven were not properly characterized. Our units have a lifetime permit issued by the Illinois Environmental Protection Agency (IEPA). Our permit states "This permit is issued based on the negligible emission of particulate matter, volatile organic material, nitrogen oxides, and carbon monoxide from the five burn-off ovens". The maximum estimated emissions for each of the above mention criteria pollutants are 0.1 lb/hour and 0.44 tons/yr (tpy) each. Because the emissions are so small, there has never been a requirement to conduct emissions tests or even to estimate speciated HAPs.

Indeed, USEPA's own analysis as related in the pre-amble to this proposed rule indicates a recognition that traditional testing and control is likely not practical due to the very small size of these units:

Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch-operated, combustion units that are used to clean residual materials from various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices.

It was further noted in the supporting data for the proposed rule that of the 36 units identified only five had any emissions test data and only two sources had measured emission rates for the hazardous air pollutants of cadmium, hydrogen chloride, lead, mercury, and dioxins furans.

Given the, already acknowledged, problems associated with attempting to apply standard test methods to this type of source it would seem critical to understand how these two ovens came to

be tested for these HAP pollutants -as if governed by the existing incinerator rules. The obvious conclusion would be that the two ovens that had tested for these pollutants were not, being utilized as burn-off ovens, but very likely were operating as incinerators. It would be technically inappropriate to use data from those two units to establish proposed limits for these HAPs for thousands of dissimilar facilities.

If we understand the process for developing these rules correctly, emissions standards for existing units maybe less stringent than standards for new units, but "shall not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in the category." It seems unreasonable and somewhat arbitrary for USEPA to develop a sweeping new set of emissions and performance standards for, potentially, thousands of pieces of equipment based on data from two “ovens" that likely are not representative of burn-off ovens as typically and widely employed.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 4

Comment: Tables 4, 5, and 6 on Pages 31953 and 31954 of the Proposed Rule Summarize the MACT Floor Results for So-Called Burn-Off Ovens.

We would be interested in the Model Number and Serial Number of the units tested if available and not confidential. We would also be interested in reviewing the specific test data for these units if available.

We were able to obtain complete copies of the stack test reports for the sources located at Facility I.D. numbers OHWhirlpoolClyde, FLAscend, and INWabashNational855. A quick review of these three tests reveals errors in transferring the data to Exhibit H [see DCN: EPA-HQ-2003-0119-1767.9], and also reveals some stack test data that was simply not reported correctly. For example, Exhibit H shows the PM emissions from OHWhirlpoolClyde to be 49.784 mg/dscm. The actual stack test emission result summary for this unit [see DCN: EPA-HQ-2003-0119-1768.3] shows a value of less than 17.81 mg/dscm. For the stack tests conducted at INWabashNational855, run #2 for CO shows a negative value reported for the CO emissions, which was then used to reduce the overall average CO emission level for this unit. The same is true for run #1 and run #3 for SO_x. Both of these runs yielded negative values for SO_x, which were used to help lower the overall average SO_x emissions [see DCN: EPA-HQ-2003-0119-1768.3]. These representations of the data are not accurate as it is not possible to produce a negative amount of CO or SO_x. Exhibit H [see DCN:

EPA-HQ-2003-0119-1767.9] indicates that the unit at FLAscend does not have a control device. This statement is not correct. This unit is one of our furnaces, and it is equipped with an afterburner. We now wonder what other inaccuracies these and the other stack tests may include.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 5

Comment: If indeed the EPA used the test data of TX-Madix and SC-Camden, as we were told, the EPA's CISWI database shows these burn-off ovens removing no sulfur holding components, they remove nylon and polyester, which easily explains their low SO2 emissions. In addition these units show no Dioxin and Furan emissions data.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 7

Comment: None of the Tests Conducted Analyzed for VOCs, and No Test Measured the Amount of Organic Material Removed from the Parts.

Analysis for NOx, CO, and other emissions without analysis of VOCs emitted does not provide useful information. We think that VOCs should be evaluated so that the total furnace operation can be evaluated. In addition, none of the tests show how much organic material may have been on the parts inside the units during the test. If only a very small amount of material were placed inside the furnace, then it would tend to produce "better" test results than a fully loaded unit. In short, to properly calculate MACT levels, EPA must have data on furnace throughput, operation, and total emissions.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 11

Comment: Test Results for Only Ten (10) Units Is a Small Sample for Establishing Guidelines for More Than 15,000 Units.

The test results shown in Exhibit H [see DCN:

EPA-HQ-2003-0119-1767.9] represent test data for only 10 units. Ten units are about 1/16 of a percent of the units in operation. We also believe that the stack test results on such a small sample do not reflect the true emissions for the industry, or the potential emissions for the units that have no control device. This testing is inconsistent with the requirements of

Section 129 of the Clean Air Act that requires a review of the best performing 12 percent of units in the category (excluding units which first meet lowest achievable emission rates 18 months before the date such standards are proposed or 30 months before the date such standards are promulgated, whichever is later).

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)
Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 2

Comment: The MACT floor appears to have been improperly analyzed by pollutant, rather than by unit. The limits appear to have been set by different units operating under different conditions, and thus pyrolizing what are potentially vastly different materials. As a result, EPA has artificially selected the best data for each pollutant as if there were a hypothetical unit that could meet all of the standards. In reality, no unit can meet them all, and thus every unit would be out of compliance. This makes no sense, given EPA's mandate in Section 129 of the Clean Air Act to establish standards for "each category of solid waste incineration units." 42 U.S.C. § 7429(a)(1)(A) (emphasis added). To be sure, EPA has discretion to distinguish among classes, types, and sizes of units, 42 U.S.C. § 7429(a)(2), but the statute is clear that the MACT floor must be based on the average emissions limitation achieved by the best performing 12 percent of actual units within the category. Accordingly, EPA's attempt to create a new, hypothetical unit conflicts with the plain language of the statute because no real unit can achieve those standards. There must be some units that can actually meet the emissions limits.

Response: See preamble Section V. for the responses on the rationale for subcategories-burn off ovens and the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 3

Comment: Sampling issues skew the establishment of the MACT floor for burn-off ovens. Burn-off ovens, by their very nature, are batch operations. These units run relatively short burn cycles. EPA's requirement to run three consecutive test for the duration requirement pushes the time frame beyond the actual time required to remove the material from the parts we are trying to recover. Thus when averaging emission rates the results are always lower than normal, since the

bulk of the burn takes place during the first two hours. Some of these test runs are two hours in length; therefore consecutive runs are primarily just combustion gas residues. To use these averages from the floor facility group, EPA will establish limits that no one will meet during the heart of their burn cycles.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 7

Comment: The AQD found that the proposed CISWI emission limits for cadmium, lead, mercury, HCI, total dioxin/furans (D/F), and total DIF (TEQ) for burn-off ovens are based on very minimal emission testing data. The information in the docket included only two tests for these contaminants for burn-off ovens (See April 26, 2010 ERG memo entitled "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category", Table A-3). The docket also contains very little information defining what types of materials were processed in the burn-off ovens during the tests.

With regard to DIF, information on chlorine content of the materials processed would be important to document due to the known increased potential for DIF formation when significant amounts of chlorinated materials are present in the materials processed in a combustion process. Considering the small number of tested units, it appears unlikely that these two test results form a valid basis for setting an emission standard for the entire burn-off oven industry sector. These two tested ovens may or may not be representative of the types of materials typically processed in this industry.

A more appropriate approach for setting emission limits for this source category would involve identifying a set of ovens that are known to be representative of the source category in terms of the materials processed and the emission control measures applied, then arranging for and providing funding for several emission tests.

It also appears from the limited process information in the docket that the test data for these two ovens was generated because the ovens were subject to the existing CISWI regulation as incinerators. There was information in a stack test report in the docket that at least one of these two tested ovens was being used to some extent to dispose of waste materials such as paint spray booth filters (October 2005 emission tests for Ace Burn-off Oven, CNH America, LLC, Wichita, Kansas). Use of burn-off ovens for disposal of materials other than paint, plastics, and oil or grease on metal parts is not typical of the burn-off ovens operated in Michigan, and probably not typical elsewhere in the United States as well.

It is difficult to accept the EPA assertion that these two ovens represent the "best performing 12 percent" of sources in the source category since for both ovens "Existing Control Device" in several tables is identified as either "Unknown" (Ace Burn-off Oven, KSCNHWichita) or "No Equipment" (INC-1, NDCNHAmerica). As an example see docket for March 26, 2010 ERG

memo "DRAFT — Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units," Appendix D2.

The statement in the preamble that there are only 176 operating burn-off ovens nationwide seems a vast underestimate. It appears that EPA should survey the state air agencies to identify the operating burn-off oven sources. Revisiting and/or expanding the inventory of sources would be expected to have significant effects on the emission inventory and cost estimates in the rulemaking. In Michigan there are currently more than 130 burn-off ovens permitted at over 110 facilities. Michigan is not unique in the number of burn-off ovens supporting coating facilities. A large majority of these units have stacks that are too small for sampling using the test methods specified in the proposed CISWI rule. Materials reclaimed from these ovens range from paint racks reused in coating operations to wires and electrical equipment which can be recycled after the insulation is removed.

Recent permitting action in Michigan suggests that EPA needs to do more work indentifying the "best performing 12 percent" and the "best performing" unit for the existing source and new source categories, respectively. Michigan permitted a large fluidized bed burn-off oven this year requiring DIF, acid gas, and PM control measures that could be considered in the rulemaking once it is installed. These control measures include a medium temperature afterburner

(1560° F) and a ceramic element filter with lime injection. Michigan is aware of a similar but larger unit installed in 2005 in Texas with the same control technologies (fluidized bed rubber denuding system, Red River Army Depot, Texarkana, Texas). It is not clear at present if large units like these perform at a similar level to those covered by Michigan's general permit for natural gas-fired burn-off ovens up to 1 MMBtu heat input.

On FR p. 31951 the EPA acknowledges that burn-off ovens are small units. 'Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices." Potential emissions from burn-off ovens can be calculated using a mass balance method.

In summary, if valid MACT floor emission limits are to be defined, Michigan believes the EPA needs to repeat and expand the source inventory to insure that the limits based on emission testing are representative of the nationwide source category, not just two burn-off units that happened to be tested under the existing CISWI regulation. It will be important to ensure that the sources included in the inventory represent the more effective control technologies that Michigan is aware of such as medium to high temperature afterburners, lime injection, and ceramic element filters.

Response: EPA thanks the commenter for their input. See preamble Section V. for the response on rationale for subcategories- burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.

Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 4

Comment: EPA Should Decline To Regulate Burnoff Ovens Under Its Existing

Authorities.

The regulatory burden associated with burnoff oven standards is unacceptable. The MACT floor process at CAA § 112(d)(3)(A) allows the Agency to set standards based on existing sources "(for which the agency has information)" (parentheses original). However, in the case of burnoff ovens operating in the plastics industry, the Agency is hard pressed to claim that the two sets of incomplete data, not characterizing the entire statutory CISWI pollutant list, forms a justified MACT floor determination. Congress requested that EPA base MACT floors on at least 30 sources, or not less than five if emissions data is not reasonably available from 30 sources. However, emissions data could become available from thousands of plastics industry burnoff ovens, if EPA had only asked in a timely manner. The fact that EPA only collected an extremely limited subset of potentially available burnoff oven data, and skipped some pollutants from the data requests it did make, shows that EPA had not considered burnoff ovens a viable source category throughout the entire rulemaking process.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 16

Comment: Inadequate data exists for these units on which to base CISWI limits.

For the pollutants Cd, HCl, Hg, and dioxins/furans, the only data in the docket are for two units which fall in the incinerator subcategory. These are the units identified as "KSCNHWichita" and "NDCNHAmerica". In fact, these are already subject to NSPS Subpart CCCC, and this is why this particular stack test data exists.

Response: EPA thanks the commenter for their input. See preamble Section V. for the response on rationale for subcategories- burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: David Darling
Commenter Affiliation: American Coatings Association (ACA)
Document Control Number: EPA-HQ-OAR-2003-0119-2119.1
Comment Excerpt Number: 2

Comment: ACA is also concerned that the supporting data for the proposed rules is not representative since only 5 of the 36 units identified had any emissions test data and only two had measured emission rates for the hazardous air pollutants of concern (cadmium, hydrogen chloride, lead, mercury and dioxins fitrans).

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Richard G. Stoll, Foley & Lardner, LLP
Commenter Affiliation: Foley & Lardner, LLP
Document Control Number: EPA-HQ-OAR-2003-0119-2353.1
Comment Excerpt Number: 3

Comment: EPA neither collected nor used any data from drum reclamation units in calculating proposed emission standards – all of the data collected and used was from burn-off ovens (part and rack reclamation units)

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 5

Comment: Based on the documents available for review in the docket, it appears that two Information Collection Requests (ICRs) were used to estimate the number of affected sources and obtain emissions data and other technical information to be used in developing the subcategory's proposed standards. Neither RIPA nor any of its members were contacted by EPA or its contractors concerning these ICRs. So far as we can tell from reviewing the available record, EPA collected absolutely no data or information relating to drum reclamation furnaces in developing its proposed rule.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 6

Comment: In establishing the "MACT floor" for both existing and new burn-off ovens, emissions data from only 10 facilities were evaluated. All the facilities assessed were parts reclamation units which are designed to remove residual paint from hooks or racks. Parts reclamation units are fundamentally different from drum reclamation furnaces, which further supports our position that drum reclamation furnaces should be assessed separately. Their differences can be further illuminated by examining specific pollutants' emissions levels.

Particulate Matter – A batch-fed, closed chamber parts/rack reclamation unit typically has low or negligible airflow velocities and little mechanical movement. As shown in the

photos and process drawings provided in [see submittal for attachments 2-5 provided by commenter,] these units are relatively small in size, with a primary chamber of approximately 50 to 260 cubic feet.. In contrast, drum reclamation furnaces as shown in the attachments, operate with chain conveyor systems that move 55-gallon steel drums continuously through a tunnel-design furnace, with an induced draft fan that continuously pulls ambient air from both the tunnel entrance and exit.

The typical drum reclamation furnace has a primary combustion chamber of 700 to 1200 cubic feet. Typical actual flow rates in the primary chamber generate air velocities of approximately 35 fps; a dramatically different environment than the more static, controlled primary chamber environment of a parts/rack reclamation unit.

As described in the Burn-off Oven Clarification Request Survey contained in the docket, typical batch cycles for parts/rack reclamation units vary from 2 to 24 hours. This combustion environment is in no way comparable to a drum reclamation furnace. Both the high air velocity and the mechanical conveyor movement result in higher generation of particulate matter, on a concentration basis, for a drum reclamation furnace.

RIPA was able to obtain results of limited source testing conducted at a typical drum reclamation furnace; the results for particulate matter are shown below in comparison to the proposed CISWI limits for burn-off ovens. This comparison demonstrates that the particulate matter emission rate for a drum reclamation furnace is well above the range of values identified in EPA's MACT Floor calculations for burn-off ovens. This corroborates RIPA's assertion that the data collection activities and resulting MACT floor calculations for the burn-off oven subcategory cannot be used to represent actual performance levels of drum reclamation furnaces [see table showing emissions of particulate matter from source test results of drum reclamation furnaces compared to the proposed CISWI existing and new unit emission limits for the burn off oven subcategory provided by the commenter].

Nitrogen Oxides and Carbon Monoxide – Emissions of NOx and CO are related to the nature of the burners used for combustion, the amount of excess air used, and the flame temperature. A comparison is provided of the typical burner capacity and operating temperatures for parts/rack reclamation units and drum reclamation units [see submittal for table provided by commenter.]

As shown in this comparison, parts/rack reclamation units operate at a much lower temperature in the primary chamber, and because they are operated in batch mode would be expected to generate less NOx than a drum reclamation furnace operating at a much higher temperature. In addition, NOx concentrations would be expected to be higher in a drum reclamation furnace due to the much greater excess air in the primary chamber, the result of the large amount of induced draft of ambient air from the open entrance and exit.

The overall burner capacity of both the primary and secondary combustion chamber in a drum reclamation furnace is an order of magnitude higher than the typical parts/rack reclamation unit. Burner operation may be modulated using manual or automatic control; however, in both scenarios the drum reclamation furnace operates on a continuous basis, with fluctuations in temperature and burner function as needed to respond to changes in the nature of the empty drums processed. Because parts/rack reclamation units operate in batch mode, the combustion characteristics of each batch can be more precisely controlled with respect to the burner air/fuel ratio. These factors would result in lower emissions of both NOx and CO on a concentration basis from a parts/rack reclamation unit.

Metal Compounds – Emissions of metal compounds including lead, cadmium and mercury are typically related to the presence of metals in the materials combusted, the combustion temperature, and the presence of chlorine. As described in the table [see submittal for table provided by commenter,] the nature of materials combusted is fundamentally different between parts/rack reclamation units and drum reclamation units.

While it cannot be known whether the average metals content of materials combusted in a drum reclamation unit is higher or lower than the representative parts/rack reclamation unit, the two types of units are processing different materials with presumably different metal content characteristics.

With regard to the effect of operating temperatures on metals emissions, our table [see submittal for table provided by commenter] shows a comparison of how metal compounds would be expected to volatilize in the primary chamber. A review of this data show that if lead is present it would not volatilize in a typical parts/rack reclamation unit, but would instead partition to ash. For this reason, lead emissions from a drum reclamation unit would be expected to be higher on a concentration basis.

Given the substantial difference in the potential to emit and a massive difference in costs to control, we believe that the test data obtained from parts reclamation units cannot and must not be used as a model air emissions profile for the regulation of drum reclamation furnaces.

RIPA was able to obtain results of limited source testing conducted at a typical drum reclamation furnace; the results for lead and cadmium are shown [see submittal for table provided by commenter] in comparison to the proposed CISWI limits for burn-off ovens. This comparison demonstrates that the lead and cadmium emission rates for a drum reclamation furnace are well above the range of values identified in EPA's MACT floor calculations for burn-off ovens. This corroborates RIPA's assertion that the data collection activities and resulting MACT Floor calculations for the burn-off oven category can not be used to represent actual performance levels of drum reclamation furnaces.

MACT Floor Calculations – Basis for Identifying Best Performing 12% of Sources

As stated in the preamble, test data collected by EPA were used to identify the best performing 12% of facilities tested within each CISWI subcategory. These data were then used to calculate emissions limits for each of the target pollutants.

Only 10 test reports were used to compile data for MACT floor calculations in the burn-off subcategory and only a few of the test reports contained data on all the target

pollutants. The number of test data reports (i.e., the number of pollutant measurements) used in calculating the MACT floor for burn-off ovens for each target pollutant was: Particulate Matter

(10), Hydrogen Chloride (2), Carbon Monoxide (10), Nitrogen Oxides (10), Sulfur Dioxide (9), Dioxins/Furans (2), Lead (2), Cadmium (2), and Mercury (2).

This means that for 5 of the 9 target pollutants, only 2 data reports were used to identify the top performing 12% of over 15,000 sources. This analysis clearly does not meet the requirements of Clean Air Act Section 129, as it is statistically impossible to assess the performance of such a large group with so few data reports, drawn from such a select number of units of only one type.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 6

Comment: MACT Floor determination for Parts Cleaners using thermal and mechanical cleaning.

EPA's proposal effectively establishes a MACT floor for parts cleaners that use a combination of thermal and mechanical cleaning to remove residual materials from metal parts. The emission limitations are supposedly based on a single source test at a single facility, but in that one test (three one-hour runs) most of the pollutants given limits were not even tested. It is not reasonable to establish such emission limits where no data exists for some pollutants and data available for others were based

on a single source test evaluating emissions under one specific run condition. In addition, in this one source test, the Parts Cleaner was a fluidized bed that by its very nature necessarily operates under excess air conditions. In such cases, the oxygen level in the exhaust stream is always going to approach ambient level. Thus the correction factor typically required for oxygen starved systems, in order to discourage inappropriate dilution of pollutant concentrations, produces irrational results for fluidized bed systems where no dilution is desired.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 3

Comment: The MACT Floor, Economic And Benefit Analyses Were Not Based On Accurate Data About Burnoff Ovens

* MACT Floor Analysis - underestimated the number of sources. EPA assumed that only 36 burnoff ovens are currently existing. As stated previously, CNH alone operates 11. Comments submitted by others, including burnoff oven manufacturers, estimate that the number of currently existing burnoff ovens to be in the range of 4,000 - 5,000.

* MACT Floor Analysis - did not use data from 12% of the best performing sources. The MACT floor was established based on data for 5 units (12% of 36). Since the assumption of the number of sources is not correct, then the MACT floor was not properly established based on the best performing 12% of sources.

* MACT Floor Analysis - used test data for incinerators. EPA's data base for the MACT floor analysis for burnoff ovens has data from two facilities for five pollutants (cadmium, hydrogen chloride, lead, mercury, and total dioxin/furan), data from 9 units for one pollutant (sulfur dioxide), and data from 10 units for 3 pollutants (carbon monoxide, nitrogen oxide, and particulate matter).

At the time EPA was developing the proposed rule, two of the CNH units (KSCNHWichita and NDCNHAmerica) were duel burnoff ovens (for cleaning hooks and grates) and incinerators (for burning paint filters). The units are able to run different programs, some designed for filters and some for hooks and grates. The cycles vary by length depending on the size/amount of material to be cleaned or filters to be burned. The ovens were permitted under the 2000 rule and had performed required stack testing. The data used in the MACT floor analysis was for batches when the units were burning filters. Therefore, the emissions data is not representative of burnoff oven emissions and must not be included in the MACT floor analysis.

Without the data for those two units, EPA's MACT floor database has only eight units in the data base with data for only sulfur dioxide, carbon monoxide, nitrogen oxides and particulate matter. Consequently, there is no longer any data for burnoff ovens for which to establish emission limits for cadmium, hydrogen chloride, lead, mercury, and total dioxin/furan. A MACT floor cannot be established for these pollutants without any data.

While we have requested that the data for two of our facilities be excluded because it is not data from a burnoff oven operation, if it continues to be utilized in the MACT floor analysis, the HCI data for KSCNHWIchita needs to be corrected. We can not locate a stack test report that reports the value contained in the MACT floor analysis.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Late James R. Thornton
Commenter Affiliation: Northrop Grumman
Document Control Number: EPA-HQ-OAR-2003-0119-2245.1
Comment Excerpt Number: 4

Comment: The proposed MACT floor emission limits for the burn-off oven subcategory do not meet the requirement of section 129(a)(2) of the Clean Air Act.

Explanation: Section 129(a)(2) requires emissions standards for existing units to be based on the average emissions from "the best performing 12 percent of units in the category". According to Table 4 in the preamble to the proposed rule, the MACT Floor for the burn-off oven subcategory is based on five units which are the best performing 12 percent of 36 total existing units. The preamble also states that the proposed MACT floors are established under the assumption "that the data available represents the entire population of data from the best performing CISWI units used to establish the proposed standards." NGSB believes that the presumption that the 36 existing units represent the entire population of the burn-off ovens is faulty; therefore presuming that five units accurately make up the best performing units is also faulty. The 36 units were identified from the combustion survey associated with ICR No. 2286.01. That survey requested respondents to identify incinerators that had a more narrow definition ["...a combustion unit with the primary purpose of destroying matter and/or reducing the volume of the materials and is neither a boiler or [sic] process heater..."] as compared to the more comprehensive subcategory definitions in the proposed rule. In addition, the ICCR database used in the development of the 2000 CISWI rule identified over 300 existing units (43 drum reclaimer units and 299 parts reclaimer units) that would now fall under the new burn-off oven subcategory. Therefore, NGSB believes that many burn-off ovens were omitted from the ICR associated with the proposed rule and that the assumption that five units represent the "entire population" of the best performing units is incorrect.

Furthermore, as indicated in the MACT Floor document: "only two units had data for Cd, HCI, Pb, Hg, and total dioxin/furans; consequently, only two units could be included in the EG floors for these pollutants." NGSB believes that to establish MACT floors on a small sample of the existing units, and in some cases, on two units, clearly does not meet the requirement of Section 129(a)(2). EPA should properly identify the universe of burn-off ovens and should collect more sufficient data from existing burn-off ovens in order to establish an appropriate MACT floor that would more accurately be based on the best performing existing units.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 20

Comment: No Numeric Emission Standard for Dioxin/Furans (D/Fs) Should be Established at this Time.

EPA has established MACT floor standards for energy recovery units and burn-off ovens for D/Fs from an inadequate dataset and has no sound basis for supporting the assumption that a control technology is available that has been demonstrated to reduce D/Fs from these units exists.

The EPA has only recently gathered any D/F emissions data from units such as coal-fired boilers and has not yet fully developed an understanding of the variability of D/F emissions over time or an understanding of the cause of D/F emissions in coal-fired boilers. EPA has only one 3-run test

from any given boiler from which to establish the MACT floor. Some of the reported emissions of D/F used to set the new source standards are at extremely low levels very close to detection limits. EPA has not established that these levels are repeatable over time or across variations in fuel by the best-performing units. Any given unit (even the top performers) is at great peril of failing the D/F emission limit in the annual performance tests. Such a result may well be the result of normal statistical variability which has not been accounted for in EPA's MACT floor analysis.

Response: See preamble Section V. for the responses on the rationale for subcategories-burn off ovens and energy recovery units. Further, see preamble Section V. for the response on Limits for TMB and TEQ for dioxin/furans and the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 35

Comment: EPA does not have adequate data for burn-off units on which to base CISWI limits. Inadequate data exists for these units on which to base CISWI limits. For the pollutants Cd, HCl, Hg, and dioxins/furans, the only data in the docket are for two units which fall in the incinerator subcategory [Footnote: These are the units identified as "KSCNHWichita" and "NDCNHAmerica"] Unlike the rest of this subcategory, these two units are already subject to NSPS Subpart CCCC, which is why this particular stack test data exists. However, these units are not indicative of the rest of the category. Before EPA imposes CISWI limits on burn-off units, additional data should be obtained and analyzed.

Response: EPA thanks the commenter for their input. See preamble Section V. for the response on rationale for subcategories- burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 37

Comment: Performance Tests To Demonstrate Compliance With The Proposed CISWI Standards Are Not Feasible For Burn-Off Ovens

It will be infeasible to conduct performance tests to demonstrate compliance with the proposed standards in many cases: Burn-out ovens are batch type units with run times as short as 2-4 hours. It will not be possible in many cases to conduct three runs and collect enough sample volume as required in Table 9 of the proposed rule. It will also not be possible in many cases to demonstrate compliance with pollutants such as cadmium and dioxins/furans. A source should

not be barred from demonstrating compliance just because its operating practices do not fit the prescriptive demands of the proposed regulation.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 43

Comment: EPA should not set standards for dioxin and furans for burn-off ovens.

Dioxins and furans are not fed to these units. The only source of potential dioxin/furan emissions from these units would be de novo synthesis. Research [Footnote: The best summary of the research on this topic can be found in Chapter 3.2 of the Technical Support Document for the 1999 Hazardous Waste Combustion rule, Volume 4] has shown that for de novo synthesis of complex organic molecules post combustion requires certain sets of conditions. These conditions are a minimum of 2 seconds residence time within a temperature window of 400 to 750 F, the presence of chlorine, the presence of a surface catalyst, and the absence of sulfur. The structure of burn-off ovens does not allow for these conditions to occur. The temperatures and residence time for the afterburners of burn-off ovens are typically 1500 F to 1800 F. Since these units do not have any air pollution control devices and relatively short stacks (5-8 feet), the temperature will not change significantly from the afterburner until it is vented to the atmosphere. Once vented, the air will pass through the temperature window necessary to form dioxins so rapidly that there will not be an opportunity for any formation. In addition, there will be limited availability of chlorine and surface catalysts needed for the de novo synthesis to occur. Thus, there minimal opportunities to form these compounds post combustion. Since there is no dioxin fed to these units and the possibility of post-combustion formation.of dioxin is extremely low, there is no reason to set dioxin standard for this category. In addition, once they reclassify the two burn-off ovens as incinerators, EPA has no data on D/F emissions from this category.

Response: See preamble Section V. for the response on the rationale for subcategories-burn off ovens.

4.13 MACT Floor: Results for Existing Units (Proposed Approach): Small remote incinerator subcategory

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 10

Comment: In addition to inadequate data to calculate the baselines for these larger categories, EPA has improperly established the baselines on fewer than five sources for the incinerator and the small, remote unit categories, inconsistent with the requirements of Section 112(d)(3)(B) of the Clean Air Act, which specifies a minimum of five sources to be used to establish baselines in categories with fewer than 30 sources.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches. See also the response to EPA-HQ-OAR-2003-0119-1953.1 excerpt 5 on Section 112(d)(3)(B) of the CAA.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 2

Comment: The limits established by EPA violate the CAA because they are unachievable for almost all incinerators in Alaska. EPA must establish limits that are achievable in practice.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 10

Comment: EPA relies on a flawed data set in establishing the MACT floor.

EPA states that, in the incinerator and small remote incinerator categories, there are 47 total existing units (28 and 19, respectively). We believe there are substantially more than 47 existing incinerators since a perusal of Title V permits indicates there are more than half that many (at least 27) in Alaska, alone. So it is very possible, perhaps likely, that EPA has gone beyond the floor in establishing the emission limits for existing units since EPA used only the top 4 performers in the incinerator category and the top 3 in the small remote incinerator category, when there are, in all likelihood, many more incinerators than now known to EPA. We believe it is necessary for EPA to develop an accurate accounting of the number of incinerators in the United States and to recalculate the MACT floors as appropriate (and, we propose, consistent with the suggestion in the final section of this letter). If going beyond the floor, a cost benefit analysis must be performed.

Response: See preamble Section V. for the responses on rationale for the small, remote and incinerator subcategories and control technology assumptions for the floor and beyond-the-floor.

Commenter Name: Brad C. Thomas

Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 11

Comment: The CAA bars EPA from relying on a pollutant-by-pollutant approach.

EPA developed the MACT floors using a pollutant-by-pollutant approach. CAA section 129(a)(2) indicates that the MACT floor for existing facilities should be set by examining the best performing 12 percent of units in a category. Any more stringent requirement must balance cost, other environmental impacts, and energy requirements and be "achievable." Instead of establishing limits at the levels achieved by the best-performing 12% of facilities, the pollutant-by-pollutant approach establishes emissions limits that can be met by far less than 12% of all units in a category. Thus, the pollutantby-pollutant calculation method cannot be squared with the statutory approach of establishing a MACT floor. The pollutant-by-pollutant calculation method, in contrast, is a "beyond-the-floor" approach, and as such must be balanced against other factors and yield "achievable" limits.

Assuming the Kuparuk incinerators – the only one of the 19 known to meet all of the proposed emission limits – are small remote incinerators, then the top performing 5 percent of incinerators were used to establish the floor for existing small remote units.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

4.14 MACT Floor: Results for Existing Units (Alternative Approach): Waste-burning Kilns

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 28

Comment: Alternative Floors Under the Alternate Definition of Solid Waste

This section reports the alternative floor values developed by PCA using the alternate definition of solid waste. The floor values are given in Tables A-9 and A-10 for existing and new units, respectively [see submittal for tables provided by commenter.] PCA believes that it is not appropriate to set a standard for opacity; therefore, no floor value has been calculated. Further, for the reasons detailed for the floor analysis under the primary solid waste definition, all of EPA's dioxin/furans TMB and TEQ data (both best performing and other kilns) need to be reviewed, correctly attributed, and corrected for non-detections before any meaningful analysis can be conducted. Therefore, we did not compute alternative floors for dioxin/furans in the analysis.

For existing units (see submittal for Table A-9 provided by commenter), the alternative floor values are higher in all cases than the floors proposed by EPA, as a result of removing errors and

biases in the EPA database and of correctly accounting for the limited amount of information that is available on emissions variability. For some pollutants, the calculated floor values are sufficiently high as to represent emissions limitations that are not meaningful and, therefore, are not shown in the tables. Even where floor values are shown, they are affected by the same limitations of inadequate data that make it impossible to compute meaningful floors for the other pollutants. The purpose of this analysis is not to advocate that EPA establish floors at these levels. Rather, the purpose is to emphasize that adequate emissions data do not currently exist to support the establishment of correct and meaningful standards.

For new units (see submittal for Table A-10 provided by commenter), the Option A floor values have been set equal to the existing unit floors given in the table for existing units. For Option B, the new unit floors have been determined by the lowest ranked kiln that has at least two stack tests, because no statistical limit can be placed on the emissions of lower ranked kilns that have only a single stack test. As can be seen in the table, only for CO is the Option B floor lower than that computed under Option A. Only for CO, lead and NOx emissions is the new unit floor within the range of measured emission values; in all other cases it is so high that it does not represent a meaningful result, much less a meaningful emissions limitation.

As for the proposed definition of solid waste, the extreme floor values encountered in Option B reflect the fact that having only two stack tests for the single best performing kiln is an inadequate basis for determining the floor because the variability in emissions has not been characterized. When N=2, the t-statistic for the UPL99 emissions level takes on a value of 32 for N-1=1 degree of freedom and results in a multiple of 32 times the standard deviation being added to the average emission level. With this little information, the uncertainty in the analysis is enormous. Even when 4 tests are available for the floor-setting kiln, the emissions variability, coupled with the uncertainty associated with 3 degrees of freedom, produces floor values that are still very large.

The purpose of this analysis is not to argue that EPA should adopt the floors presented in the tables, but rather to indicate in stark terms the inadequacy of the existing database to support floor development. If EPA disagrees and elects to proceed with the establishment of emission floors, it has no basis to set floors under the definition of solid waste below the Option A levels given in Tables A-9 and A-10 [see submittal for tables provided by commenter.] It has no basis to set floors at any level

for the pollutants where the calculated floor values have been flagged with asterisks as not meaningful.

If it rejects the new source floors computed under Option B, then it cannot bypass the Option A floors for existing units in order to select lower values from Option B. Option A is the conventional application of a UPL formula to the data (in this instance the boiler MACT equation), as EPA has done in this and other rulemakings, and it provides the technically most-credible estimates of the floors for existing units. That Option A sets the new unit floors equal to those for existing units merely recognizes that there is not adequate data to determine floors for new units, when the lowest ranked kiln often has only 1 stack test and few kilns have more that 2 stack tests.

Response: EPA thanks the commenter for their input. See preamble Section II.C. for a discussion on how the solid waste definition is addressed in the final rule.

4.15 MACT Floor: Results: New Units (Proposed Approach)

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 4

Comment: The EPA used "one single unit" and "one emission test report" of that unit as the bench mark for future NEW CISWI MACT FLOOR EMISSION LIMITS.

Clearly the size of the unit and the material cleaned in the unit during the "one-spot check" can have a large impact on the emission data collected and should be taken into account when setting limits for different air pollutants.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 4

Comment: EPA admits that the ULs for new sources were sometimes "greater than the existing MACT floor limit for that pollutant in that subcategory." 75 Fed. Reg. at 31,955. Such a result is impossible given that the new source standard is required to be based on the emissions level of the best performing source. EPA admits that "the limit for new sources cannot be less stringent than that of existing sources." Id. Yet, where that happened, instead of relying on

"emissions levels achieved," 42 U.S.C. § 7429(a) (emphasis added), as required by statute, EPA arbitrarily set the new source floor at the same level as the existing source floor. Setting new source floors at existing source floor levels, without showing that the latter accurately reflect the single best unit's actual emissions levels, is unlawful.

Response: See preamble Section V. for discussion on calculating emission limits and the emission limit calculation memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 58

Comment: In the proposal, EPA indicates they do not anticipate any new units being built. AF&PA believes that EPA should further evaluate the achievability of the new source limits and the method of setting those limits. As described previously in these comments, we support a source approach rather than a pollutant by pollutant approach for setting the emission limits. For the new source limits, this approach is even more important, because the limits are set at the levels achieved by the best performing source in the category. Setting the new source limits on a pollutant by pollutant basis will not result in these limits being representative of what any one boiler has achieved.

EPA should consult with manufacturers to assist them in determining what the appropriate new source limits are to ensure that they are achievable. AF&PA members have anecdotal evidence that manufacturers are concerned about providing guarantees for the proposed new source emission limits. We have also heard that the manufacturers will not provide emissions guarantees for startup and shutdown periods.

The new source limits are often influenced by test results obtained at levels less than the method detection limits. EPA should not set new source limits based on data that is below the measurement capabilities of the analytical and stack test methods.

New source CISWI limits are being set on a very limited amount of data. Table A-2 of the MACT floor memo [see DCN: EPA-HQ-OAR-2003-0119-0059] shows that for the majority of the limits, only 3 test runs were used to calculate the limit. AF&PA believes EPA should use additional test, fuel, or CEMS data to improve the variability of the emissions data from the top performers in order to improve the achievability of these limits.

Section 129 states that the new source limits in each subcategory are to be based on the best controlled similar unit. EPA should also demonstrate that the unit being used to set the NSPS limits is in fact representative of the subcategory. We also believe that it was not Congress' intent to establish regulations that would prohibit the construction of new sources in the regulated source category. EPA should obtain additional data and abandon the pollutant-by-pollutant approach when establishing the new source emission limits.

Response: See preamble Section V. for the responses on the MACT Floor Analysis which includes a response on the Pollutant-by-Pollutant Approach and Alternative Approaches and the treatment of detection levels. Further, see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 2

Comment: Clean Air Act (CAA) Section 129(a)(2) states the following:

Standards applicable to solid waste incineration units promulgated under section 111 and this section shall reflect the maximum degree of reduction ... taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts

and energy requirements, determines is achievable for new or existing units in each category... The degree of reduction in emissions that is

deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar source.... [Emphasis added]

For the new source emission limitations, EPA relied on the best performing source within each subcategory for each individual pollutant requiring regulation per CAA Section 129. GPI — Macon Mill contends that the methodology EPA has employed in establishing emission limitations in the proposed CISWI NSPS rule does not meet Congressional intent as conveyed in

the CAA. Specifically, this approach results in a rule proposing cost prohibitive limitations. EPA recognizes the cost impact of the proposed CISWI rule, as they state on page 31959 of the Federal Register we already estimate no new CISWI sources will be constructed due to costs associated with the MACT floor limits in the proposed NSPS.

By establishing new source limits that are not realistically achievable by a new emission unit, EPA is promoting the reliance on older, less efficient energy recovery sources as well as older incineration units. Older equipment typically has emission profiles that are generally worse than new units. Surely, Congressional intent when establishing the requirements of CAA Section 129 was not to prohibit the installation of new equipment, but to simply ensure that new equipment emitted pollutants only at levels "achieved in practice by the best controlled similar source."

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 4

Comment: NESCAUM is concerned with the proposed CISWI emission limits. The proposed numbers, based on statistical analysis of the 99% confidence levels, may not be reasonable to implement. In addition, many of the emission limits are too close to the detection limits of the reference test methods, and do not include an adequate compliance margin that accounts for either test method or fuel variability.

Response: See preamble Section V. for the responses on the MACT Floor Analysis which includes a response on the treatment of detection levels.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 6

Comment: EPA's MACT floors for new sources are unlawful because although section 129(a) may allow new sources floors to be based on emission levels, those emission levels must be the product of control.

Under Section 129, Congress specified that the floor levels for new sources are to be based on the "emission control achieved in practice" by the single best source. Under this criteria, whatever floor standard EPA establishes, must be the product of control. Likewise, floors for existing sources must have also been "achieved." This requirement is not in conflict with § 111, and in fact, is consistent with the § 111 requirement that the standard reflect "the best system of emission reduction" a requirement that calls for action by the source that reduces emissions.

As the Agency knows, emission levels can be achieved by intentional control, unintentional control, or no control ("happenstance" as the Agency often calls it). 70 FR 59402, 59444 (October 12, 2005). Thus, if the Agency chooses to use emission test data as the benchmark for measuring floors, it must make sure that this data is the result of "best system of emission reduction." Consequently, it can only use those emission test data that comes from systems that control their emissions (whether it is intentional control, or, as National Lime Association v. EPA, 233 F.3d 625 (D.C. Cir. 2000) ("National Lime II") recognized, unintentional control. See below, Section 3.B.i.

Consequently, establishing new source MACT floors by examining emission levels, without determining which ones were achieved by control from the best systems of emission reduction is unlawful. Since EPA has not examined the emissions in its database to see if the emission levels are based on control, its proposed MACT floors for new sources are unlawful.

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 8

Comment: NESCAUM requests that emission limits be provided in pounds per million Btu and pounds per hours because many states require emissions to be reported in both manners.

Response: See preamble Section V. for discussion on emission limits and consistency between other applicable NESHAP limits.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 36

Comment: ACC Is Concerned That This Rule Will Prevent New Sources From Being Built

In the proposal, EPA states it does not anticipate any new units being built. [Footnote: 75 FR 31966.]As Congress surely did not intend Section 129 to act as a bar on the building of new units, ACC believes that EPA should further evaluate the achievability of the new source limits and the method of setting those limits. As described previously in these comments, we support a source approach rather than a pollutant by pollutant approach for setting the emission limits. For the new source limits, this approach is even more important, because the limits must be set at the levels achieved by the best performing source in the category. Setting the new source limits on a pollutant by pollutant basis will not result in these limits being representative of what any one boiler is achieving.

The new source limits are often influenced by test results obtained at levels less than the method detection limits. EPA should not set new source limits based on data that is below the measurement capabilities of the analytical and stack test methods.

New source CISWI limits are established based on a very limited amount of data. Table A-2 of the MACT floor memo [Footnote: EPA-HQ-OAR-2003-0119-0059.] shows that for the majority of the limits, only 3 test runs were used to calculate the limit. ACC believes EPA should use additional test, fuel, or CEMS data to more accurately capture the variability of the emissions data from the top performers in order to represent the true emissions performance that is being achieved in practice by the top performers. Section 129 states that the new source limits in each subcategory are to be based on the best controlled similar unit. EPA should also demonstrate that the unit being used to set the new source limits is in fact representative of the subcategory. The intent of section 129 is not prohibit the construction of new sources, but rather to ensure that new sources meet emission standards being achieved in practice by similar new units.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 39

Comment: EPA's proposed methodology for calculating new unit MACT floors selects the best performing source on a pollutant by pollutant basis with UL calculation only for the test runs for that unit. This methodology results in unachievable and indefensibly low emission limits for many types of units. The result is that the rule that will preclude installation of any new units that can combust alternative materials, which is counter to stated administration goals of improving energy efficiency and lessening dependence on fossil fuels. This approach obviously does not recognize the inherent differences in materials properties that in turn are dependent on the source, which cannot be a replica of the best performing source materials. Because of this, the entire floor setting process in this case is faulty. 75 FR 31954-56

In order to create a more equitable process, EPA needs to use their proposal in Boiler MACT as an example and set on sources with at least three runs. EPA also needs to consider achievability

in setting the floor limits. By estimating no new units, it should be clear that the proposed units are unachievable, and must be modified.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see see preamble Sections V and VI. for a discussion on the projection of new units.

4.16 MACT Floor: Results for New Units (Proposed Approach): Incinerator subcategory

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 13

Comment: [See submittal for Table 5 provided by commenter for incinerators where one facility can meet 6 of 10 proposed new source standards.]

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 16

Comment: It should be noted that when EPA moves two units from the burn-off oven category to the incinerator category, the standards for the incinerator category will also need to be recalculated and this analysis will need to be redone.

Response: EPA thanks the commenter for their input. Units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 21

Comment: EPA's method for setting the CO and NOx standards is flawed because the Agency did not take into account the inherent conflict in complying with two standards.

The relationship between CO and NOx is complicated. CO is the simpler of the two It is well known that as temperature increases, the CO concentration decreases. Most combustion processes are run at elevated temperatures for this reason. It is also well known that as

combustion temperature increases, the amount of thermal NOx increases. Thus, on the surface, the two would seem to conflict. However, NOx is formed during combustion from two processes: one by fixing the nitrogen in the air with the oxygen in the air in a high temperature environment (referred to as "thermal NOx") or from the direct oxidation of nitrogen contained in the fuels ("fuel NOx"). Obviously the presence of nitrogen in the fuels makes getting a low NOx value much more difficult.

The reason for the conflicting relationship between NOx and CO is linked to the

relationship between oxygen concentration and temperature, and the mechanisms that form CO and NOx. A certain amount of excess oxygen is necessary for complete combustion. However, too much oxygen lowers the thermal efficiency. High temperatures are desired to drive the combustion reactions (and lower CO), but when the temperature goes above a certain level, the nitrogen also tends to bond with oxygen to form NOx. As excess oxygen is reduced, one formation mechanism for NOx is discouraged (not having enough oxygen for the nitrogen to bond with), but more CO is formed if the oxygen gets too low. At the same time, as the excess oxygen is reduced, this takes away a heat sink so the overall temperature goes up, which tends to increase the kinetics of NOx formation, so that the nitrogen will bond faster with whatever oxygen is present to form NOx. Of course, as the oxygen is depleted below the amount needed for complete combustion, NOx is significantly reduced but this also increase CO. The bottom line is that in parts of the operating window for most boilers and many incinerators, it is difficult to control both CO and NOx

simultaneously. Low-NOx burners or flue gas recirculation can help, but this is generally something not suitable (or only a partial fix) for systems burning bulk solids and only addresses the thermal NOx. A significant amount of nitrogen in the fuel will get converted to NOx and completely change the ratios.

About the only reliable way to control both NOx and CO is to run at relatively high temperature and a reasonable excess oxygen for good CO control and then add on "back-end" NOx control (selective catalytic control or non-selective non-catalytic reduction).

Most incinerators will be expected to operate at an'equivalence ratio [Footnote: Equivalence ratio is a measure of fuel-oxygen ratios. Ratios of 1.0 or greater are considered as fuel-rich and ratios less than 1.0 are considered as fuel-lean., of between about 0.5 and 0.9 (which normally gives an oxygen concentration of 10%' by volume or less, and usually not much below about 4%). Many boilers run much closer to 1.0 (they try to minimize excess air to increase efficiency, and keep oxygen down in the range of 3% or less). Some systems may operate with individual areas of the system (solids bed in a kiln or in a waste feed lance flame envelope.) under fuel-rich conditions even though the overall system is oxidative. When one looks at the theoretical relationship between CO and NOx [See submittal for Appendix B provided by commenter], you will notice that over this range sometimes the CO and NOx trend together, and sometimes they are reversed. That's why it difficult to establish a consistent relationship between these two pollutants. This relationship is highly site-specific.

Thus, EPA's current method of selecting the lowest emitter for CO to set the CO standard and the lowest emitter of NOx to set the NOx standards is ignoring the fundamental chemical processes that occur during combustion and does not represent a "reasonable estimate" of what these units are actually achieving. EPA must use some other method for determining best performers for CO and NOx.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

4.17 MACT Floor: Results for New Units (Proposed Approach): Energy Recovery Unit subcategory

Commenter Name: Michael R. Shoemaker
Commenter Affiliation: Wenck Associates, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1840.1
Comment Excerpt Number: 3

Comment: While we recognize that different pollutants can be controlled independently of each other in certain instances, the process by which EPA set the standards for new units in the energy recovery subcategory does not follow sound scientific reasoning. The EPA states in Section V, Part D:

For energy recovery units, we analyzed a beyond-the-floor CO limit of 3 ppm. In comparison, the proposed MACT floor emission limit is 150 ppm. Therefore, the beyond-the-floor CO emission limit is approximately 98 percent less than the MACT floor emission limit. We are unaware of any technology that is able to continuously meet a 3 ppm CO limit for all existing energy recovery units. Variances in fuel composition and condition will have an effect on CO emissions in addition to the controls in place, so this limit may be achievable for the best source based on their particular unit design and fuel inputs, but not demonstrated to be achievable for any other existing units without unreasonable costs associated with modification of the units. As a comparison, the proposed boiler NESHAP limit varies by combustor design, but for biomass boilers, which burn fuels and have combustor designs that are similar in characteristics to some CISWI energy recovery units, the limits are in the order of 200 to 700 ppm.

The EPA acknowledges that emissions of CO will vary depending on conditions. The variance is a characteristic of combustion. As the EPA selects emissions standards from different units, they fail to recognize that conditions will vary and pollutant relationships will be affected. The rankings from the MACT floor illustrate the issue. That is, no single unit exists that achieves the proposed standards in practice.

The EPA should use the best controlled similar unit to determine emissions standards rather than using multiple units and selecting performance standards that are not truly achieved in practice.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 8

Comment: The emission limits for energy recovery units under CISWI are much different than the proposed limits for boilers under the major and minor source boiler MACT and GACT rules. In most cases the CISWI standard is much more stringent, for example, 3 PPM CO for a new CISWI unit versus 560 PPM CO for a new biomass stoker boiler. If the emissions profiles are similar and thus have similar environmental impact, it is logical to have similar emission limits, not drastic differences between the rules as is being proposed.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 11

Comment: [See submittal for Table 3 provided by commenter showing that three energy recovery units can meet 3 of the 10 proposed standards for new sources.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. Further, see preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 22

Comment: EPA's method for setting the CO and NOx standards is flawed because the Agency did not take into account the inherent conflict in complying with two standards.

The relationship between CO and NOx is complicated. CO is the simpler of the two It is well known that as temperature increases, the CO concentration decreases. Most combustion processes are run at elevated temperatures for this reason. It is also well known that as combustion temperature increases, the amount of thermal NOx increases. Thus, on the surface, the two would seem to conflict. However, NOx is formed during combustion from two processes: one by fixing the nitrogen in the air with the oxygen in the air in a high temperature environment (referred to as "thermal NOx") or from the direct oxidation of nitrogen contained in the fuels ("fuel NOx"). Obviously the presence of nitrogen in the fuels makes getting a low NOx value much more difficult.

The reason for the conflicting relationship between NOx and CO is linked to the

relationship between oxygen concentration and temperature, and the mechanisms that form CO and NOx. A certain amount of excess oxygen is necessary for complete combustion. However, too much oxygen lowers the thermal efficiency. High temperatures are desired to drive the combustion reactions (and lower CO), but when the temperature goes above a certain level, the nitrogen also tends to bond with oxygen to form NOx. As excess oxygen is reduced, one

formation mechanism for NOx is discouraged (not having enough oxygen for the nitrogen to bond with), but more CO is formed if the oxygen gets too low. At the same time, as the excess oxygen is reduced, this takes away a heat sink so the overall temperature goes up, which tends to increase the kinetics of NOx formation, so that the nitrogen will bond faster with whatever oxygen is present to form NOx. Of course, as the oxygen is depleted below the amount needed for complete combustion, NOx is significantly reduced but this also increase CO. The bottom line is that in parts of the operating window for most boilers and many incinerators, it is difficult to control both CO and NOx

simultaneously. Low-NOx burners or flue gas recirculation can help, but this is generally something not suitable (or only a partial fix) for systems burning bulk solids and only addresses the thermal NOx. A significant amount of nitrogen in the fuel will get converted to NOx and completely change the ratios.

About the only reliable way to control both NOx and CO is to run at relatively high temperature and a reasonable excess oxygen for good CO control and then add on "back-end" NOx control (selective catalytic control or non-selective non-catalytic reduction).

Most incinerators will be expected to operate at an'equivalence ratio [Footnote: Equivalence ratio is a measure of fuel-oxygen ratios. Ratios of 1.0 or greater are considered as fuel-rich and ratios less than 1.0 are considered as fuel-lean., of between about 0.5 and 0.9 (which normally gives an oxygen concentration of 10%' by volume or less, and usually not much below about 4%). Many boilers run much closer to 1.0 (they try to minimize excess air to increase efficiency, and keep oxygen down in the range of 3% or less). Some systems may operate with individual areas of the system (solids bed in a kiln or in a waste feed lance flame envelope.) under fuel-rich conditions even though the overall system is oxidative. When one looks at the theoretical relationship between CO and NOx [See submittal for Appendix B provided by commenter], you will notice that over this range sometimes the CO and NOx trend together, and sometimes they are reversed. That's why it difficult to establish a consistent relationship between these two pollutants. This relationship is highly site-specific.

Thus, EPA's current method of selecting the lowest emitter for CO to set the CO standard and the lowest emitter of NOx to set the NOx standards is ignoring the fundamental chemical processes that occur during combustion and does not represent a "reasonable estimate" of what these units are actually achieving. EPA must use some other method for determining best performers for CO and NOx.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

4.18 MACT Floor: Results for New Units (Proposed Approach): Waste-burning kiln subcategory

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1

Comment Excerpt Number: 64

Comment: Based on current vendor information to NCCA, there is no guarantee that the new kiln limits for SO2, CO, HCl, mercury or NOx can be achieved on a short term, or continual basis based on current BACT technology. The new kiln limit for CO is so unreasonably low that basic combustion would not be possible using any fuel. It is very difficult to project compliance with continuous monitoring requirements for naturally occurring constituents, which vary significantly over 50 to 100 years of limestone reserves.

Response: See preamble Sections V and VI. for a discussion on the projection of new units. Further, see preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 15

Comment: The CISWI Standards for New and Reconstructed Sources Are Not Achievable

CAA Section 129(a)(2) provides for new units that the "degree of reduction in emissions that is deemed achievable * * * shall not be less stringent than the emission control that is achieved in practice by the best controlled similar unit, as determined by the Administrator". This statement assumes that all sources in a specific category have similar (or identical) uncontrolled emissions, and the installation of similar emission controls will result in emissions comparable to the "best controlled similar unit". Cement kilns are very different in design and operation from location to location, utilize very different raw materials and fuels, produce very different products, and thus have very different uncontrolled emissions. Therefore, even if Lafarge were to install control technology identical or even beyond that of the best controlled

similar unit, it could not guarantee it could meet the emission levels of the best controlled similar unit in each case. Therefore, the standards are not achievable for all sources.

Cement kilns that elect to comply with the "existing source" CISWI emission limits will ultimately face an impossible effort to comply with the "new source" CISWI emission limits once they modify or reconstruct their source. A simple comparison of some of the emission limits proposed in the CISWI rule make this conclusion obvious. [Note: Lafarge does not agree with the proposed emission limits for existing or new cement kilns. It uses the proposed limits and those in the proposed NESHAP and NSPS for demonstration purposes only.]

The current Portland cement NESHAP limits D/F from kilns to 0.2 ng TEQ/dscm (0.4 ng TEQ/dscm for those with APCD inlet temperatures <400°F). To comply with the current NESHAP limits, kilns were required to modify their operations and apply MACT. The proposed NESHAP (May 2009) does not recommend revising these limits, as it recognizes that this is MACT for both new and existing kilns. By comparison, the proposed CISWI sets D/F limits for new sources at 0.000028 ng TEQ/dscm. This equates to a 99.986% reduction in D/F levels. EPA has not provided any documentation on how an existing source that modifies and becomes subject to the "new source" CISWI limits can achieve this emission level, only that one source

during one testing event was emitting at this level over a 3-hour period. No technology has ever demonstrated the ability to reduce D/F levels in kiln gases by a level even approaching this degree of reduction on a continuous basis. While EPA may argue that the "best performing source" is continuously achieving this level (to which Lafarge disagrees), it cannot demonstrate

that other kilns with their unique mix of raw materials, fuels and products is capable of achieving this emission level even while using the best available technology on the market.

The Portland cement NSPS and EPA's BACT/LAER Clearinghouse document provide EPA with a gauge of the NOx level being achieved in practice by new cement kilns. New cement kilns are preheater/precalciner (PH/PC) technology, designed to minimize NOx emissions through preheating the kiln gases by staging combustion in oxygen-deficient zones.

Existing kilns include not only PH/PC kilns, but preheater-only, long wet and long dry kilns. In particular, long wet and long dry kilns are not designed for preheating kiln gases or staging combustion, and therefore must burn most or all of their fuel at the main burner. This limitation results in uncontrolled NOx that is significantly higher than from PH/PC kilns.

The recently finalized Portland Cement NSPS (40 CFR 60, Subpart F) limit for NOx is 1.5 lbs/ton of clinker. BACT for new kilns subject to PSD/NSR has been 1.5 lbs/ton of clinker or higher based on case-by-case evaluations of kiln design, raw materials, fuels, etc. The proposed NSPS and existing BACT limits assume well designed PH/PC kilns utilizing SNCR technology. Although only a small portion of PH/PC kilns have SNCR installed, the data indicates that 1.5 to 2.0 lbs/ton of clinker has been achievable when using SNCR achieving approximately 50% NOx control. The proposed CISWI NOx limit for new sources is equivalent to approximately 1.0 lbs/ton of clinker. For new PH/PC kilns to achieve this limit, the SNCR systems would have to be capable of achieving at least 67-75% NOx control efficiency on a continuous basis. This level of continuous control has never been demonstrated by a SNCR system on a cement kiln.

Long wet and long dry kilns have much higher uncontrolled NOx emissions. To achieve a level of approximately 1.0 lbs/ton of clinker would require control efficiencies of greater than 80-90 percent. The only technology that is speculated to be capable of achieving this level of control is selective catalytic reduction (SCR). EPA is fully aware that SCR technology is not yet proven to be effective at these removal efficiencies on cement kilns on a continuous basis. EPA stated in the recently finalized Portland Cement NSPS that it believes that SNCR (not SCR) is best demonstrated technology (BDT). In fact, Lafarge is the only cement company in the U.S. that has agreed to install and trial an SCR on one of its long dry kilns, but this is not scheduled to occur until 2013 and no emission limits have been proposed or assumed. Therefore, it is premature to assume that long wet or long dry kilns can achieve a NOx emission level of 1.0 lbs/ton of clinker.

A similar argument can be made for the "new source" CISWI emission limit for SO2. SO2 emissions are a function of the type and quantity of sulfur inputs to the cement kiln. EPA has recently set the Portland Cement NSPS SO2 limit at 0.4 lbs/ton of clinker or a 90 percent SO2 reduction demonstration. BACT looks at case-by-case conditions and sets appropriate SO2 limits based primarily on limestone and fuel sulfur, and the cost effectiveness of various control technology options. At present, almost all of the BACT limits for SO2 are higher than the new NSPS limit.

The proposed CISWI SO2 limit for "new sources" translates to approximately 0.035 lbs/ton of clinker. This limit is over 11 times more stringent than the NSPS and lower than any current BACT limit for SO2. It assumes that even with a control technology capable of continuous 95 percent removal efficiency, the uncontrolled SO2 from any kiln subject to the rule

would have to be below 0.7 lbs/ton of clinker. This uncontrolled SO2 level is nearly as low as the final NSPS and is not achievable (even with controls) by more than 90% of the kilns in operation today.

Comparable arguments could be made for PM and lead. The best controls available for these pollutants are already being utilized (a high efficiency fabric filter baghouse). To achieve in excess of 70% additional reduction is not technically feasible unless multiple control devices were placed in series. This is impracticable and not economically feasible for a cement plant or any manufacturing entity.

Response: See preamble Section V. for the responses on Control Technology Assumptions for the Floor and Beyond-the-Floor and consistency between other applicable NESHAP limits.

4.19 MACT Floor: Results for New Units (Proposed Approach): Burn-off oven subcategory

Commenter Name: Richard G. Fraser
Commenter Affiliation: SteelMan Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1384
Comment Excerpt Number: 2

Comment: Of the ten burn-off ovens that you tested, only one met the proposed NOx standard. In reviewing the data from the test you performed on that oven, the afterburner temperature was only 1,100 degrees F. and not the 1,400 -1,500 that is necessary for the oven to function properly. It surely would have had significantly higher NOx emissions if it had been operating properly. No burn-off oven that is operating properly can meet the proposed NOx standards.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 3

Comment: The Proposed NOx Limit of 16 ppm Shown in Table 8 to Subpart CCCC on Page 31987 Is Not Attainable When Processing Vapors in the Gas-Fired Afterburner.

Our cleaning furnaces use direct flame afterburners to destroy VOCs given off by the organic material processed inside the furnace compartment. These gas-fired burners inherently produce some amount of NOx on their own. In addition to the NOx produced by the gas burners, additional NOx is produced when the vapors and pyrolysis gases liberated from the organic material in the furnace are burned in the afterburner flame. The use of low NOx burners can not achieve the desired result because these burners will only operate in a very narrow range. The unit identified as Facility I.D. INWabashNational855 scored lowest on NOx and was described as not having a control device [see DCN: EPA-HQ-2003-0119-1767.9]; so, we would expect to see a large amount of VOCs emitted if a significant amount of material was being processed. This unit is the only unit that scored below 54 ppmvd corrected to 7% oxygen. We also noticed that this unit scored poorly on the PM test, which might be an indication of un-processed vapors and VOCs being emitted.

We were able to obtain a complete copy of the stack test report for this unit. Page 4 of the stack test indicates that the temperature inside the furnace during the stack tests was about 630oF. Although Exhibit H [DCN: EPA-HQ-2003-0119-1767.9] shows this unit does not have a control device, the actual field data sheets found in appendix C of the actual test report [see DCN: EPA-HQ-2003-0119-1768.2] clearly show exhaust stack temperatures in the range of about 1185oF during all of the tests. The exhaust stack temperatures seem to indicate that this unit does have an afterburner. The exhaust stack temperature, however, does not meet EPA guidelines for most States, which require an afterburner temperature of 1400oF. This low stack temperature is the reason the NOx emissions from this unit are so low. NOx formation is temperature dependent with NOx formation increasing with temperature and residence time. When the stack temperature on this unit is adjusted to be in compliance with EPA guidelines, the NOx emissions from this unit will also increase. The NOx emissions from this test are not indicative of a unit operating within the prescribed EPA guidelines for afterburner temperature, and so must not be used to help establish the guidelines. Comparable units need to be evaluated by EPA. Comparing furnaces with and without air pollution control devices, or with air pollution control devices operating below minimum prescribed temperatures skews the data.

EPA has suggested that higher afterburner temperatures and/or longer residence times might be necessary to achieve the proposed limits for some pollutants such as CO. Both of these will tend to increase overall NOx formation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 6

Comment: EPA used the test data of TX-Madix and SC-Camden, as we were told, the EPA's CISWI database shows these burn-off ovens removing no sulfur holding components, they remove nylon and polyester. Both units exceed the NOx emission limits for new sources in the

“proposed rule”. (p.s. if a different unit was used to set the limits, please identify this unit and its data.)

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 9

Comment: The proposed limits listed in Table 8 to Subpart CCCC for D/F are extremely low. These limits are derived from the emission test results for the lowest measured D/F emission rates for the

source category determined from the October 2005 emission tests for the Ace Burn-off Oven, CNH America, LLC, Wichita, Kansas.

Very little information is available in the docket for determining whether this particular burn-off oven is representative of the burn-off oven industry. It appears test results for this oven were used to set the new source emission limits for cadmium, mercury, total DIE, and total D/F (TEQ) emissions (ref. Table A-1, April 26, 2010 ERG memo "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category").

While there are copies of emission testing summaries in the docket, there did not appear to be a completed questionnaire describing the process. Completed questionnaires are available in the docket for many of the other tested burn-off ovens in the database. Michigan questions whether the results of the emission tests for this particular oven should be used to set the "new source"

limits for this entire source category, considering the lack of information on this tested unit. It may be that the materials processed were not typical of what burn-off ovens in the industry process.

Also, the "Existing Control Device for this oven is listed as "Unknown" at several locations in the docket (e.g., March 26, 2010 ERG memo "DRAFT — Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units," Appendix D2). Again, it seems inappropriate to be setting the nationwide "new source" emission standard for this source category based on testing for an oven for which the control technology is "unknown."

The D/F emission rate allowed under the Michigan air toxics rule for a recently permitted burn-off oven was compared with the allowable emission rate under the proposed new source emission limit of the CISWI regulation (0.00086 nanogram per dry standard cubic meter (ng/dscm) TEQ). The emission rate allowed under the CISWI regulation would limit this new source to an hourly emission rate of only 2.3E-12 lb/hr TEQ, while the Michigan air toxics rules would allow an emission rate of 1.3E-8 lb/hr TEQ (at a carcinogen risk of one in one million). The Michigan allowable rate is larger by a factor of approximately 5,700. Based on this comparison, it seems the "new source" limit is unnecessarily strict.

Michigan also applied an available EPA emission factor for a well controlled (afterburner at 1800-2000° F) tested burn-off oven to this permitted oven and estimated a D/F emission rate of 2.18E-8 lb/hr TEQ compared to the CISWI allowable rate of 2.3E-12 lb/hr TEQ. The emission rate based on the published EPA emission factor is higher by a factor of approximately 9,500. Again, the "new source" limit appears much more stringent than necessary when compared to a well controlled source.

As noted above in the discussion on "existing source" emission limits, recent permit reviews in Michigan suggest that the EPA needs to expand the source inventory to better indentify the "best performing" unit for the new source category as well as the "best performing 12 percent" of units for the new and existing source categories, respectively. This can be done by ensuring that more sources using efficient control technologies are considered in the inventory.

As part of our recent permitting activities, Michigan became aware of certain efficient D/F, acid gas, and PM control measures used at sources in other states. One set of control measures for these contaminants applied by a source in Texas included a medium temperature afterburner (1560°F) and a ceramic element filter with lime injection. This fluidized bed rubber denuding system was installed in 2005 at the Red River Army Depot, Texarkana, Texas. This source

should be added to the inventory of sources used for the rulemaking along with other sources using similar control technologies.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens. Further, see the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

4.20 MACT Floor: Results for New Units (Alternative Approach): Energy Recovery Units

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 5

Comment: The emission limitations EPA proposes are not achievable, even by its own estimate that no new CISWI sources will be built because of the stringency of the standards being proposed (FR 75 at page 31966). By extension it is logical to assume that EPA believes no existing CISWI unit will be reconstructed or modified to achieve this stringent standard. Also noteworthy is the fact that EPA significantly lowers the required emission rates for new energy recovery sources under the "alternative approach" presented in Table 3 (75 FR at 31946) in comparison to the already unachievable emission limits presented in Table 2. The "alternative approach" broadens the definition of solid waste and thus makes the CISWI rule applicable to more source types. Michigan Biomass believes this represents an insurmountable hurdle that would prevent any future CISWI units from being built and would force units that fall under the "alternative approach" to abandon secondary materials currently being used as fuel, causing significant disruption within the biomass energy industry.

We question the rationale for developing emission standards that will shut down an industry that currently provides cost effective and environmentally sound disposal options for NHSM and supports renewable energy objectives. This is not what Congress intended when it passed the CAA, nor is it consistent with federal energy policy.

Response: See preamble Section II.C. for a discussion on how the solid waste definition is addressed in the final rule. Further, see preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 44

Comment: Alternative Approach. While CIBO could support the alternative approach emission limits proposed for existing sources, the alternative approach limits for new solid fuel fired boilers are unreasonably strict. The levels for the new sources are so low that it would eliminate the potential for any new solid fuel fire boilers to burn solid waste materials. This approach will severely stifle the new development of modern, cleaner boilers and is not a rational proposal. 75 FR 31945-46

Response: See preamble Section II.C. for a discussion on how the solid waste definition is addressed in the final rule.

4.21 MACT Floor: Non-technology factors or considerations

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 77

Comment: We're also concerned about the explosions and fires. We have at least 10 major explosions and fires per year –- an average of 10 major explosions and fires a year at our trash incinerator in Hartford. It used to be that we had over a hundred fire calls a year. Most of them were false alarms, but there used to be dozens of fires at our trash incinerator. And none of those –- and the emissions that are emitted during those fires do not count toward the limits for air toxins and air pollution; and we believe that they should. We believe that these facilities should be responsible for their mishaps, for their upsets, for their fires and explosions.

Response: See preamble Section V. for the response on start-up, shutdown, and malfunction requirements.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 13

Comment: EPA states in the CISWI preamble [see submittal for footnote] that "the composition of the materials combusted is highly variable and is a key factor in the profile of emissions" from incinerators. Therefore, although EPA determined it was not necessary to further subcategorize incinerators, the variability in emissions from the top performing incinerators should be examined and should be taken into account when setting standards. In fact, EPA has further recognized the impact of fuel characteristics on variability from these units under Boiler MACT by incorporating a fuel variability factor into the calculation of the proposed emission limits under that rule. For the very same reason, EPA should incorporate a fuel/feed pollutant content variability adjustment under the CISWI rule. The CISWI database contains fuel analysis data for many units, but it does not appear that this information was used. EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure the effect of fuel/feed variability on emissions is captured.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Jeffrey O'Hearn
Commenter Affiliation: Panolam Industries International Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1961.1
Comment Excerpt Number: 2

Comment: An additional concern that we have is that some of these existing units will be required to install add-on controls to control emissions caused by the primary fuel and are not related to the combustion of the waste stream that is combusted in the same unit.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 9

Comment: EPA Illegally Omitted a Fuel Adjustment Factor from its Proposal

EPA states in the CISWI preamble that “the composition of the materials combusted is highly variable and is a key factor in the profile of emissions” from incinerators. Therefore, although EPA determined it was not necessary to further subcategorize incinerators, the variability in emissions from the top performing incinerators should be examined and should be taken into

account when setting standards. In fact, EPA has further recognized the impact of fuel characteristics on variability from these units under Boiler MACT by incorporating a fuel variability factor into the calculation of the proposed emission limits under that rule. For the very same reason, EPA should incorporate a fuel/feed pollutant content variability adjustment under the CISWI rule. The CISWI database contains fuel analysis data for many units, but it does not appear that this information was used. EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure the effect of fuel/feed variability on emissions is captured.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1517.1, excerpt 13.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 35

Comment: EPA's use of a pollutant-by-pollutant approach, rather than a source approach, to set limits also contributes to lack of achievability. EPA acknowledges that composition of fuel/feed materials is a key factor in a unit's emissions profile (75 FR 31951) but setting limits on a pollutant-by-pollutant basis ignores that fact. The limits for each of the 9 pollutants are being set by different units burning different materials. In some cases, values of zero are being used in floor calculations, which is not at all appropriate, as there is no control technology capable of reducing emissions to zero. The emissions of a pollutant can only be zero if there is nothing in the fuel or feed to produce emissions of

that pollutant. It is not appropriate to be setting a floor for a pollutant based on units that are not burning material even capable of producing emissions of that pollutant. In the incinerator category, for example, the best performers for HCl, lead, and cadmium include units with no air pollution control devices. These units outperform units equipped with air pollution control systems because they are burning wastes with no significant amounts of chloride, lead, or cadmium. Units burning wastes with even modest content of these constituents will have a difficult or impossible challenge meeting standards set using this data.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and rationale for subcategories.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 49

Comment: EPA states in the preamble (75 FR 31951) that "the composition of the materials combusted is highly variable and is a key factor in the profile of emissions" from incinerators. Therefore, although EPA determined it was not necessary to further subcategorize incinerators, the variability in emissions from the top performing incinerators should be examined and should

be taken into account when setting standards. EPA has recognized that it is appropriate to subcategorize boilers (energy recovery units under CISWI) in the Boiler MACT into coal, biomass, liquid, and gas boilers because these boilers are designed differently and the properties of the fuel affect the emissions from these units. In fact, EPA has further recognized the impact of fuel characteristics on variability from these units under Boiler MACT by incorporating a fuel variability factor into the calculation of the proposed emission limits under that rule. EPA should incorporate a fuel/feed pollutant content variability adjustment under the CISWI rule. The CISWI database contains fuel analysis data for many units, but it does not appear that this information was used. EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure the effect of fuel/feed variability on emissions is captured.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1517.1, excerpt 13.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 4

Comment: EPA recognized in the proposed Boiler and Process Heater MACT that it can and must consider variability in the fuel supply when determining the MACT floor emission standard for fuel-dependent HAPs. EPA has made no effort to account for the variability of cadmium, lead, mercury, sulfur, and chlorine fuel supplies in the proposed CISWI rule. Now that CISWI is expanding to include energy recovery units that burn fossil fuel such as coal, it is necessary for EPA to consider other data in addition to performance tests when setting the MACT floor standards.

EPA also fails to account for fuel/feed quality variability for other subcategories such as incinerators, where the streams being burned in most of those units are truly unique in properties and constituent concentration. Application of the best controls possible cannot be assumed to result in emission rates achieved by other units when there is no detectable concentration of some constituents in those best performer's feed streams, as determined by analysis or by process knowledge. Without some consideration of differences in feed material composition the resultant standards impose an impossible hurdle to some units. If EPA would at least investigate control equipment performance characteristics (e.g., percent reduction) and use that to enable sources to demonstrate performance, there would be some hope of achieving compliance. Lacking that, the resultant emission limits basically eliminate the option of combusting some materials, leading to a need for alternative disposition, increased use of traditional fossil fuels to displace lost heat input for energy recovery units, and increasing likelihood that some processes cannot compete and will shut down, with attendant negative employment and economic impacts. While it is reasonable to impose justifiable requirements that lead to use of best controls to minimize emissions, it is not reasonable to impose limits that cannot be achieved regardless of the use of controls.

Response: See Preamble Section V. for discussion on emission limits and pollutant-by-pollutant approach.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 7

Comment: Revised MACT floor determinations must account for the inherent variability in the fuel supplies.

EPA recognized in the proposed Boiler and Process Heater MACT (see the Boiler MACT Floor Memo) that it can and must consider variability in the fuel supply when determining the MACT floor emission standard for fuel-dependent HAPs. EPA has made no effort to account for the variability of cadmium, lead, mercury, sulfur, and chlorine fuel supplies in the proposed CISWI rule. Now that CISWI is expanding to include energy recovery units that burn fossil fuel such as coal, it is necessary for EPA to consider data other than performance tests when setting the MACT floor standards.

It is well known that coal is a variable fuel supply and that these fuel dependent pollutants will vary over time. We reference data submitted in Eastman's comments on the proposed Boiler and Process Heater MACT (75 Federal Register 31845; June 4, 2010) where we supplied several years worth of data on mercury and chlorine data on coal supplied to two of the powerhouses at our Tennessee facility. Also, we have enclosed with these comments data (see Excel file on CD enclosed with these comments) from the coal supply to a third powerhouse that houses the three coal-fired boilers that may be subject to CISWI. Figures 1 -4 are charts showing graphically the variation of sulfur, lead, mercury, and chlorine in this coal supply [See submittal for figures provided by commenter.] We do not detect cadmium in this coal supply.

Then, EPA should determine the UPL at the 99th confidence levels using all the data available for each top performing unit. Then, the average and 99% UPL concentrations should be determined for the group of top performers. Then, similarly to what EPA did in Appendix A-2c to the MACT Floor Memo, calculate the ratio of the group's UPL to the group's average and use that as the Fuel Variability Factor to multiply by the average emission level achieved by the top performers.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and on the MACT Floor Analysis Methodology (UL or UPL.)

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 2

Comment: The proposed rules lack a practical understanding of regional fuel differences. The approach of one-size fits all ignores the reality that natural gas is not available to some facilities such as ours. In addition, it appears that no attempt was made when setting limits or defining categories to look at the impacts of wood residuals in a marine environment which are very different from fuels not exposed to salt-laden air.

Response: See preamble Section V. for the response on the rationale for subcategories-energy recovery units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 3

Comment: EPA‘s use of a pollutant-by-pollutant approach, rather than a source approach to set limits also contributes to lack of achievability. EPA acknowledges that composition of fuel/feed materials is a key factor in a unit‘s emissions profile (75 FR 31951) but setting limits on a pollutant-bypollutant basis ignores that fact. The limits for each of the 9 pollutants are being set by different units burning different materials. In some cases, values of zero are being used in floor calculations, which is not appropriate, since there is no control technology capable of reducing emissions to zero. The emissions of a pollutant can only be zero if that HAP is not present in the fuel or feed.

In some instances, EPA has proposed a limit for a pollutant based on units that are not burning material capable of producing emissions of that pollutant. In the incinerator category, for example, the best performers for HCl, lead, and cadmium include units with no air pollution control devices. These units outperform units equipped with air pollution control systems because they are burning wastes with no significant amounts of chloride, lead, or cadmium. Units burning wastes with even modest content of these constituents will have a difficult or impossible challenge meeting standards set using this data.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 35.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 4

Comment: EPA should subcategorize CISWI units based on waste type and then on combustion technology as appropriate for combustion related pollutants.

EPA’s proposed CISWI subcategories (incinerators, energy recovery units, waste-burning kilns, burn-off ovens, and small, remote incinerators) are based on an assortment of differences including purpose, type, and size and geographic location, which EPA describes as “technical and other differences in the processes such as combustor design, draft type and availability of utilities” (75 FR 31951). None of these differences account for the most important distinction affecting most waste combustion emissions and emission control technology – the type and characteristics of the waste combusted. Each of EPA’s proposed subcategories includes groups of units combusting significantly different waste types, e.g., the energy recovery subcategory includes pulp and paper wastes, different types of waste wood, and other manufacturing process

wastes. It is unreasonable to expect that a unit combusting a given waste with its associated combustion characteristics and contaminant levels would be able to achieve an emissions

standard set using emissions data from a unit combusting a different waste type with different combustion characteristics and none or only trace amounts of the contaminants.

A striking example of EPA's inappropriate subcategories is found in the incinerator floor analysis where the best performers for hydrogen chloride (Table B-32), lead (Table B-33) and cadmium (Table B-30) include units with no air pollution control devices! These units are grouped with other units equipped with significant air pollution control systems yet they still outperform them. The only explanation is that the selected best performing units are combusting wastes with no significant chlorine, lead, or cadmium content. Units burning wastes with even modest contaminant content would have a difficult if not impossible challenge meeting standards set using data from these best performing units.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 5

Comment: EPA's energy recovery unit floor analysis for lead (Table B-23 of ERG Floor Memorandum) shows that the top performing units have extremely low lead emissions, yet these units are equipped with controls similar to that of lower performing ones. The improved performance of the top units is in part explained by the following table, derived by dividing each unit's lead emissions in Table B-23 by its particulate emissions in Table B-26.

Energy Recovery Units

Lead as % of

Particulate Matter

Best performing 12% units

0.017%

All units

0.227%

Worst performing 12% units

0.767%

As can be seen, the best performing units' particulate lead content was 13 times lower than the subcategory average and 45 times lower than the bottom 12% performers, indicating that the lead content of the waste combusted was much lower in the top performers.

[See submittal for table submitted by commenter illustrating the particulate lead content differences between the best and worst performing units.]

EPA's proposed subcategorization is insensitive to these types of waste characteristic differences.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 10

Comment: Consider that many of the regulated pollutants emitted from cement kilns do not originate from non-hazardous secondary materials, but rather from naturally occurring materials (i.e, limestone, clays, shales, etc) used as raw ingredients in the cement manufacturing process.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 10

Comment: EPA states in the CISWI preamble that "the composition of the materials combusted is highly variable and is a key factor in the profile of emissions" from incinerators. Therefore, although EPA determined it was not necessary to further subcategorize incinerators, the variability in emissions from the top performing incinerators should be examined and should be taken into account when setting standards. In fact, EPA has further recognized the impact of fuel characteristics on variability from these units under Boiler MACT by incorporating a fuel variability factor into the calculation of the proposed emission limits under that rule. For the very same reason, EPA should incorporate a fuel/feed pollutant content variability adjustment under the CISWI rule. The CISWI database contains fuel analysis data for many units, but it does not appear that this information was used. EPA should analyze the fuel analysis data and obtain additional fuel data from top performers to ensure the effect of fuel/feed variability on emissions is captured.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners

Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 17

Comment: EPA did not consider variability sufficiently in establishing floors under the Proposed Rule. EPA identifies in preamble that composition of materials used in CISWI units is highly variable and is a key factor in the profile of emissions. 75 FR 31951. This being said the test data only represents variability for those units when test data was taken, not for all operating conditions which may be typical for those units. In addition, there is a wide range of sources and materials used in other CISWI units from which no test data was used, so the factors unique to facilities outside the top 12% are not adequately accounted for.

Response: See preamble Section V. for the responses on rationale for subcategories and the MACT Floor Analysis.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 18

Comment: EPA recognized in the proposed Boiler and Process Heater MACT (see the Boiler MACT Floor Memo) that it can and must consider variability in the fuel supply when determining the MACT floor emission standard for fuel-dependent HAPs. EPA has made no effort to account for the variability of cadmium, lead, mercury, sulfur, and chlorine fuel supplies in the proposed CISWI rule. Now that CISWI is expanding to include energy recovery units that burn fossil fuel such as coal, it is necessary for EPA to consider data other than performance tests when setting the MACT floor standards.

It is well known that coal is a variable fuel supply and that these fuel dependent pollutants will vary over time. See Data and Comments submitted by Eastman Chemical Company on the proposed Boiler MACT and CISWI Rules. EPA needs to collect coal data either directly from the sources or from the suppliers that serve the top performers. If units do not have a large data set, then EPA should collect chlorine data available from the coal suppliers. Then, EPA should determine the UPL at the 99th confidence levels using all the data available for each top performing unit. Then, the average and 99% UPL concentrations should be determined for the group of top performers. Then, similar to what EPA did in Appendix A-2c to the MACT Floor

Memo, calculate the ratio of the group's UPL to the group's average and use that as the Fuel Variability Factor to multiply by the average emission level achieved by the top performers.

Once EPA sets the MACT floor emission standards in this way, EPA should allow compliance with the standard to be demonstrated using long term averages of the pollutant content in the fuel.

Response: See preamble Section V. for the responses on the MACT Floor Analysis. See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

4.22 Other - MACT Floor Analysis

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 18

Comment: I'll just add that one frustration is that a number of our mills spent a fair amount of money testing under Phase 2 as boilers, and because of this issue around what is a waste and a fuel, that data is not being used. So there is some very good data out there from facilities that were identified as top performers at the time of the ICRN testing whose data is not being used.

So we think the Agency can look outside the best performers to others that look very much like the best performers and have all the characteristics of the best performers and use that data given the relative paucity of the data set.

Response: See preamble Section V. for the response on the Role of States.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 5

Comment: The proposed MACT Standards did not take into account California's long history of comprehensive toxics control programs. ARB's statewide air toxics program was established in the 1983 under the Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner) which created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplemented the AB 1807 program, by requiring a statewide air toxics inventory as well as notification of people exposed to a significant health risk. Facilities that are

found to pose a significant health risk to the community are required to reduce their risk below the level of significance through a risk management plan. All HAPs identified by U.S. EPA are included in California's list of toxic air contaminants (TAC) and additional chemicals have also been added to the list by ARB, based on toxicity and potential exposure. Over 600 substances have been listed under the Act.

In addition, districts include a TAC review during the permitting process for new and modified facilities. Sources emitting TACs must comply with district requirements regarding risk assessment and risk management of TAC emissions. Screening analyses and health risk assessments are performed as part of the permitting process. In the case of unacceptable health risks, districts require mitigation to reduce the risk.

Since the goal of U.S. EPA in developing any MACT standard is to reduce public exposure to hazardous air pollutants, any analysis conducted should include consideration of existing state programs that accomplish or contribute to the same goal.

Response: See preamble Section V. for the responses on Biased Data Collection from Phase II ICR Testing and the MACT Floor Analysis.

5.0 BEYOND-THE-FLOOR

5.1 General comments on beyond-the-floor analysis

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 10

Comment: EPA Should Explain the Standards for Waste-Burning Kilns in a Form Comparable to the Standards Set in the Cement NESHAP to Comply with Its Obligations for Beyond the Floor Analysis.

The standards for pollutants from waste-burning cement kilns controlled by this proposed rule are expressed in a different form than the standards for other cement kilns set by the Cement NESHAP, e.g. lb/MM ton clinker (mass-based form) for mercury in the Cement NESHAP rule vs. mg/dscm (concentration-based form) in the proposed CISWI rule. EPA should express the standards for waste-burning cement kilns in the same form as the standards for other cement kilns because the comparison is essential to the beyond the floor determination that EPA must carry out for waste-burning kilns. Moreover, EPA should ensure that it does not create perverse incentives for kilns to emit more pollution or manipulate the standards.

An apples-to-apples comparison is essential to a reasoned beyond-the-floor analysis. If a lower emissions level is achievable for cement kilns that do not burn waste, it is also potentially achievable for those that do, and EPA must analyze that possibility. See 42 U.S.C. §§ 7412(d)(2); 7429(a)(2) (beyond-the-floor determinations center on achievability). Moreover, weaker standards for waste-burning kilns may create a perverse incentive for kilns to burn waste, which introduces more contaminants into the process and increases the risk of pollution. An accurate assessment is not possible unless EPA converts the CISWI standard to the forms used in the Cement NESHAP rule. For EPA to make a beyond-the-floor determination without comparing the standards in the two rules would be arbitrary. In addition, the use of the concentration form for mercury and particulate matter may create incentives for kilns to dilute concentrations but still emit large quantities of pollutants. A mass-based standard like the one set in the cement NESHAP rule would avoid such perverse incentives.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1

Comment Excerpt Number: 19

Comment: EPA's Beyond the Floor Analysis Is Arbitrary and Unlawful.

Section 129 of the Clean Air Act requires EPA to conduct a "beyond the floor" analysis that determines the maximum degree of emissions reductions "achievable" in light of considerations such as non-air quality health and environmental impacts, energy requirements, and costs of compliance. 42 U.S.C. § 7429(a)(2). EPA's decision (a) to consider only beyond the floor limits equal to the new source floors, and (b) to eliminate them as unachievable because they are not "cost-effective," is arbitrary and unlawful.

a. Pegging the Beyond the Floor Limits for Existing Sources to the New Source

Limits is Arbitrary.

Section 129(a)(2) of the Clean Air Act instructs EPA to determine the "maximum degree" of "achievable" emissions reductions based on certain criteria. Id. On its face, this statutory language suggests that there is a range of possible emissions reductions, and that the "maximum degree... achievable" will lie somewhere along the continuum of possible standards. There is a considerable range of possible emissions limits between the standards imposed on existing and new sources; EPA could have considered any number of standards within this range in assessing beyond the floor standards. Rather than inquire into the range of possible emissions reductions for existing sources, EPA evaluated only one potential beyond the floor standard: the new source floors. 75 Fed. Reg. at 31,956 (considering the proposed NSPS limits as the basis of the beyond the floor analysis for existing sources in each subcategory). Instead of examining multiple control technologies to determine what level of emissions reductions are "achievable" based on cost and other factors, the agency set numeric limits, equal to the new source floors, and then reasoned backward to find that none of the additional control technologies would make the new source floors "achievable" for all existing sources. Id. That evaluation is arbitrary and unlawful.

i. EPA's Decision Not to Apply Beyond the Floor Standards to Three Subcategories of CISWI Units Is Arbitrary and Unlawful.

For the incinerator, small remote incinerator, and burn off oven subcategories, EPA failed to conduct a proper beyond the floor analysis. First, EPA determined that the proposed MACT floor limits would cause some facilities to discontinue burning waste. 75 Fed. Reg. at 31,956/3, 31,958/1-2; Memorandum: Compliance Cost Analyses for CISWI Units, EPA Doc. No. EPAHQ-OAR-2003-0119-0054 at 12 ("Compliance Cost Memo"). Then, applying the arbitrarily chosen new source floor limits, EPA determined that all remaining units in these subcategories

would elect to shut down because the costs of compliance with the beyond the floor limits would be "unreasonable." Id. But EPA is required to determine the "maximum... achievable" emissions reduction, not to determine whether it is "achievable" to meet a certain predetermined limit. EPA's approach amounts to a policy decision in favor of certain units in these subcategories continuing to combust solid waste rather than limiting their emissions to the maximum extent achievable. EPA must perform a lawful beyond the floor analysis to determine the maximum achievable emissions reduction.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 24

Comment: Eliminating Beyond the Floor Limits on the Basis of "Cost-effectiveness" is Unlawful.

Section 129 of the Clean Air Act allows EPA to consider "cost" when setting the MACT floors. In its beyond the floor analysis, EPA measured the "incremental cost effectiveness" of various beyond the floor control options, and then declined to adopt them on the basis that they were not "reasonably cost-effective for all existing units." Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units, EPA Doc. No. EPA-HQ-OAR-2003-0119- 0057. However, cost-effectiveness is not a "metric" for cost, and §129 does not instruct EPA to render decisions on the basis of "cost-effectiveness," but on "cost."

Because § 129(a)(2) refers to "cost," not "cost-effectiveness," EPA's attempt to base beyondthe-floor decisions on its opinions about cost-effectiveness is unlawful. Cost and cost-effectiveness are different measures reflecting different concepts. Cost, necessarily, is a simple measure of how much money is needed to buy, install, or operate a particular control device, or, in the case of non-technological alternatives, what expense is incurred to implement a particular measure. Cost-effectiveness, as EPA uses the term, is a ratio of a measure's cost divided by the amount of a HAP that it reduces.

The Act makes clear that EPA's standards must reflect the "maximum degree of reduction" that is "achievable" considering the "cost of achieving such emission reduction" and other enumerated statutory factors. 42 U.S.C. § 7429(a)(2). Under this mandate, the only relevant questions regarding the cost of a measure are: (1) whether it is too costly to be "achievable"; and (2) whether it would yield additional reductions, so that EPA's standard would not reflect the

"maximum" achievable degree of reduction without it. Cost-effectiveness is not relevant to either of these questions.

The entire concept of cost-effectiveness is at odds with § 129(a)(2)'s mandate that beyondthe-floor standards reflect the "maximum... achievable" degree of reduction. Cost-effectiveness is an inherently subjective measure that compares expense with a benefit, the amount of pollution reduced. But § 129(a)(2) identifies and fixes the benefit side of the equation by

mandating the "maximum" degree of reduction that is achievable. By asserting discretion to set standards at a less protective level yielding not the maximum degree of reduction that is

"achievable" but, instead, the degree of reduction that EPA thinks is cost-effective, EPA alters the statutory mandate and defeats Congress's purpose. Indeed, by basing beyond-the-floor decisions on cost-effectiveness claims, EPA attempts to transform the relevant statutory inquiry into an open ended and wholly discretionary process that allows the agency to refuse to set beyond-the-floor standards whenever it claims that such standards are not sufficiently cost-effective.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 2

Comment: EPA can still strengthen the existing proposals to maximize net social benefits. In the final rulemakings, EPA should make the following changes:

Issue any additional or different "beyond-the-floor" standards that maximize net social benefits, as allowed by Section 112(d)(2) of the Clean Air Act and directed by Executive Order 12,866.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 3

Comment: EPA has overreached in crafting the proposed work practices and "beyond the floor" requirements. The energy assessment and management work practice requirements are too broad, too intrusive, and exceed the scope of EPA's authority for CAA MACT rules. EPA should more narrowly tailor these requirements.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 4

Comment: EPA has not performed any of the requisite analysis required by Section 111 relating to new source performance standards.

CRWI believes that construing § 111 in para materia means that § 129 standards must be "achievable" through application of the best system of emission

reduction that EPA determines has been adequately demonstrated. EPA has not made any such demonstration. Instead, EPA has taken emission test data from any of the sources and accepted it

as reflecting what has been "achieved" for the purpose of § 129, and that it comes from a system of emission reduction that has been adequately demonstrated.

Section 111 requires that EPA consider the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements be taken into account. There is no evidence EPA has done so.

EPA may believe it can escape this analysis when setting floor standards since analysis of BDT is akin to setting beyond-the-floor standards. CRWI does not agree. CRWI asserts that EPA cannot ignore the requirement in § 111 to consider other factors when EPA sets floor standards. Section 129 floor standards provide a minimum level of stringency based on what has been achieved. Consequently, conducting an analysis required for more stringent "beyond-the-floor" standards is not in conflict with the floor provisions, and must be done, to accommodate the requirements of § 111. In that way, if EPA establishes floor standards, EPA can affirm that these standards also meet the requirements of § 111.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 5

Comment: Section 112(d) Gives EPA Legal Authority to Pursue Welfare-Maximizing Regulations

Section 112(d)(2) requires emissions standards to reflect "the maximum degree of reductions in emissions. . . that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable." The stringency of EPA's beyond-the-floor regulations therefore depends on the definition of "achievable." Statutory structure and legal precedent suggest that EPA has authority to define "achievable" in light of costs and benefits.

In the past, EPA has interpreted Section 112(d)(2) not to require consideration of the full range of benefits from curtailing HAP emissions. In Sierra Club v. EPA (2004), the D.C. Circuit accepted that interpretation, finding that the phrase "non-air quality health and environmental impact" did not require consideration of the negative social effects from the deposition of HAP emissions.[Footnote: 353 F.3d 976, 990 (D.C. Cir. 2004). Instead, "non-air quality health and environmental impacts" meant any negative social effects caused by industry compliance with potential regulation, not those effects caused by the original pollution.]But EPA's past interpretations do not preclude rethinking the appropriate definition of "achievable." The Sierra Club decision was largely based on deference to an agency interpretation of an ambiguous term. Under the Supreme Court doctrine established by Chevron v. NRDC, courts will uphold any reasonable agency interpretation of an ambiguous term, regardless of whether it is the "best" or "most reasonable" interpretation. [Footnote: Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 843-844 (1984).] So long as the reinterpretation is neither arbitrary nor

capricious, it is perfectly acceptable for EPA to issue another reasonable interpretation of Section 112(d)(2)[Footnote: See Nat'l Cable & Telecomm. Assoc. v. Brand X Internet Services, 545 U.S. 967 (2005) (explaining that Chevron review applies to agency changes of legal interpretations, quoting Chevron, 467 U.S. at 865-66); id. at 981-82 (Rehnquist, J., concurrent in part, dissent in part) (explaining that changes in administration are legitimate grounds for changing agency interpretations).]—for example, one that balances costs and benefits.

The Court in Sierra Club also believed that the Clean Air Act's statutory structure indicated that Section 112(d) required technology-based instead of risk-based regulations, but that framework is not inconsistent with defining "achievable" in light of costs and benefits. Specifically, Sierra Club found:

[T]here is no apparent reason to suppose that Congress would have required immediate consideration of health and environmental impacts caused by, say, deposition of HAPs,

while postponing consideration of the more direct health and environmental impacts caused by emission of HAPs into the air until the second stage of standard promulgation under the CAA. As discussed, the 1990 Amendments established a two-phase approach to

promulgating emission standards. The first phase—at issue in this case—requires a technology-based approach. [CAA § 112(d).] The second phase occurs eight years later and involves a risk-based approach. [CAA § 112(f)(2)(A)]("Emissions standards promulgated under this subsection shall provide an ample margin of safety to protect public health. . ."). That risk-based analysis requires EPA to consider, inter alia, public health and adverse environmental effects—precisely what Sierra Club contends EPA must consider now with respect to non-air quality impacts. Sierra Club's interpretation would collapse the technology-based/risk-based distinction at the heart of the Act, undermining the central purpose of the 1990 Amendments—to facilitate the near-term implementation of emission standards through technology-based solutions. In doing so, that interpretation would reintroduce the very problem Congress sought to exorcize—that the pursuit of the perfect (risk-based standards) had defeated timely achievement of the good (technology-based standards). EPA's reading of the statute is reasonable.[Footnote: 353 F.3d at 990.]

First, the distinction between requiring the consideration of "direct health and environmental impacts" and allowing their consideration should be emphasized. Section 112(f) requires the consideration of these impacts, but Section 112(d)(2) certainly allows them. Recently, in Entergy v. Riverkeeper, the Supreme Court affirmed that just because a statute does not require analysis of costs or benefits does not necessarily mean an agency cannot perform cost-benefit analysis.[Footnote: 129 S.Ct. 1498, 1509 (2009).]

Second, Entergy more generally supports the proposition that broad statutory language allows EPA to weigh the social costs and benefits of regulation unless doing so is directly contrary to the statute. The text of Section 112(d) explicitly requires the consideration of costs, [Footnote: Additionally, it should be noted that "non-air quality health and environmental impacts" are societal costs and are not experienced by the parties themselves.]and no language in Section 112(d) prohibits the consideration of benefits. To the contrary, Section 112(d)(4) indicates that EPA is allowed to consider benefits: if a pollutant has an established health threshold, such that additional emissions reductions will not deliver additional health benefits, EPA may consider that benefits threshold when determining which standards are the "maximum. . . achievable" required under Section 112(d)(2). [Footnote: CAA § 112(d)(4) ("With respect to pollutants for

which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection.”).] In order words, the statute explicitly allows

consideration of benefits when defining “achievable” in certain contexts, and so does not prohibit consideration of benefits. Given the broad statutory language, the lack of a prohibition, and the overall purpose of the statute—“to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population”[Footnote: 42 U.S.C. § 7401(b)(1).] —EPA has authority to interpret Section 112(d) to allow the consideration of costs and benefits.

Finally, some consideration of costs and benefits under Section 112(d) will not disrupt the structural distinctions found by the Court in Sierra Club. Section 112(f) remains a different, risk-based provision, in particular because its language on public health standards almost certainly excludes consideration of costs, under Whitman v. American Trucking Association. The operative language of Section 112(f) is:

Emission standards promulgated under this subsection shall provide an ample margin of safety to protect public health. . .unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.[Footnote: CAA § 112(f)(2)(A).]

Obviously, this subsection requires consideration of costs when determining whether a more stringent environment-based standard is required, but it does not require consideration of costs in determining the standard based on public health. In American Trucking, the Supreme Court ruled that Section 109 of the CAA (with language similar to Section 112(f)’s public health-based standard)[Footnote: Compare CAA § 109(b)(1) (“National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.”).]precluded the consideration of costs. [Footnote: 531 U.S. 457 (2001).]More generally, American Trucking stands for the proposition that, depending on statutory context unique to certain sections of the CAA, neglecting to require the consideration of costs—as in the first part of Section 112(f)—may be tantamount to prohibiting the consideration of costs.[Footnote: In Entergy v. Riverkeeper, this more general proposition is explained: “In American Trucking, we held that the text of

§ 109 of the Clean Air Act, ‘interpreted in its statutory and historical context. . .unambiguously bars cost considerations’ in setting air quality standards under that provision. The relevant ‘statutory context’ included other provisions in the Clean Air Act that expressly authorized consideration of costs, whereas § 109 did not.” Entergy, 129 S.Ct. at 1508 (citation omitted).]

The interpretation described above would maintain a four-part structure when applying Section 112(d) and Section 112(f) together. Section 112(d)(3) mandates a technology-based floor. Section 112(d)(2) gives EPA discretion to go beyond this floor, to achieve the “maximum degree of reduction. . .achievable” in light of costs and benefits. Section 112(f)(2)(A) then has two parts: first, a health-based standard where EPA is prohibited from considering costs; and second, an environmental risk-based standard where EPA must consider costs to determine whether to go beyond the health-based standard. This interpretation preserves Sierra Club’s distinction between the two stages of the standard-setting process.

The D.C. Circuit's other concern in Sierra Club was the timely promulgation of standards under Section 112(d). EPA should already have all the data it needs to reconsider whether additional or different beyond-the-floor standards would better maximize net social benefits. This change should not appreciably disturb the 2013 timeline for requiring compliance with the new standards.

In addition, EPA may be foregoing significant net benefits for every year after 2013 by under-regulating. Surely it would be worth a small delay to ensure that this does not happen.

To conclude, EPA has legal authority to reinterpret the language of Section 112(d) to allow the consideration of costs and benefits when selecting the maximum emissions reduction achievable. As shown in the next section, given administration-wide policy, EPA should exercise that authority to maximize net social benefits under Section 112(d).

Administration Policy Requires EPA to Pursue Welfare-Maximizing Regulations

Given the rationales for public regulation of private entities and the directives of Executive Order 12,866, EPA should interpret Section 112(d) to allow the agency to set all emissions standards that maximize net social welfare.

Typically, entities will not voluntarily reduce their own HAP emissions because they do not pay the full costs of those emissions. Air pollution is a classic "negative externality": the harmful effects of pollution are mostly felt by members of the public who cannot directly influence the production of that pollution. Basic micro-economics holds that when an entity does not pay for an effect it

produces, its optimal behavior will not take that effect into consideration. In the status quo, major and area sources of HAP do not pay for the full effect of their emissions. [Footnote: Some entities that will be regulated under the rule may currently pay for emissions which are correlated with the emission of HAP (e.g., sulfur dioxide). While this may encourage some reductions in HAP, it will not necessarily lead to the optimal amount of reductions.]Because there are positive costs (both health effects and environmental effects) from the emission of HAP and regulated entities are not paying for these costs, these entities are currently "over-producing" HAP emissions.

The existence of a negative externality does not necessarily dictate that all HAP emissions must be eliminated. Rather, society should be willing to pay for any change which produces higher benefits than costs. The costs of regulating HAP emissions will be passed from individual sources to society as a whole in a variety of ways: consumers may face higher prices as the cost of production rises; business owners and investors may lose income as regulated entities lose profits; government entities that operate regulated boilers may have to increase taxes or decrease their expenditures in other areas. A wide variety of benefits will counteract these costs, including decreased mortality from lower particulate matter emissions. If the benefits of the proposed rule are higher than the costs, society as a whole is better off.

The goal of maximizing net benefits is enshrined in administration-wide policy under Executive Order 12,866. The Order directs federal agencies to "assess all costs and benefits of available regulatory alternatives" in deciding how to regulate, and then "select those approaches that maximize net benefits. . . unless a statute requires another regulatory approach."[Footnote: Exec. Order No. 12,866 §1, 58 Fed. Reg. 51,735 (1993).] Since, as demonstrate above, EPA has

statutory authority to consider net benefits under Section 112(d), the directives of Executive Order 12,866 apply.

More Stringent Standards Are Likely Required to Maximize Net Benefits

If more stringent standards did not increase social welfare, EPA would be justified in solely using the "MACT floor" emission standards, as determined by Section 112(d)(3). But the figures presented in the EPA's regulatory impact analysis ("RIA") indicate that this may not be the case.

High ratios of benefits to costs may indicate under-regulation. Figure 1 shows a graphical depiction of the marginal costs and benefits of a hypothetical optimized regulation, where the stringency of the regulation has been set to equalize marginal costs and marginal benefits. [See submittal for Figure 1 provided by commenter illustrating a graphical depiction of the marginal costs and benefits of a hypothetical optimized regulation, where the stringency of the regulation has been set to equalize marginal costs and marginal benefits.] Area A (the area underneath the marginal cost curve) represents the total social costs of the regulation. The combination of Areas A, B, and C (the total area underneath the marginal benefit curve) represents the total social benefits of the regulation. In this simple linear example, this gives a ratio of 3:1 for total benefits to total costs.

By contrast, Figure 2 shows a graphical depiction of the marginal costs and benefits of a hypothetical scenario of under-regulation, where marginal costs have been set well below marginal benefits. [See submittal for Figure 2 illustrating a graphical depiction of the marginal costs and benefits of a hypothetical scenario of under-regulation, where marginal costs have been set well below marginal benefits.] Area D (the area underneath the marginal cost curve) represents the total social costs of the regulation. The combination of Areas D, E, and F (the total area underneath the marginal benefit curve) represents the total social benefits of the regulation. In this example, the ratio of total benefits to total costs is 7:1.

These twin examples show how under-regulation leads to a higher ratio of total benefits to total costs.

Table 1 shows the costs and benefits of the Major Source Proposal and Area Source Proposal at a discount rate of 7%.[Footnote: Note that choosing the higher discount rate minimizes the ratio in this case.][See submittal for Table 1 illustrating Total Costs and Benefits of Proposed Major and Area Source Rules at 7% Discount Rate provided by commenter.]

Given the range of benefit estimates, the ratio of benefits to costs is between 5 and 13 for the Major Source Proposal and between 1.8 and 4.4 for the Area Source Proposal. As demonstrated by the simple example above, this may indicate that the agency is under-regulating in at least the Major Source Proposal. The RIA also excludes many highly significant benefits categories that the agency did not have the time or analytical ability to quantify. [Footnote: For example, the RIA concentrates on the health effects related to particulate matter reductions, and "[t]he benefits from reducing hazardous air pollutants have not been monetized in this analysis, including reducing 370,000 tons of carbon monoxide, 37,000 tons of HCl, 1,000 tons of HF, 8.3 tons of mercury, 3,400 tons of other metals, and 1,200 grams of dioxins/furans each year." RESEARCH TRIANGLE INSTITUTE, RTI PROJECT NUMBER 0209897.004.074, REGULATORY IMPACT ANALYSIS: NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS

AND PROCESS HEATERS at 6-1 (Draft Report, Prepared for EPA, Apr. 2010) [hereinafter RIA].]This means that the true benefit-to-cost ratios are almost certainly higher than those indicated by the table.

While the RIA indicates that there are no additional benefits from regulating major sources with heat input capacity under 10 MMBtu/hr, [Footnote: Id. at 6-31.]this does not show that the costs of additional emissions standards on sources with heat input capacity over 10 MMBtu/hr are higher than the benefits. EPA should analyze whether alternative regulatory structures—in light of all quantified and unquantified benefits—would better maximize net benefits.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 45

Comment: Beyond-the-Floor Analysis Shows Unreasonable Costs

SYA agrees with EPA that any beyond-the-floor analysis for this rule for the cement kiln subcategory shows that beyond-the-floor standards are not cost effective. As the RIA concludes, for some of the pollutants there are no control technologies available to further reduce emissions and for others, the emission reductions would require a level of control

that would be unreasonably expensive and would result in units ceasing to combust wastes in cement kilns. We concur with EPA's assessment that, "... the incremental costs of additional control above the MACT floor emission limits are not reasonable relative to the level of emission reduction achieved."[Footnote: 75 FR 31959.]

We must reiterate, however, that even at the floor level, it is most likely that cement kilns will abandon the use of secondary materials rather than be inappropriately regulated as solid waste incinerators.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

5.2 Beyond the Floor: Additional Controls and control combinations that should be considered

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Commenter Name: Marshall D. Moore
Commenter Affiliation: Chemtura Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2098.1
Comment Excerpt Number: 1

Comment: Chemtura Corporation (Chemtura) is providing comments to the above-referenced proposed rulemaking for consideration by the United States Environmental Protection Agency (EPA). In general, Chemtura is providing the EPA with information regarding the use of calcium bromide as a cost-effective means of reducing mercury emissions from coal-fired combustion sources. Calcium bromide has been demonstrated to effectively oxidize elemental mercury so that it can be better controlled by traditional air pollution control devices (e.g., fabric filters; electrostatic precipitators; flue gas desulfurization units; etc).

Chemtura's comments consist of a White Paper prepared by Chemtura that summarizes the calcium bromide technology and some additional papers that discuss calcium bromide technologies as well as activated carbon injection and other mercury control options. Chemtura includes the following for your consideration:

* [See DCN: EPA-HQ-OAR-2003-0119-2098.4 for Chemtura White Paper on Calcium Bromide Technology for Mercury Reductions (August 2010)]

* [See DCN: EPA-HQ-OAR-2003-0119-2098.3 for Bromine-enhanced Mercury Abatement from Combustion Flue Gases –Recent Industrial Applications and Laboratory Research, Vosteen, et.al. (2006)]

* [See DCN: EPA-HQ-OAR-2003-0119-2098.2 for Southern Company Evaluates Novel, Cost-Effective Mercury Control Technologies, EPRI Success Story (2009)]

In addition to the attached papers, we encourage the EPA to consider the benefits of calcium bromide reported by NESCAUM in section 1.3.1 of "Technologies for Control and Measurement of Mercury Emissions from Coal-Fired Power Plants in the United States: A 2010 Status Report" available on-line at: http://www.nescaum.org/topics/mercury

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 57

Comment: EPA seeks comment on any control combinations that would support a beyond-the-floor standard, and indicates that it "may adopt beyond-the-floor options for the final rule if any that are identified are determined to be reasonable." 75 FR 31956. CIBO members know of no combinations of controls for boilers by which those units could reduce their emissions beyond the proposed floors. In the event, however, that EPA determines that such combinations are possible, and develops a beyond-the-floor MACT, EPA will need to provide another opportunity for notice and comment rulemaking so sources can determine whether such standards are achievable. Any newly proposed beyond the floor standards would not be "logical outgrowths" of EPA's proposed rule [Footnote: See Envtl. Integrity Project v. EPA, 425 F.3d 992, 996 (D.C. Cir. 2005); Shell Oil Co. v. EPA, 950 F.2d 741, 750- 51 (D.C.Cir.1991)]

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

5.3 Beyond the Floor: Intermediate levels of control that should be considered

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 45

Comment: In the proposed rule, EPA notes that several of the MACT floor limits for energy recovery units and waste burning kilns under the alternative approach are not as stringent as the proposed rule, and that intermediate levels of control above the floor may be reasonable under that alternative approach. Therefore, it cannot be assumed that the identified initial alternative approach floors would be promulgated, but rather that above the floor lower emission limits could realistically result. 75 FR 31959

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor. Further, see preamble Section II.C. for a discussion on how the solid waste definition is addressed in the final rule.

5.4 Beyond the Floor: Feasibility: NOx controls

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 21

Comment: EPA's Beyond the Floor Analysis for NOx Is Arbitrary and Unlawful.

EPA's beyond the floor analysis for NOx is defective and arbitrary to its analysis for CO. EPA admits that SNCR technology can achieve 30-50% reductions in NOx emissions, and that this may already reduce emissions below the proposed floor for existing sources. See 75 Fed. Reg. at 31,957. EPA does not state why it cannot base a beyond the floor standard on the 30-50% reduction that is achievable by SNCR alone, and instead evaluates existing sources' ability to meet the new source floor limits (upon which the beyond the floor standards were arbitrarily predicated). Id. EPA then dismisses the standard as unachievable because it would likely involve "significant modifications at considerable cost" for some units. Id. As discussed above, EPA provides no support for its assumption that beyond the floor standards must be achievable by all existing units. The possibility that some units may have to expend some unspecified sum, even if "considerable," to install combustion controls does not make a standard based on SNCR and combustion controls unachievable.

EPA also rejects selective catalytic reduction technology (SCR) on the basis that it is "not aware of any successful applications of SCR technology to waste-combustion units," and opines that

this may be due to the presence of sulfur or PM in the gas stream. Id. This argument is disingenuous. As with its faulty logic about the suitability of oxidation catalysts for waste-burning kilns, EPA assumes that a practice is not feasible because it has not previously been used in a category or subcategory. This assumption is arbitrary. Furthermore, the proposition that SCR would be unsuitable for NOx reduction in waste-combustion units due to sulfur and PM in

the gas stream is utterly without basis in the record and belies the fact that SCR is a commonly employed NOx control in coal-fired boilers where sulfur and PM occur in abundance. See EPA, Air Pollution Control Technology Fact Sheet, SCR, EPA-452/F-03-032.[See DCN:EPA-HQ-OAR-2003-0119-2027.11 for attachment provided by commenter.] NOx reductions through use of SCR may be achievable regardless of whether SCR is currently deployed on waste combustion units. SCR does not have to be "adequately demonstrated" for the particular subcategory to be considered as a beyond the floor control option.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

5.5 Beyond the Floor: Feasibility: CO controls

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 4

Comment: The Proposed Rule relies on Carbon Monoxide emissions as a surrogate for organic HAP emissions. While this may seem to be a logical and simplified approach, Boilers and Process Heaters must also achieve Nitrogen Oxides emissions limitations. Forcing higher oxygen levels in combustion units to achieve extremely low Carbon Monoxide emissions limitations will make compliance with Nitrogen Oxides emissions limitations more difficult, if not impossible.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor. Also, see preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 20

Comment: EPA's Beyond the Floor Analysis for Carbon Monoxide Is Arbitrary and Unlawful.

For incinerators, small remote incinerators, and burn-off ovens, EPA claims to have evaluated whether the new source standards for carbon monoxide (CO) could be met by means of using "afterburner retrofits, tune-ups, advanced combustion controls or catalytic oxidation." 75 Fed.

Reg. at 31,957/1. However, EPA provides only a cursory and misleading discussion of the feasibility of these control options. See Compliance Cost Memo at 9-12. One can only assume that the outcome of EPA's analysis results from the agency's blanket dismissal of

beyond the floor limits based on the new source floors for these subcategories. EPA's abdication of its obligation to determine the maximum level of emissions reductions achievable for each subcategory is arbitrary and unlawful.

For waste-burning kilns, EPA considered oxidation catalysts and regenerative thermal oxidizers (RTOs) as potential controls to meet the beyond the floor limits that it arbitrarily pegged to the new source floors. The agency rejects oxidation catalysts because they "have not been applied to waste-burning kilns and may not be as effective on waste-burning kilns as they are on other sources." 75 Fed. Reg. at 31,957/1. EPA's presumption that a practice is not feasible because it has not previously been used in a category or subcategory is arbitrary and unlawful and belies the agency's previous position that considering transfer of technology from one industry to another is appropriate.

EPA is accustomed to assessing pollution-control technologies used in one category for use in other pollution-control contexts. See, e.g., Kennecott v. EPA, 780 F.2d 445, 453 (4th Cir. 1985) (in the setting of Clean Water Act best available technology); NRDC v. EPA, 655 F.2d 318, 331 (D.C. Cir. 1981) (applying general considerations of technology prediction, including transfer of technology in use in other industries, to Clean Air Act determinations). Furthermore, EPA has stated its belief that Congress's "intent is to consider transfer technologies [across source categories] when appropriate." Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources; Final Rule, 61 Fed. Reg. 68,384–85 (Dec. 27, 1996) ("HAP Rule") [See DCN: EPA-HQ-OAR-2003-0119-2027.10 for attachment provided by commenter.] In the HAP Rule, EPA asserted that technology transfer was an appropriate consideration in setting new source floors—if transfer is appropriate in setting floors, than surely it must be a valid consideration when looking beyond the floor.

Just as arbitrary is EPA's rejection of oxidation catalysts merely because they "may not be as effective" for waste-burning kilns. This speculative statement not only betrays a failure to actually assess the applicability of the technology to waste-burning kilns, it fails to explain why not being "as effective" renders the technology unachievable if it reduces emissions beyond the floor.

EPA dismisses RTOs as suitable beyond the floor controls, citing cost-effectiveness and adverse energy and environmental impacts, but fails to explain why these factors make standards based on the technology unachievable. 75 Fed. Reg. at 31,957. EPA's failure to explain why such standards are unachievable is arbitrary and unlawful.

For energy recovery units, EPA dismisses beyond the floor standards, concluding "we are unaware of any technology that is able to continuously meet a 3 ppm CO limit [the new source limit] for all existing energy recovery units." Id. EPA's choice of an arbitrary 3 ppm target is unlawful and arbitrary, as is the agency's interpretation of the beyond the floor provision as requiring that a standard be achievable for all units in a subcategory. There is a large gap between the proposed existing (150 ppm) and new (3 ppm) source standards for CO. Yet EPA fails to consider whether any other level of emissions reductions between the two proposed standards would be achievable. Nor does EPA justify its assumption that the beyond the floor standard has be to achievable for all units in the subcategory. The statute contains no such

requirement. 42 U.S.C. § 7429(a)(2). Finally, EPA acknowledges that the best performing unit may have been able to achieve 3 ppm CO because of fuel composition and other factors, yet fails to consider fuel switching as a beyond the floor control option. See Compliance Cost Memo at 11. EPA's failure to examine intermediate emissions reductions or consider alternative control options, and its elimination of possible control technologies because of requirements that are not justified by the record, is arbitrary and unlawful.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor. Also, see preamble Section V. for the response on the rationale for subcategories-burn off ovens.

5.6 Beyond the Floor: Feasibility: HCl and SO2 controls

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 22

Comment: EPA's Beyond the Floor Analysis for SO2 Is Arbitrary and Unlawful.

For SO2, EPA only considers beyond the floor options for waste-burning kilns; it does not discuss the other types of units at all. See 75 Fed. Reg. at 31,957–31,958; Compliance Cost Memo at 11. The failure to consider beyond the floor options for other units is unlawful. See 42 U.S.C. 7429(a)(2).

For possible beyond the floor SO2 controls for waste-burning kilns, EPA discusses the option of increasing the amount of caustic or lime used in scrubber devices. Rather than quantifying how much emissions could be reduced based on given inputs of caustic or lime, EPA vaguely states that "there are limits to the amounts of additional caustic or lime that are technically

feasible," and refuses to consider actual achievable reductions. See 75 Fed. Reg. at 31,957. This is arbitrary and unlawful. Next, EPA discusses the possibility of adding serial scrubbers on existing units, which it states would reduce emissions. Id. However, rather than fulfill the mandate of § 129 by engaging in a consideration of the impacts of requiring additional scrubbers, EPA blithely concedes that it "did not quantify the costs," but "concluded... that this level of control would post unreasonable costs that would result in units ceasing to combust wastes in

kilns." Id. Without further analysis, EPA has an inadequate basis for its conclusions, and the abdication of its statutorily mandated duty is arbitrary and unlawful.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

5.7 Beyond the Floor: Feasibility: PM, Cd and Pb controls

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 23

Comment: EPA's Beyond the Floor Analysis for Particulate Matter Is Arbitrary and Unlawful.

For particulate matter (PM) control, EPA only evaluated beyond the floor pollution control technologies for waste-burning kilns and energy recovery units, relying on its presumption that the other subcategories would shut down rather than adopt additional control measures. 75 Fed. Reg. at 31,958.

EPA clouds its beyond the floor analysis for PM by relying on its assertion that the controls that "would likely" be employed to meet MACT floor limits for metals—fabric filters and

"possibly" membrane bags—are the best available form of PM control. Id. But § 129 requires EPA to set separate standards for PM and metals that each satisfy the beyond the floor analysis requirements. Rather than determining the lowest levels of PM emissions achievable if fabric filters or bags were required, and setting a beyond the floor limit based on that requirement, EPA simply states that no additional controls are available that would enable all existing units to meet the new source limits the agency arbitrarily set as the beyond the floor limits. EPA fails to evaluate any intermediate emissions reductions. EPA also again fails to justify its assumption that all sources in a category must be able to meet the beyond the floor standard. This is arbitrary and unlawful.

For energy recovery units, EPA does pay lip service to an alternative PM control measure (cartridge filtration), but it again fails to quantify the costs and states in conclusory fashion that upon review of the cost information, EPA determined that costs would be "unreasonable." Id. EPA does not explain why the costs are unreasonable, what the cost information showed, or why any of the cost information renders the control measure unachievable. This fails to meet the requirements of § 129 and is arbitrary and unlawful.

For the other subcategories, EPA fails to evaluate any control technologies at all, instead merely estimating the costs of attaining the new source floor limits it arbitrarily considered to be the beyond the floor limits and concluding that those costs are unachievable. See id. For none of these subcategories does EPA evaluate any intermediate beyond the floor limits. See id. The failure to analyze achievable beyond the floor PM pollution controls for the other three subcategories makes EPA's analysis inadequate, arbitrary and unlawful.

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

5.8 Beyond the Floor: Feasibility: Hg and dioxin/furan controls

Commenter Name: Linda Allen-Tawes
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0149
Comment Excerpt Number: 1

Comment: I remember the "Blue Goose", an incinerator that was able to burn dioxin. Couldn't the companies use something like that?

Response: See preamble Section V. for the response on control technology assumptions in the floor and beyond-the-floor.

6.0 RATIONALE FOR REGULATED POLLUTANTS

6.1 Rationale for Regulated Pollutants: Surrogates

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 25

Comment: PM does NOT meet any of the three Court-defined criteria for HAP metal surrogacy

The EPA's proposed rule incorrectly continues the use of PM as a surrogate for HAP metal emission limits without reconsidering whether continuing to use this surrogate is still "scientifically reasonable." National Lime at 637. The EPA relies on National Lime where the Court upheld the EPA's use of PM as a surrogate for HAP metals in the original Portland Cement NESHAP promulgated in 1999. In a 2000 case and others, the Court of Appeals established a three part test for surrogacy based on their earlier ruling in National Lime. Sierra Club v. EPA, 353 F.3d 976 (D.C. Cir. 2004)("Copper Smelter MACT").

All three criteria must be met to use PM as a surrogate for HAP metals. These criteria are:

* "...PM control technology indiscriminately captures HAP metals along with other particulates." (Subsection 3.2.2)

* "...PM control is the only means by which facilities "achieve" reductions in HAP metal emissions..." (Subsection 3.2.3)

* HAP metals are not invariably present in PM emissions from CISWI.

However, despite the Court of Appeal's decision to uphold the use of a surrogate in 2000, the Court has repeatedly cautioned the EPA both in National Lime and more recent cases to reconsider whether PM is an appropriate surrogate for HAP metals. See Natural Resource Defense Council v. EPA, 489 F. 3d 875, 882-883 (D.C. Cir. 2007) ("Brick MACT").

Specifically, the Court has directed EPA to consider whether PM is still a good surrogate in light of the potential impact upon emissions that changes in inputs to the cement manufacturing process can have, especially the possibility of fuel switching. In National Lime the Court states that:

"In considering the role of inputs, the EPA must also assure itself that the fuels and other inputs affect HAP metal emissions in the same fashion that they affect the other components of PM. For example, PM might not be an appropriate surrogate for HAP

metals if switching fuels would decrease HAP metal emissions without causing a corresponding reduction in total PM emissions."

National Lime at 639.This latter possibility noted by the Court is clearly the case since reducing HAP metal concentrations from their current levels in feed and fuel to zero would essentially reduce HAP metals to zero in the emissions (reducing HAP metals concentrations by many orders of magnitude) while having essentially no impact on PM emissions. It is clear that the Court intends for the EPA to consider all aspects of the Portland Cement Manufacturing (PCM) processes including primary input feedstock as well as fuels and additives to reduce such things as corrosion and improve control efficiencies for both PM and vapor phase species like mercury. Clearly, in processes like solid waste incineration where concentrations of hazardous metals in feed materials can vary by many orders of magnitude while PM remains relatively constant, monitoring of PM provides no useful indication of hazardous metals.

It needs to be emphasized that the Court in reaching its conclusion supporting the EPA's use of PM as a surrogate for HAP metals, specifically qualified its support by defining the kind of HAP metal; i.e. non-volatile HAP metals. National Lime at 628 and 637. In addition the EPA used this qualifier in its arguments to the Court (EPA, 2000) and the only way the EPA's justifying statements in its brief (EPA, 2000) could be technically correct is by restricting the discussion to non-volatile HAP metals; i.e. those metals having an insignificant (<<1%) fraction of its mass in the vapor phase at the temperatures of PM control. It needs to be noted that in this current proposal, the EPA has defined the specific metals it is referring to: arsenic, beryllium, cadmium and lead, calling them non-volatile HAP metals. (Section II A) In Section II B it justifies its use of a surrogate (PM) for non-volatile HAP metals referring to the National Lime case. It is thus important to note that the EPA has restricted its reference to non-volatile HAP metals, but the elements it herein defines as non-volatile (arsenic, beryllium, cadmium and lead) have not been previously referred to as non-volatile by the EPA, nor has the EPA provided herein or else where data that can justify classifying these elements as non-volatile.

On the contrary, the EPA has previously referred to cadmium and lead as semi-volatile HAP metals, arsenic and beryllium as low volatile metals, and published reports supporting this latter classification. (EPA, 2008) In fact the EPA has even referenced tables in its own reports that would suggest that none of these metals could be classified as non-volatile by the above definition. (Tables 13-6 and 13-7, EPA 1998a) In the 18 ESP tests conducted on coal-fired utility boiler emissions, the lowest trapping efficiencies ranged from 94, 27, 0, 93, 34, 95, and 0% for arsenic, beryllium, cadmium, chromium, lead, manganese and mercury while the mean trapping efficiencies were 98, 94, 80, 97,93, 98 and 25% respectively. For fabric filters, the minimum reported trapping efficiencies were 97, 94, 0, 75, 97, 95, and 0% while the mean trapping efficiencies were 99, 99, 72, 94, 99, 98, and 36%, respectively. This EPA data clearly suggests a significant mass fraction of these metals is present in the vapor phase. In addition, there has been

a continuing concern for vapor phase arsenic poisoning DENOX catalyst (Gutberlet, 1988). As such, the classification of these elements as non-volatile HAP metals is incorrect, both based on the EPA's own data as well as EPA's previous use of these terms and the published literature. (Germani and Zoller, 1988; Clark and Sloss, 1992). The above would suggest there is no court support for using PM as a surrogate for low or semi-volatile HAP metals; i.e. arsenic, beryllium, cadmium and lead. However, even if the non-volatile classification were to apply, none of the specific criteria the Court has laid out to guide the EPA are satisfied for all non-mercury HAP metals as will be shown below, thus eliminating any justification for using PM as a surrogate for urban HAP metals.

HAP metals are NOT invariably present in PM from CISWI

A significant fraction of HAP metals such as Hg, Se, As, Cd, Pb etc. can be found in the vapor phase. As such, they will be removed in PM controls with varying efficiencies as noted above. The fine particle fraction of PM will be enriched in these HAP metals, which in turn is removed in PM controls with lower efficiency than coarse particles. In a process-controlled operation like CISWI, trace species like HAP metals can vary by orders of magnitude in the feed material while major species are controlled in the process and will vary by only a few percent. Thus, even though PM removal efficiency can be relatively constant, minimizing individual HAP metals in emissions will require a complex optimization of feed material, control of processes as well as

selection of optimum control technology for both PM and vapor phases. As a result, even though urban HAP metals including Hg, Se, As, Cd, Pb, etc. can be found in PM, their individual concentrations will be highly variable and depend on the above noted conditions.

PM control technology does NOT indiscriminately capture HAP metals along with other particulates

PM control technology preferentially removes larger particles over fine particles and vapor.

As noted above, HAP metals are expected to be enriched in the fine particle fraction of PM and to have a significant fraction (>1%) of its mass in the vapor phase. This is indeed what was shown in the above noted reference and tables. (EPA 1998a) While the HAP metals exhibited widely varying removal efficiencies (beryllium from 27 to 99%, cadmium from 0 to 98%, lead from 34 to 99%), the PM capture efficiencies varied only from about 96 to 99+%. Therefore, as PM passes through the control systems, larger particles are removed more efficiently then smaller particles and vapor. In other words, PM control technology does not indiscriminately remove PM, but instead the control technology has a bias in favor of larger non-vaporized particles.

PM control is NOT the only means by which facilities achieve reductions in HAP metal emissions

While PM control has been one of the leading methods to reduce emissions of HAP metals, it is not the only method as evidence by its comments on waste segregation. As such, the EPA seems to feel there are other means than just PM controls by which facilities can achieve reductions in HAP metal emissions such as waste segregation and additives to improve the capture of PM and vapor phases of HAP metals. Furthermore, the impact of future process modifications on HAP metals cannot be predicted. For example, the addition of catalyst and corrosion inhibitors, and/or additives to oxidize mercury such as halides might have significant impacts on the volatility of other HAP metals. Since the volatility of HAP metal halides is substantially greater than most

oxide forms, converting mercury to a halide may convert other HAP metals to their more volatile halide. Individual HAP metal emissions must be monitored to assess the impact of these

possible future process modifications.

Thus, none of the Court-defined criteria for using PM as a surrogate for HAP metals are met. Furthermore, the reader is reminded that in the National Lime case, the Court sided with the EPA only in the case of non-volatile HAP metals, none of which are listed by the EPA in this proposal. Now, as demonstrated above, PM is not even an appropriate surrogate for non-volatile HAP metals. That is, monitoring PM is not an appropriate surrogate (substitute) for monitoring each individual HAP metal, nor is setting PM emission limits an appropriate surrogate (substitute) for setting emission limits for each individual HAP metal. Individual HAP metals must be measured directly to understand the impact on HAP metal emissions of various CISWI process and control options.

Court-defined criteria for PM surrogacy are NOT expected to be met during SSM events

The only way emissions from SSM events can be included is by making emission measurements on a continuous basis with CEMS so as to include emissions during random malfunction events.

During these events, emissions, control of these emissions, the chemical state of the emissions and the partitioning between physical phases could and in realistic circumstances would be expected to be different from those during normal operation. Under these conditions, one would not expect the PM surrogacy criteria to be met. On the contrary, the conditions during SSM events are such that the criteria for PM surrogacy established by the Court are even less likely to be met than during normal operating conditions. CEMS need to be able to measure all physical phases of HAP species including mercury PM since a significant amount could be associated with this fraction. (Gossman 2007)

Direct measurement of HAP metals is essential for the EPA to comply with the spirit and intent of the Clean Air Act.

Subsection 112(d)(3) of the CAA requires the EPA to set standards for existing sources based on the emission averages of the best performing 12% of current facilities. Further, subsection 112(d)(6) requires that the EPA review and revise these standards at least every 8 years. Thus, it is clear that Congress intended the EPA to periodically adjust emissions standards as industry standards improved. In order for the EPA to accurately revise the standards for HAP metals they need to monitor for HAP metals directly to better understand how the "best performers" reduce HAP metal emissions. That is, the efficacy of various HAP metal emission reduction options cannot be assessed unless each HAP metal is measured because each has unique and wide ranging chemical and physical properties dictating their presence and behavior under various conditions. This will be particularly important if processes and/or chemistry changes through the addition of reactants to facilitate other aspects of the process such as minimization of corrosion and catalyst poisoning, enhancement of collection efficiency of other species like mercury, etc.

Failure to monitor HAP metals directly will significantly impair the EPA's ability to revise emissions standards in the future and would not be in keeping with the intent of the CAA to ensure that emissions standards are updated every 8 years based on improvements that the best performers have implemented.

Direct measurement of HAP metals is required to evaluate residual risks

HAP metals have wide ranging health and environmental impacts. Unless each is monitored directly and continuously, these impacts cannot be fully assessed. Certainly, simply monitoring PM provides essentially no information for assessing these potential health and residual risk impacts. PM is a particularly poor surrogate for assessing the health risks associated with HAP metals such as Hg, As, Pb, Cd, Cr, etc.

In addition, section 112(k)(1) of the CAA encourages the connection between source emissions and ambient exposure to effectively reduce public health risks such as cancer associated with source emissions. In 112(k)(2), congress clearly states its intent to have both the ambient air and source emissions monitored for metals to characterize the source emissions and define the contribution of these sources to public health risks from HAP. Defining and quantifying the contribution of sources to ambient risks is greatly aided by the direct measurement of specific

HAP metals as well as other metals that can be provided by the new monitoring methodology noted in Subsection 2.2.

Congressional mandate in the CAA to use enhanced monitoring

In section 114 of the CAA, congress gives EPA a mandate to require enhanced monitoring (42 U.S.C. 7414 (a) (3)). Major sources are required to use enhanced monitoring such that there is reasonable assurance of HAP control. Clearly, periodic testing does not provide reasonable assurance of control nor does monitoring PM provide reasonable assurance of urban HAP metal control. Similarly, monitoring only the vapor phase of mercury does not provide reasonable assurance of control under all conditions that are now to include SSM events. This is particularly the case when there is a proven and approved technology available that measures all phases of mercury as well as all phases of all urban HAP metals.

Clearly, direct monitoring of all phases of all HAP metals is an enhancement over the monitoring of a surrogate (PM) for some urban HAP metals and one phase of mercury.

Availability of new monitoring technology

As noted above in Subsection 2.2, a new, proven multi-metals CEMS is commercially available and accepted by the EPA for use at a specific hazardous waste incinerator. Thus, use of PM as a surrogate for HAP metals monitoring is no longer needed.

HAP multi-metals CEMS is the lower cost, simpler option

With the Court ruling requiring the inclusion of emissions from SSM events in emission averages, it will be essential that CEMS be available that can measure emissions of all phases of HAP metals including mercury PM. As such, the use of multi-metal CEMS methods would allow all of the urban HAP metals including mercury and all phases to be continuously monitored with a single CEMS. This option would be simpler, more reliable and have lower initial and on-going costs than the only other option consisting of two CEMS, one for PM and one for mercury vapor. In addition, these multi-metal CEMS can provide emission measurements for over 20 metals including all 11 HAP metals. Measurement of the non-HAP metals might be used for process diagnostics, source apportionment in the ambient environment and other possible applications not yet realized.

EPA suggested using PM as a surrogate would eliminate the cost of performance testing to comply with numerous standards for individual metals. This is no long relevant with the advent of the new multi-metals monitoring methodology (Subsection 2.2) because by monitoring the

metals directly in emissions, it is not necessary to conduct the performance tests mentioned by the EPA.

Public has a right to know HAP metal emissions in plain language

If the EPA has decided that emission of HAP metals is sufficient to require regulation, the public has the right to know what those individual HAP metal emissions are in plain language; that is in a language the public can relate to ambient measurements. The EPA uses different units to define emission limits for different HAP. The EPA should use reasonably common units at least in form and common with typical ambient measurement units such as ng/m3.

Response: This comment appears to be directed towards HAP emissions, which are regulated under 40 CFR Part 63 standards. We note the standards for CISWI contain emission limits for the prescribed nine pollutants, including Cd, Hg and Pb in addition to PM. Furthermore, CISWI limits are expressed in a concentration basis, as the commenter recommends.

However, we agree with the commenter that filterable PM may be a surrogate for metals that are emitted in a solid or liquid state, but would not necessarily proportional to the metals that are in vaporous state in the stake or upon exiting the stack.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 1

Comment: The proposed rule incorrectly continues the use of PM as a surrogate for HAP metal emission limits without reconsidering whether continuing to use this surrogate is still "scientifically reasonable." National Lime at 637. To support its use of PM as a surrogate for HAP metals, the EPA relies on National Lime where the Court upheld the EPA's use of PM as a surrogate for HAP metals in the Portland Cement NESHAP promulgated in 1999. In a 2004 case and others, the Court of Appeals established a three part test for surrogacy based on their earlier ruling in National Lime. Sierra Club v. EPA, 353 F.3d 976 (D.C. Cir. 2004)("Copper Smelter MACT").

All three criteria must be met to use PM as a surrogate for HAP metals. These criteria are:

o "...HAP metals are invariably present in cement kiln PM..." (Subsection 3.2.1)

o "...PM control technology indiscriminately captures HAP metals along with other particulates." (Subsection 3.2.2)

o "...PM control is the only means by which facilities "achieve" reductions in HAP metal emissions..." (Subsection 3.2.3) Copper Smelter MACT at 984, quoting National Lime.

However, despite the Court of Appeal's decision to uphold the use of a surrogate in 2000, the Court has repeatedly cautioned the EPA both in National Lime and more recent cases to reconsider whether PM is an appropriate surrogate for HAP metals. See Natural Resource Defense Council v. EPA, 489 F. 3d 875, 882-883 (D.C. Cir. 2007) ("Brick MACT"); See also Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 863-865 (D.C. Cir 2001); See also Copper Smelter at 985. Specifically, the Court has directed EPA to consider whether PM is still a good surrogate in light of the potential impact upon emissions that changes in inputs to the

cement manufacturing process can have, especially the possibility of fuel switching. In National Lime the Court states that:

o "In considering the role of inputs, the EPA must also assure itself that the fuels and other inputs affect HAP metal emissions in the same fashion that they affect the other components of PM. For example, PM might not be an appropriate surrogate for

HAP metals if switching fuels would decrease HAP metal emissions without causing a corresponding reduction in total PM emissions."

National Lime at 639.This latter possibility noted by the Court is clearly the case here in the current proposed CISWI rule since reducing HAP metal concentrations from their current levels in feed and fuel to zero would essentially reduce HAP metals to zero in the emissions (reducing HAP metals concentrations by many orders of magnitude) while having essentially no impact on PM emissions. It is clear that the Court intends for the EPA to consider all aspects of the processes including primary input feedstock as well as fuels and additives to reduce such things as corrosion and improve control efficiencies for both PM and vapor phase species like mercury.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 25.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 7

Comment: On page 31956 the EPA suggests using opacity as a surrogate for PM ("...we believe that opacity is an appropriate surrogate for PM emissions.") Although the EPA used this assumption to estimate PM emissions variability in the absence of PM variability data for some sources, CES strongly disagrees with the general statement of opacity being an adequate surrogate for PM. To the extent that PM is being proposed as a surrogate for HAP metals, the use of opacity as a surrogate for PM puts two inappropriate/incorrect steps of surrogacy assumptions between true HAP metal emissions and the opacity monitor. Opacity should not be used as a surrogate for HAP metals by indirectly and incorrectly suggesting that it might be an appropriate surrogate for PM. This will just further delay the time when direct measurement of HAP metals can be used to set future limits and provide accurate assessment of residual risks from there HAP metals.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2149.1, excerpt 12.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 8

Comment: PM CEMS: CES believes that PM is NOT an appropriate surrogate for HAP metals. As such, CES believes that HAP metals should be measured directly using multi-metal CEMS. It

is now possible to monitor individual metal emissions on a continuous basis with commercially available CEMS.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 25.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 18

Comment: Use of PM as a surrogate for HAP metal emissions is no longer appropriate given the changed circumstances that include a) the Courts requirement to include SSM emissions, b) availability of proven, multi- metal CEMS technology, c) PM does not meet the Court-defined criteria for surrogacy, d) the need to evaluate the efficiency of metal-reducing options, e) the need to evaluate residual risks for specific metals, f) meeting the CAA mandate to use enhanced monitoring methods, and g) multi-metals CEMS represent the simplest, lowest cost monitoring option.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 25.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 23

Comment: Improved understanding of the behavior of HAP metal emissions

Our current understanding of the behavior of HAP metals in high temperature processes and PM controls clearly indicate that none of the Court-defined surrogacy criteria are expected to be met (Cooper et. Al, 2009).

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 25.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 24

Comment: Use of PM as a surrogate for HAP metals no longer appropriate 2.3.1 Contemporary understanding CISWI supports expected differences in behavior of PM and HAP metals

The variability of PM and HAP metals in Solid waste incinerators is not well understood. However, because of the complexity and variability of the process, it is reasonable to assume that its PM and HAP metal emissions will be at least as complex as that in coal-fired boiler

emissions, which are well understood. The behavior of trace metals, including HAP metals in coal-fired boilers, is well understood based on extensive studies such as, "Trace Elements – Emissions from Coal Combustion and Gasification" (Clark and Sloss, 1992), "Fine-Particulate Emissions From Stationary Sources and Control Technologies," (Pan, 1987) and "Air Pollution Engineering Manual" (Buonicore and Davis, 1992). A clear and consistent picture of the behavior of trace HAP metals in incinerator emissions emerge from a review of this material that includes the flowing key features:

* HAP metals such as Hg, selenium (Se), arsenic (As), cadmium (Cd), lead (Pb), etc. vaporize at high temperatures present in combustion chambers of incinerators.

* Downstream of these high temperature zones, the less volatile HAP metals cool to form and/or condense on submicron fine particles that are as a result enriched in HAP metals while the coarse particles are depleted in these metals.

* The more volatile metals (Hg, Se, Ar, Cd, Pb etc.) remain in the vapor phase to varying degree depending on the chemical form, temperature and other potential reactants available in the process stream.

* PM controls have higher removal efficiencies for larger particles resulting in lower removal efficiencies for the fine particle fraction of PM enriched in PM HAP metals.

* ESP and fabric filters have similar overall PM removal efficiencies (about 99%), but fabric filters are superior at controlling fine particulate matter that are enriched in HAP metals and thus should be superior to ESP units at controlling HAP metals

* Partitioning between vapor and PM phases can depend on temperature as noted above as well as such factors as the presence or absence of species either present in the feedstock or added to the process. Examples include the addition of powered activated carbon (PAC) to sequester mercury; addition of chemicals to oxidize elemental mercury to increase removal efficiency in scrubbers; addition of chemicals to inhibit deleterious processes such as corrosion, poisoning of catalyst, etc. The addition of these various chemicals can impact the form and behavior of HAP metals and their removal efficiency, particularly the more reactive and semi-volatile species such as arsenic, selenium and cadmium.

This picture is further supported by a substantial body of research as summarized in the above noted summaries as well as the following specific reports: Beishon et al 1989, Boron and Wan 1990, Chadwick et al 1987, Dale and Chapman 1991, Davis and Pakrasi 1992, Gossman 2007, Gutberlet 1984 and 1988, Hicks 1991, Karlsson 1986, Kauppinen and Pakkanen 1990, Laudel et al 1991, McKenna and Furlong 1992, Meij 1989 and 1992, Meij and Vaessen 1991, Meij and Winkel 1991, Meij et al 1990 and 1991, Meserole and Chow 1991, Morrison 1986, Neme 1991, Obermiller et al 1991, Schifftner and Hesketh 1992, Sligar 1991, Smith 1980, Smith et al 1999, Tumati and Devito 1991, Turner et al 1992, Yokoyama et al 1991.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)

Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 27

Comment: EPA could remedy the lack of data problem by using PM as a surrogate for the regulated metals. Even though § 129 of the CAA specifically requires setting emission limits for certain metals, EPA has discretion to use PM as a surrogate and has exercised this discretion in many NSPS and NESHAP rulemakings.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 25.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 10

Comment: Total hydrocarbons (THC) needs to be added as an alternative standard to CO as a surrogate for non-dioxin organic HAPs.

EPA has elected to propose CO as a surrogate for non-dioxin organic HAPs and is requiring CO CEMS for all energy recovery units. Compliance with the CO emission standard is then determined on a 24 hour rolling average basis. While we have concerns that the MACT floor emission limitations do not properly account for load variation or periods of startups and shutdowns, we believe, that once the CO MACT floor level is properly determined, compliance with a CO limit will be the preferred method in many cases. However, Eastman requests that EPA set an alternative THC standard. The Hazardous Waste Combustor MACT (40 CFR 63 Subpart EEE) provides an option of a 100 ppm CO limit or a 10 ppm THC limit. While most hazardous waste incinerator operators selected the CO option, Eastman has selected the THC option at three of our incinerators and has found the THC CEMS, while more costly, to be a workable option. Our experience with other solid fuel units shows us that THC levels are often more stable and less reactive to load swings than CO. Since THC really is a better indicator of non-dioxin organic HAPs that CO (CO is not a HAP whereas much of the THCs are HAPs), there is no reason EPA cannot grant our request and provide a THC option.

To grant this request, EPA needs to gather additional THC data. However, there is some data available in the Boiler and Process Heater MACT record to begin this analysis. For PC boilers, EPA obtained 30 days of THC and CO CEMS data from a Phillip Morris unit in Virginia. The Upper Predicted Level at a 99 percent confidence interval for this data is 6 ppm (@3 percent O2) excluding the three startup periods and 18 ppm including the startup periods. For stoker boilers, EPA obtained 30 days of THC and CO CEMS data from a DuPont unit in West Virginia. However, this boiler never ran below 50 percent load and no startups were included in the data, so this data really cannot be used to set an appropriate standard. Eastman proposes that EPA include the use of THC in lieu of CO , and that EPA collect additional data to establish a reasonable standard that reflects both steady-state and SSM operation. Eastman would be willing to collect such data to promote sound data-based decision making.

Response: CO is one of the nine pollutants for which CAA section 129 requires emissions standards. CO is not a surrogate for organic emissions control.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 12

Comment: Opacity Requirements

EPA proposes opacity standards for new and existing CISWI units as a surrogate for particulate matter (PM) emissions. While opacity is important to characterize, and may be an indicator of

proper operation, NESCAUM does not agree that opacity alone should serve as a surrogate measurement for PM emissions. This is particularly problematic in situations where a large percentage of emissions are in the condensable form, or when fuel is inconsistent and proper boiler operations are not maintained. An example of this was found in Connecticut at a

326 mmBtu/hour municipal waste combustor. The facility had reported continuous compliance with its opacity limit, as indicated by its continuous opacity monitoring system (COMS) and the pressure drop (delta-P) across the baghouse. However, during a compliance test for PM emissions, the facility was found to be in violation of its PM emission limit. Analysis indicated that the facility had nearly 50 compromised fabric filter bags out of 2,000. In this case, neither opacity nor pressure drop measurements served as adequate indicators for ensuring compliance with the PM emissions permit limit.

NESCAUM recommends that EPA maintain opacity limits at a level of

10 percent as an indicator of proper boiler performance, but not as a substitute for PM emissions testing or PM continuous emission monitoring systems (CEMS).

Response: We agree with the commenter that neither opacity monitoring nor pressure drop is an effective means by which to detect changes in performance of a fabric filter relative to compliance. The rule requires bag leak detection monitoring for fabric filters with option to apply PM CEMS.

6.2 Rationale for Regulated Pollutants: Additional Pollutants

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 76

Comment: We believe that mercury, and lead, and arsenic, and chromium should be at least some of the metals that are monitored continuously because they vary so much from time to time.

Response: We believe that the combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate and sufficient for assuring ongoing compliance with these standards.

Commenter Name: Jay Baldwin
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0622
Comment Excerpt Number: 1

Comment: In my opinion, EPA should attend all hazardous pollutants as a matter of course, and mandate, not leaving out any hazards that threaten the health of humans and the environment, no matter who the polluter is.

Response: Under CAA section 129, EPA is required to set standards for cadmium, carbon monoxide, dioxins/furans, hydrogen chloride, lead, mercury, nitrogen oxides, particulate matter, and sulfur dioxide. The final rule covers these nine pollutants as required.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 41

Comment: As for incinerators, the ash needs to be addressed. We've spoken about this very briefly today, but I think we really need to remember that this doesn't go away. It's in the ground. It goes into mother earth and it becomes dust which creates pollution for our lungs. You know, it just doesn't evaporate into the atmosphere. We would rather it to, obviously, but it doesn't have an osmosis, you know, type of processing.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 4

Comment: In addition to mercury contamination, contamination from toxic and hazardous air pollutants such as copper, iron and zinc need to be addressed through increased monitoring.

Wood waste from construction and development contain metals such as copperand zinc. [See submittal footnote 14 for reference] These metals are strongly correlated with dioxin formation and can serve as catalysts for dioxin formation. [See submittal footnotes 15 and 16 for reference]

Response: Under CAA section 129, EPA is required to set standards for nine pollutants, including dioxins/furans. The final rule covers these nine pollutants as required.

Commenter Name: Joseph Mendelson III
Commenter Affiliation: National Wildlife Federation (NWF)
Document Control Number: EPA-HQ-OAR-2003-0119-2022.1
Comment Excerpt Number: 1

Comment: The proposed rule indicates that the agency is making "other amendments that EPA believes are necessary to adequately address air emissions from commercial and industrial solid waste incineration. 75 Fed. Reg. 31938. However, the proposal does not adequately address such emissions in that the existing standards and proposed amendments do not require standards and guidelines to address carbon dioxide and other air pollutants.

The agency has already determined that greenhouse gas emissions threaten the public health and welfare. See 74 Fed. Reg. 66496 (Dec. 15, 2009)("Endangerment Finding"). Municipal solid waste incineration units are a significant source of greenhouse gas emissions including carbon dioxide emissions. U.S. greenhouse gas emissions from the incineration of waste have trended upward from 8 MMT/year CO2e in 1990 to 13.1 MMT/year CO2e in 2008. See U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2008 (Apr. 15, 2010). And the average per unit of electricity air emission rates in the United States from municipal solid waste-fired generation are 2988 lbs/MWh of carbon dioxide – more than the average emission rates coal-fired generation units (2,249 lbs/MWh of carbon dioxide). See U.S. EPA, Clean Energy: Air Emissions, available at http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html (last visited Aug. 23, 2010).

Accordingly, any revision of the performance standards for this source category should include standards for greenhouse gas emission.

Response: EPA is not addressing greenhouse gases in this rulemaking. We are setting standards for the nine pollutants required by CAA section 129.

6.3 Rationale for Regulated Pollutants: Dioxin/Furan

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 5

Comment: Dioxin is highly toxic and can cause reproductive and developmental problems,

damage the immune system, interfere with hormones and also cause cancer [See submittal footnote 17 for reference] . Once dioxin has entered the body, it persists a long time because of its chemical stability and its ability to be absorbed by fat tissue, where it is stored in the body. The Department of Human Health and Services determined that it is reasonable to expect dioxin to cause cancer, among many other adverse health effects. [See submittal footnote 18 for reference.]

Response: Under CAA section 129, EPA is required to set standards for nine pollutants, including dioxins/furans. The final rule covers these nine pollutants as required.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 12

Comment: EPA appears to have made a pervasive error in assembling the dioxin/furans data on a TMB. From our review of the data for the best performing kilns, we know that the recorded data are actually dioxin/furans emissions on a TEQ basis for 4 kilns (out of 9 best performers): Ash Grove Durkee, Ash Grove Seattle, Holcim Devil's Slide K1, and Lafarge Joppa K2 (see Table A-4.9). For other kilns, we have verified (or corrected) the numerical value taken from the 114 filings, but due to time limitations, we have not obtained the stack test reports needed to determine whether the reported values are on a TMB or TEQ basis. In only two instances (Lehigh Evansville 121 and Mitsubishi 4-RK1) are we certain that the reported values are on a TMB basis.

It appears that EPA made the classification as to TMB or TEQ based on how the pollutant was named in the 114 filings. Values reported as "Dioxin/Furans" (D/F) were treated as being on a TMB basis (even if comments elsewhere in the 114 filings indicated otherwise), while values reported as "Dioxin/Furans (TEQ)" were treated as being on a TEQ basis. Only the latter identification is unambiguous, while the former identification is subject to easy misinterpretation.

EPA should review all of the D/F TMB data in its database to eliminate instances in which TEQ values have been erroneously recorded. Because D/F TEQ values are much smaller numerically than D/F TMB values, we believe that a pervasive bias exists in EPA's DF TMB data that invalidates its analysis and floor values. While PCA has corrected the errors where they have been identified, it has not conducted a complete review of the TMB data for best performing kilns. This is EPA's responsibility under § 307(d) of the CAA and applicable case law. Because of this attribution error, we believe that none of the TMB or TEQ are reliable enough to be used in analyses of any kind, until such time as the dioxin/furans data are completely reviewed and reworked.

Response: We agree with the commenter that test reports need to be checked for consistency and correct reporting.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 55

Comment: EPA Should not set both TEQ and Total Mass Dioxin/Furan Limits

There is no justification for setting both a dioxin/furan limit on a TEQ basis and a dioxin/furan limit on a total mass basis. We do not see the necessity of having both limits. As 2,3,7,8-TCDD is the congener with the highest TEF and the only congener specifically listed as a hazardous air pollutant, we believe that only a dioxin/furan TEQ limit is needed. However, we do not agree with the basis of the proposed dioxin/furan

TEQ limit. In the MACT floor analysis memo, [Footnote: see DCN:EPA-HQ-OAR-2003-0119-0059]

ERG indicates that an analysis of the dioxin/furan TEQ data and the dioxin/furan total mass data resulted in a calculated 99 UL for the top performers in the dioxin/furan TEQ data set that exceeded the calculated 99 UL for the top performers in the dioxin/furan total mass data set. We offer two explanations for this result: either the data are incorrect or the data do not match up because there are two different sets of top performers for each set of data. EPA should quality assure the dioxin/furan data for all units to ensure the top performers have been correctly determined (e.g., to ensure all test data being used conform to the EPA's 2009 ICR instructions for reporting of non-detects, since Method 23 allows reporting of non-detects as zero) and then re-calculate the emission limits for dioxin/furan TEQ and drop dioxin/furan total mass. A dioxin/furan TEQ limit should not be set based on a few observed ratios between dioxin/furan TEQ and total mass, as the emissions profile will vary from unit to unit. EPA should eliminate the dioxin/furan total mass limit, quality assure the dioxin/furan emissions data being used, and set only a dioxin/furan TEQ limit.

Response: EPA is providing facilities with the option to comply with either the dioxins/furans total mass limit or the dioxins/furans TEQ limit; they needn't comply with both limits.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 3

Comment: No numerical emission standard for dioxin/furans (D/Fs) should be established at this time.

EPA has established MACT floor standards for energy recovery units and burn-off ovens for D/Fs from an inadequate dataset and has no sound basis for supporting the assumption that a control technology is available that has been demonstrated to reduce D/Fs from these units exists.

The EPA has only recently gathered any D/F emissions data from units such as coal-fired boilers and has not yet fully developed an understanding of the variability of D/F emissions over time or an understanding of the cause of D/F emissions in coal-fired boilers. EPA has only one 3-run test from any given boiler from which to establish the MACT floor. Some of the reported emissions of D/F used to set the new source standards are at extremely low levels very close to detection limits. EPA has not established that these levels are repeatable over time or across variations in fuel by the best-performing units. Any given unit (even the "top performers") is at great peril of failing the D/F emission limit in the annual performance tests. Such a result may well be the result of normal statistical variability which has not been accounted for in EPA's MACT floor analysis. Also, neither EPA nor the regulated sources have an adequate understanding of how to reduce or control D/F emissions from these units.

Response: Under CAA section 129, EPA is required to set emission limits for nine pollutants, including dioxins/furans. The final rule covers these nine pollutants as required.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 6

Comment: From a technical perspective, we do not believe using a total D/F to TEQ ratio measured from cement kilns to establish a TEQ limit for small remote incinerator is appropriate.

The EPA's MACT floor summary memo (April, 2010) posted on the CISWI rule website as supporting

information shows no data for TEQ measurement data for the small remote incinerator category. In

the incinerator category only one unit was displayed as testing both for Total D/F and TEQ and, in that one case, the TEQ exceed total D/F. The result suggests TEQ emissions from small incinerators could be significantly higher as a fraction of total D/F than those measured in cement kilns and proposed to be used as the basis for the limit for the small remote incinerator category.

Empirical data from a variety of small remote incinerators needs to be collected to establish the MACT floor for TEQ emissions for this category. This requirement is consistent with every other proposed limit for this category and the EPA's prescribed MACT floor setting process.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 11

Comment: EPA's two dioxin/furan emission standards are duplicative and unnecessary. EPA should set a single standard for dioxin/furan total mass basis.

EPA's proposal contains two emission standards for dioxin/furan, one as total mass and the other as toxic equivalents (TEQ). These standards are redundant – the same test is

used to measure both, the only difference being a mathematical calculation using TEQ factors to convert the measured total values to TEQ values. TEQ factors have changed over the years since the original 1989 I-TEQ to the presently used 2005 World Health Organization Toxic Equivalence Factors so setting a TEQ standard represents a

potentially moving target. Furthermore, two standards are not required by Section 129 which lists "dioxins and dibenzofurans" only once and without distinction between total mass and TEQ. (Section 129(a)(4)). Finally EPA has not adequately analyzed the ratio between total dioxins/furans and total TEQ. The dioxin/furan congener profiles and subsequently TEQ results differ between combustor type, waste composition and air pollution control technologies and there is no one ratio that fits all. EPA does not have or could not practicably obtain sufficient data to determine representative ratios to set MACT floors across all the source categories and different waste compositions, combustor types and air pollution control technologies. Considering 1) the MACT standards are based on emissions reductions at best performing units and not health effects, 2) TEQ factors are subject to change, 3) TEQ results are dependent on waste composition, combustor type and air pollution control technology used and 4) the law only requires one dioxin/furan standard, EPA should promulgate a single dioxin/furan standard, as total mass.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 55.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 31

Comment: EPA Should Not Set Both TEQ And Total Mass Dioxin/Furan Limits

ACC believes there is no justification for setting both a dioxin/furan limit on a TEQ basis and a dioxin/furan limit on a total mass basis. As 2,3,7,8-TCDD is the congener with the highest TEF and the only congener specifically listed as a hazardous air pollutant, we believe that only a dioxin/furan TEQ limit is needed. However, we do not agree with the basis of the proposed dioxin/furan TEQ limit. In the MACT floor analysis memo, [Footnote: EPA-HQ-OAR-2003-0119-0059.] ERG indicates that an analysis of the dioxin/furan TEQ data and the dioxin/furan total mass data resulted in a calculated 99 UL for the top performers in the dioxin/furan TEQ data set that exceeded the calculated 99 UL for the top performers in the dioxin/furan total mass data set. We offer two possible explanations for this result: either the data are incorrect, or the data do not match up because there are two different sets of top performers for each set of data. EPA should quality assure the dioxin/furan data for all units to ensure the top performers have been correctly determined (e.g., to ensure all test data being used conform to the EPA's Phase 2 ICR instructions for reporting of non-detects, since Method 23 allows reporting of non-detects as zero) and then re-calculate the emission

limits for dioxin/furan TEQ and drop dioxin/furan total mass. A dioxin/furan TEQ limit should not be set based on a few observed ratios between dioxin/furan TEQ and total mass, as the emissions profile will vary from unit to unit. EPA should eliminate the dioxin/furan total mass limit, quality assure the dioxin/furan emissions data being used, and set only a dioxin/furan TEQ limit.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 55.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 50

Comment: Facilities should be allowed to meet either a Total or a TEQ dioxin/furan standard but not both.

For all source categories, EPA is proposing that facilities meet two dioxin/furan standards — one that is based on total mass and the second that is based on TEQ. CRWI does not see the need to meet both. The hospital/medical/ infectious waste incinerator rule requires facilities to meet one or the other but not both. For example see Table 1A to Subpart Ec to Part 60 (74 FR 51414). CRWI suggests that the final rule allow facilities to meet either-the Total standard or the TEQ standard but not both.

In calculating the standards for dioxins and furans, EPA encountered circumstances where the standard for TEQ exceeded the standard for total dioxin. While this may seem absurd at first, it is completely possible when one examines the method used to calculate TEQ from test runs. Because of the low levels being measured, it is very likely that a congener will go from non-detect to barely detected from one run to the next. The fact that "non-detect" congeners are counted as "zero" leads to high variability in the TEQ computation among runs. Therefore, when EPA applied its statistics to account for variability, the resulting TEQ standard came out higher that the total dioxin standard. EPA should not attempt to reconcile the TEQ and total dioxin results. They are separate measurements and EPA should allow compliance with either.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 55.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 53

Comment: Dioxin Limits. In regard to the proposed dioxin limits, EPA has again been overly broad in setting the limits. It is unnecessary to record both total mass and TEQ when recording data for dioxin.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 55.

6.4 Rationale for Regulated Pollutants: Hg

Commenter Name: Linda Mulka
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0139
Comment Excerpt Number: 1

Comment: The permanent neurologic effects of mercury are most pronouned in young children and prenatally when the neurologic system is rapidly developing. This has implications for our educational system and may explain some of the disparity in the math, reading and sciene scores of American children and adolescents.

Response: EPA is setting mercury standards in the final rule, which will result in a reduction of mercury emissions.

Commenter Name: Nick Bartol
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0134
Comment Excerpt Number: 1

Comment: Mercury is the second most toxic element known to man (plutonium is the first) . Both my wife and I have suffered from mercury toxicity and its is very expensive to treat.

Response: EPA is setting mercury standards in the final rule, which will result in a reduction of mercury emissions.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 3

Comment: Monitor Hg emissions: EPA proposes in this subsection use of Hg CEMS to monitor Hg emissions. However, the EPA does not distinguished between total Hg as specified in the Clean Air Act (CAA) and mercury vapor as commonly measured by most Hg CEMS. CES recommends that the EPA specify total mercury. This is particularly important now the courts have ruled SSM emissions must be included and since these events may contain significant amounts of PM phase Hg. Furthermore, CES contends that vapor phase Hg is not an acceptable surrogate for total Hg as discussed in more detail in Subsection 2.5. In addition, as discussed later, Performance Specification 12A (PS-12A) (Subsection 2.6) measures only vapor-phase Hg. Continued reliance on this obsolete technology will limit the development of new methods of measuring total mercury.

Response: The mercury standard is based on total mercury data in the form of mercury inputs to the source. We believe that measurement of total mercury would add unnecessary expense and complexity to mercury monitoring. However, sources are always able to request approval for source-specific alternative test methods and compliance monitoring requirements from EPA under section 63.7 (f) of the General Provisions.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 19

Comment: Use of vapor phase mercury as a surrogate for total mercury emissions is no longer appropriate given the changed circumstances that include a) the Courts requirement to include SSM emissions, b) availability of proven, total mercury CEMS technology, and c) vapor phase mercury does not meet the Court-defined criteria for total mercury surrogacy.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 3.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 27

Comment: CAA specifies mercury NOT vapor phase mercury

It is inappropriate to set emission limits for just vapor phase mercury. Nothing in the CAA says the EPA may set emission limits for only one physical phase of a HAP metal. This is contrary to the intent of the CAA and could result in the omission of a significant fraction of mercury emissions. What the EPA appears to be suggesting is that vapor phase mercury can be used as a surrogate for total mercury emissions. A review of the Court-defined criteria noted in Subsection 3.2 of this document clearly indicates that vapor phase mercury does not meet these surrogacy criteria.

Vapor phase mercury does NOT meet the Court-defined criteria for total mercury surrogacy

EPA's own data (EPA 1998a) suggests that about 30% (not insignificant) of mercury is captured in PM controls and over 90% might be captured in PM controls if powdered activated carbon is used to control Hg emissions. Clearly, during SSM events and more specifically during malfunctions in PM controls, a significant fraction of the Hg mass could be in the PM fraction of emissions, which would be excluded under EPA's current proposal to regulate only the vapor phase of mercury.

Clearly, volatile mercury does not meet the surrogacy criteria to represent total mercury emissions (PM and vapor). That is:

Mercury vapor is NOT invariably present in industrial incinerators total mercury emissions; i. e. mercury vapor is not a constant fraction of total mercury at various stages of the process and emissions control, but is also found in significant quantities in the PM phase.

Mercury vapor control technology does NOT indiscriminately capture total mercury emissions

Mercury vapor control is NOT the only means by which facilities can achieve reductions in total mercury emissions.

Based on the above, CES requests the EPA change its emission limit from one based on vapor phase mercury to one based on total mercury that includes both PM and vapor phases.

Total mercury can now be measured with proven methods

It is now possible to measure total mercury emissions (all phases including PM) continuously using proven and EPA accepted monitoring methodologies. (Subsection 2.2). Regulating and monitoring total mercury (vapor and PM) would be an enhancement over just regulating and monitoring vapor phase mercury.

This requested change is important and necessary to account for mercury emissions during SSM events. During these events, a significant fraction of mercury emissions might be in the PM fraction. In addition, as noted above, PM-bound Hg is significant during normal CISWI processes including PM control operational cycles as PM trapping efficiencies can change during these cycles.

Total mercury monitoring represents enhanced mercury monitoring

This would also be consistent with congressional wishes that the EPA require enhanced monitoring where it is appropriate to assure continual compliance with emission limits (Total mercury monitoring is enhanced monitoring over monitoring just one phase of mercury, vapor phase.) This recommended change would benefit the EPA and other stakeholders by providing more complete information assuring compliance and if a multi-metals monitor were used could provide compliance demonstration information for all phases of all urban HAP metals while simultaneously demonstrating compliance with a total mercury emission limit. This monitoring would be simpler and achieved at a lower cost because it would replace two CEMS, mercury vapor and PM. In addition, the plant, agency and public would benefit from the non-urban HAP metals monitored with the same CEMS that might provide diagnostic information to improve plant operation, data on all HAP metals not just for selected HAP metals and source apportionment information, all at a lower cost than the alternative of using two CEMS providing only two parameters (PM and vapor phase mercury) instead of over 20 metals

Response: See the response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 3.

6.5 Rationale for Regulated Pollutants: PM

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.

Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 13

Comment: EPA should clarify that particulate standards in the proposed regulations only apply to the "front half" of Method 5 test trains. Some permitting authorities, including the Texas Commission of Environmental Quality ("TCEQ"), require facilities to report Method 5 particulate matter test results as the sum of "front half," the sampling probe, heated filter, and intermediate transfer line, and "back half," or impinger set, particulate recovery. As EPA has proposed "front half" only particulate standards for these regulations, Arkema requests that EPA clarify that a permitting authority may not, following its own test protocol policies, require facilities to use both "front half" and "back half" results to demonstrate compliance with particulate standards. This request also applies to compliance demonstrations, such as metals and D/F, that rely on Method 5 protocols as part of the compliance demonstration.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

6.6 Rationale for Regulated Pollutants: 112(c)(6) Pollutants

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 4

Comment: The order requires EPA to "promulgate emission standards assuring that sources accounting for not less than ninety percent of the aggregate emissions of each of the hazardous air pollutants enumerated in Section 112(c)(6) are subject to emission standards under section 112(d)(2) or (d)(4)." As we understand it, even though the order (and CAA § 112(c)(6) itself) refers only to CAA §112 standards and not CAA § 129 standards, EPA believes it can satisfy this 90 percent requirement if it is allowed to take credit for sources covered by CAA § 129 standards.

We express no opinion at this time as to whether this is a sustainable interpretation of the plain words of CAA § 112(c)(6). Even assuming for purposes of argument that this interpretation might be sustained, we can find nothing in the CISWI proposed rulemaking preamble or the RIA accompanying it – or even the two companion boiler MACT proposed rulemaking preambles or the RIAs accompanying them – that purports to explain how and why coverage of CISWI sources is necessary to meet the ninety percent requirement.

The CISWI preamble discusses CAA § 112(c)(6) at some length at pp. 31969-70. In this discussion, EPA explains how and why it believes it can take credit for CISWI sources under this subsection, and EPA explains how certain of the proposed CISWI standards will provide controls over the seven pollutants covered by CAA § 112(c)(6).

EPA does not, however, include any finding or claim that its coverage of CISWI sources through this proposed rule will result in achievement of the 90 percent requirement. Similarly, EPA includes detailed discussion of CAA § 112(c)(6) requirements in both of the proposed CAA § 112 boiler rules proposed along with the CISWI proposal. See 75 FR 31898 (June 4, 2010) (area sources) and 75 FR 32008 (June 4, 2010) (major sources). Once again, EPA includes no claim or finding in these proposed rules that it will achieve the 90 percent mandate by accounting for CISWI source coverage. Interestingly, EPA disclaims the need to regulate CISWIs to reach the 90 percent requirement for mercury: "based on the information we have learned to date as we are developing standards for various source categories, such as [CISWI among others] we believe that we only need coal-fired area source boilers to meet the 90 percent requirement set forth in section 112(c)(6) for mercury." Id. at 31904-105, emphasis added.

Following fundamental rulemaking precepts, we would think that if EPA were taking the position that its coverage of CISWI units somehow put it "over the top" on the 90 percent requirement of the court order and the statute, the proposed rules would explain this, provide the data, calculations, and information to support the conclusion, and allow for comment on the conclusion and its supporting data. Again, we have found nothing in the three proposed rule preambles or the RIAs supporting them in which EPA attempts to explain (or assert) this conclusion.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 9

Comment: EPA's Proposal to Treat the Proposed § 129 Standards as Satisfying § 112(c)(6) Requirements Is Unlawful.

EPA states that its proposed § 129 standards "effectively control" emissions of polycyclic organic matter (POM) and polychlorinated biphenyls (PCBs), identified in §112(c)(6) as pollutants for which EPA must regulate 90 percent of aggregate emissions under §§ 112(d)(2) or 112(d)(4). 75 Fed. Reg. at 31,969. This is plainly illegal on its face.

The Act requires EPA to subject 90 percent of the emissions of the pollutants identified in section 112(c)(6), including POM and PCBs, to § 112(d)(2) or (d)(4) standards. 42 U.S.C. § 7412(c)(6). Assuming that EPA could meet § 112m (c)(6) requirements by taking credit for standards established under § 129, the agency would have to set specific § 129 standards for POM and PCBs. Although § 129(a)(4) gives EPA authority to do just that, the agency has not proposed § 129 standards for POM or PCBs. Accordingly, the proposed CISWI standards would not satisfy § 112(c)(6) even if § 129 standards could do so.

EPA's statements that practices required to comply with proposed § 129(a)(4) standards "effectively" control PCBs and POM are inadequate on their own to satisfy the § 112(c)(6) requirements for specific standards for the pollutants in question. Section 112(c)(6) requires

specific numeric standards for the pollutants listed. EPA has not even established that it may use one pollutant as a surrogate for others. See 75 Fed. Reg. at 31,969–70. Even if EPA were allowed to use surrogates, EPA has failed to establish that any of the pollutants regulated under § 129(a)(4) are valid surrogates for PCBs and POM. EPA's statement that "as by-products of combustion, the formation of POM and PCBs is effectively reduced by combustion and post-combustion practices required" is inadequate to show a surrogate relationship between the § 129(a)(4) pollutants and PCBs and/or POM. See id. Consequently, EPA cannot meet its obligations to regulate PCBs and POM under § 112(c)(6) with the proposed § 129 standards for other pollutants.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

6.7 Other - Rationale for Regulated Pollutants

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 10

Comment: I think we need better definitions for different pollutants, especially those which have a proven tract record of harming public health.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

7.0 Rationale for Subcategories

7.1 Subcategories: New Suggested Categories

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 2

Comment: The proposed rule intermixes the terms "burn-off ovens" and "parts cleaning units," as if all parts cleaning units operate with the same starved air, pyrolysis-type technology. We want to clarify that the fluidized bed technology has been used successfully, simultaneously combining thermal and mechanical cleaning processes, and this for over a quarter century. As a significant amount of air is needed to provide the mechanical action inside the fluidized bed, we are dealing with an excess air thermal process. The fluidized bed parts cleaning units are thus using fundamentally different processes than do the classic Burn-Off ovens. Lumping both technologies under the same category can not be justified, particularly when the EPA rational for

MACT floor emission limits is based on actual stack data of existing systems and pollutant concentrations corrected to 7% Oxygen.

Three examples can better explain this concept:

a. Burn-off ovens, operating on starved air conditions, clearly will produce less NOx and allow for a low oxygen concentration in the stack. Therefore the excess air fluidized bed unit would be penalized twice, once because of the higher NOx emission and once because of the correction factor to 7% Oxygen.

b. Burn-off oven emission stack reports typically show elevated stack temperatures, of 1300 degrees F and above, demonstrating very low emissions of dioxins and furans. This is understandable as one knows that these pollutants are fully destroyed, in any system, at elevated temperatures but can reform again when the exhaust fumes cool down below 1000 degrees F. Therefore, taking emission samples of Dioxins and furans at a temperature location above 1000 degrees F provide an unrealistic destruction profile for these components in the system.

c. The Fluidized Bed Cleaning System performs its mechanical cleaning action through the fluidizing action of sand media inside the furnace. As any mechanical cleaning system requires, the resulting exhaust system includes a dust removal system, but still one will see oxygen concentrations in the exhaust between 17% and 20.9%. Therefore, requiring such systems to correct the PM emissions to 7% Oxygen is like asking an orange to be yellow. Presently the SC Cryovac FB is included in the EPA's survey ICR and clearly confirms this example.

Therefore, we request that the administration provide MACT floor emission limits for the fluidized bed cleaning units different from the burn-off ovens emission limits, and base the MACT floor emission limits on lbs/hr, rather than on concentrations in ppmdv or mg/dscm corrected to 7% Oxygen.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 2

Comment: If EPA refuses to acknowledge that all used oil is not a waste, UOMA urges EPA to address used oil burners as a separate category in its CISWI rule and establish a de minimis exemption for burners that meet the requirements of 40 C.F.R. 279.23.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 16

Comment: Section 129(a)(2) of the Clean Air Act allows EPA to "distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such [emissions] standards." 42 U.S.C. § 7429(a)(2). In the proposed rule, EPA subcategorizes CISWI into five proposed subcategories: incinerators, energy-recovery units, waste-burning kilns, burn-off ovens, and small, remote incinerators,

"based on technical and other differences in the processes, such as combustor design, draft type, and availability of utilities. These proposed subcategories have been established based on fundamental differences in the types and sizes of units that will be subject to the standards." 75 Fed. Reg. at 31,951. The decision to subcategorize can significantly affect MACT floor determinations, which then greatly impacts the overall stringency of emissions standards. Since manipulation of subcategories can severely weaken MACT standards, the agency must carefully show that each proposed subcategory is necessary and well supported by the record. The Agency must offer a reasoned justification for the subcategories it has chosen. See, e.g., Northeast Maryland Waste Disposal Authority v. EPA, 358 F.3d 936, 947–50 (D.C. Cir. 2004) (remanding a decision to subcategorize in setting MACT standards because the Agency had not properly justified its subcategorization scheme).

Response: See preamble Section V. for the response on rationale for subcategories.

Commenter Name: Nikki Tsantrizos
Commenter Affiliation: Terragon Environmental Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2093.1
Comment Excerpt Number: 2

Comment: Terragon is an engineering firm, located in Montreal, Quebec. Our company develops and commercializes sustainable waste treatment systems that enable local and autonomous waste management. Our first product to come to market is a small scale thermal treatment appliance called Micro Auto Gasification System (or MAGS) designed to treat small quantities of solid organic waste while recovering valuable resources such as thermal energy, clean water and a carbonaceous residue or bio-char. Our MAGS technology is compact and can treat approx 40kg of waste per hour (batch process) with an average treatment of 500kg of waste/day.

The MAGS appliance is small, inexpensive, simple to operate, non-polluting and can be used by small human habitats and enterprises to safely dispose of their waste, onsite, avoiding the transfer of waste to neighbouring regions and eliminating the environmental impact of landfilling and/or incineration.

The Auto Gasification technology is not a waste-to-energy process but rather a wasteto-products process. Waste-to-energy processes (incinerators) ultimately convert the organic fraction of waste into carbon dioxide which significantly adds to the world's greenhouse gas emissions, while inefficiently producing dirty energy. By contrast, Auto Gasification (MAGS) turns most organic molecules to inorganic carbon, which can be used for many commercial applications, such as soil enrichment and chemical feedstock amongst others.

MAGS has been developed in collaboration with the American and Canadian Navies and has also received funding from Sustainable Development Technology Canada.

The new proposed rule to effectively ban all new "commercial incinerators" in the United States does not discriminate between technologies and makes no exemptions. The EPA does not currently have any category for a small scale gasification appliance such as MAGS, nor does it discriminate between technologies burning hundreds of tons of waste per day and systems that treat less than one ton per day. Given the lack of a proper category and definition for MAGS (a new technology that does not yet exist in the market), it is our understanding that MAGS may be considered a commercial incinerator, by default, and would thus be subject to the new emissions limitations set by the EPA in this proposed rule.

Please note that although MAGS is designed for on-site waste treatment at commercial sites such as hotels, the system does not treat industrial types of waste. MAGS is designed as a waste treatment alternative for residential type waste that is generated onboard a ship, in a small isolated community, at a remote vacation resort etc. The waste composition is comparable to what is called residential or municipal waste in these cases. Hazardous wastes such as batteries, and other dangerous substances would not be treated by MAGS.

I would also like to highlight that MAGS does not technically burn waste as is the case with incinerators. MAGS gasifies waste and the syngas generated from the gasification process is burned in a separate combustion chamber, generating the energy needed to fuel the process. Additionally, the MAGS burner is in the order of 100,000 Btus, comparable in size to a household barbecue.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 3

Comment: In the CISWI MACT rule EPA's selected categories groups units burning different waste materials, making it difficult if not impossible for many units to meet derived standards, even with expensive state-of-the-art emissions reduction equipment. EPA should take advantage of its ability to subcategorize units enabled under Section 129 and provide facilities with the opportunity to meet the standards at reasonable costs.

Response: See preamble Section V. for the responses on the rationale for subcategories and the MACT floor analysis.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 9

Comment: EPA acknowledges that "emissions are a function of the types of materials burned" (75 FR 31951), but dismisses that significance in a later sentence, as follows:

"Although the composition of the materials combusted is highly variable and is a key factor in the profile of emissions, we determined it was not appropriate to further subcategorize incinerators because the sources in this category are sufficiently similar such that the incinerators can achieve the same level of performance for the nine regulated pollutants." (75 FR 31951).

EPA is essentially claiming that waste composition doesn't matter because incinerator designs are similar and achieve the same performance for all pollutants despite compositional differences. EPA offers no evidence to support this questionable statement. In fact, the type and composition of wastes are indeed primary factors in emissions from waste combustion, just as the type of fuel and fuel content (e.g. sulfur) are key factors in "traditional" fuel-fired combustors. EPA has proposed to subcategorize units in the Major Source Boiler MACT rule (75 FR 32006) by unit fuel type – coal, biomass, liquid fuel, etc. – and EPA should likewise subcategorize by waste type in the CISWI MACT rule. Appropriate CISWI subcategories include units burning demolition wood wastes, units burning treated lumber wastes, and units burning manufacturing or industrial process wastes such as pharmaceutical wastes. EPA should examine its list of non-hazardous secondary materials in the context of the CISWI database and determine which other waste type subcategories are required and appropriate in order to encompass all the potential CISWI units.

Subcategorizing by waste type does not prevent EPA from further subcategorizing based on combustor type, which is appropriate for combustion related pollutants such as oxides of nitrogen (NOx) and carbon monoxide (CO). EPA's Large Municipal Waste Combustor (MWC) MACT rule does precisely this – setting most MACT pollutant standards based on a waste type, municipal solid waste, and then subcategorizing by combustor type (mass burn waterwall combustor, RDF combustor, etc.) to set CO standards. Subcategorization based first on waste type and then on combustor type is also consistent with EPA's approach in the proposed Major Boiler MACT rule where subcategories were first established based on fuel type and then on combustor for specific combustion related pollutants, "These subcategories are based on the primary fuel that the boiler or process heater is designed to burn" (75 FR 32017), And,"Within the basic unit types there are different designs and combustion systems that, while having a minor effect of fuel-related HAP emissions, have a much larger effect on organic HAP emissions...we decided to further subcategorize...but only in proposing standards for the organic HAP emissions." (75 FR 32017).

In the CISWI rule EPA should further subcategorize by combustor type for combustion related pollutants, CO and dioxin/furan, which are directly affected by combustor designs. Biomass units should fall into several subcategories, each having distinct combustion characteristics – fixed grate stokers, moving grate stokers, rocking grate stokers, circulating fluidized bed combustors, and bubbling fluidized bed combustors, and suspension burners. (The Large MWC MACT rule divides MWCs into 13 into subcategories for CO emissions, including the distinction between bubbling bed and fluidized bed combustors.) The following table presents permit limits and CO emissions as measured by certified CEMS at Covanta Energy and Wheelabrator biomass-to-energy facilities. The table shows the distinct differences among combustor types at biomass plants. [See Submittal for table showing distinct differences among combustor types at

biomass plants.] In addition to the biomass subcategories EPA should examine its inventory of CISWI units to determine which other combustor type subcategories are required and appropriate in order to encompass all the potential CISWI units.

Response: See preamble Section V. for the response on rationale for subcategories.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 26

Comment: The Clean Air Act Provides EPA with Discretion to Subcategorize Based on

Size, Type and Class of Source

CAA §129(a)(2) provides that EPA may subcategorize based on "classes, types ..., and sizes of units within a category in establishing " standards." This provision vests EPA with the clear authority to group like units for purposes of establishing emissions limitations. The legislative history of the analogous section 112 suggests what Congress meant when it authorized EPA to distinguish among sources by "class" "type" or "size." The relevant Senate Report indicates that EPA should:

[T]ake into account factors such as industrial or commercial category, facility size, type of process and other characteristics of sources which are likely to affect the feasibility and effectiveness of air pollution control technology. Cost and feasibility are factors which may be considered by the Administrator when establishing an emission limitation for a category under Section 112 . . . where a group of sources may share the characteristics of other sources in the category, the Administrator may establish subcategories for such sources.

S. REP. NO. 228, 101st Cong., 1st Sess. 166 (emphasis added).

That language confirms that Congress' use of the broad concepts of "class" "type" or "size" was meant to allow subcategorization based on (and require consideration of) a broad array of factors. That is particularly true given Congress' open-ended statement that EPA should consider "other characteristics of sources" when grouping them for purposes of establishing emissions limits. Thus, §129(a) authorizes (and requires) EPA to consider differences in "commercial category, facility size, type of process and other characteristics" that may affect: (1) feasibility of control technology, (2) effectiveness of control technology, and (3) costs of control. Where those factors are present, subcategorization is warranted.

Response: See preamble Section V. for the responses on the rationale for subcategories and control technology assumptions for the floor and beyond-the-floor.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 27

Comment: EPA has proposed establishing five subcategories for CISWI units: Incinerators, Energy Recovery Units [Footnote: This subcategory covers "energy recovery units (e.g., units that would be boilers if they did not burn solid waste) designed for heat recovery that combust solid waste materials." 75 Fed. Reg. 31,941, § 60.2875, 75 Fed. Reg. 31,999.] Waste Burning Kilns, Burn-Off Ovens, and Small, Remote Incinerators. CIBO strongly supports subcategorization, but EPA has not considered the vast diversity of combustion units and materials combusted by CISWI units. The result of EPA's proposed subcategorization is that not all units that will fall within each proposed subcategory can demonstrate the emission limits achieved by best-performing units in that subcategory. 75 FR 31943. To avoid this scenario, the final rule should include further subcategorization, which along with appropriate data and floor setting methodology, will account for the diversity inherent in affected CISWI units.

Response: See preamble Section V. for the responses on the rationale for subcategories and the MACT floor analysis.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 11

Comment: The proposed rule's relationship to pyrolysis and gasification units: The DEC has noticed an increase in the number of proposed pyrolysis and/or gasification units that use solid waste as a fuel. The resulting syngas, liquid, and/or solid residues are then used for energy generation or offered for sale as fuel. How are these units affected by the proposed rule, and which proposed subcategory regulates their emissions?

Response: See the applicability sections of the regulations and the NHSM rule to determine if these sources are subject to regulation under CISWI.

7.2 Subcategories: Incinerators

Commenter Name: Jeffrey O'Hearn
Commenter Affiliation: Panolam Industries International Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1961.1
Comment Excerpt Number: 1

Comment: The rule does not take into account units that are multipurpose by function. These units may not be able to meet the proposed stringent new limits. Multi-purpose units such as ours perform multiple important functions. Our unit's primary purpose is to combust VOC and HAP emissions from several MACT production sources (and is very effective at >99% control). It also combusts a non-hazardous liquid stream that is generated from those same MACT production

sources. We believe this multi-purpose unit does not fit the category of true solid waste incinerators that only combust solid waste and should be exempted based on the rationale

that it is already regulated as a MACT control device in various other regulations.

Response: See Preamble Section V. discussion on applicability.

Commenter Name: Jeffrey O'Hearn
Commenter Affiliation: Panolam Industries International Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1961.1
Comment Excerpt Number: 4

Comment: Due to the wide variety of combustion devices and waste streams combusted, a single category for incinerators with energy recovery would not be reflective of the industry and therefore the category must be expanded into separate subcategories.

Response: See preamble Section V. for the response on rationale for subcategories.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 29

Comment: EPA Wrongly Concluded That All Incinerators Are Sufficiently Similar To

Meet One Emission Limit

In justifying establishing a single subcategory for all incinerators, EPA states that: "[a]lthough the composition of the materials combusted is highly variable and is a key factor in the profile of emissions, we determined it was not appropriate to further subcategorize incinerators because the sources in this category are sufficiently similar such that the incinerators can achieve the same level of performance for the nine regulated pollutants." 75 FR 31951. This conclusion is obviously incorrect. The variability of combusted materials necessarily means variability in emissions concentrations, which variability cannot be masked exclusively by emissions control performance or statistical analysis. Thus, it will be extremely difficult for incinerators combusting materials other than what the best-performing incinerators are combusting to comply with the limits in the proposed rule if EPA does not refine the overly-broad incinerator subcategory. This inability to achieve the emission limits is amply demonstrated by simply looking at emissions from existing well controlled CISWI incinerators compared to the EPA-determined MACT floor emission limits.

Response: See preamble Section V. for the response on rationale for subcategories-incinerators.

7.3 Subcategories: Energy Recovery Units

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 17

Comment: EPA Must Develop Additional Subcategories

EPA has not acknowledged the effect of unit design, fuel type, or load on emissions of these pollutants in setting the proposed emission limits, which is inappropriate and inconsistent with the arguments proposed for subcategorization by unit fuel type and design in the proposed Boiler MACT regulation. EPA has recognized that it is appropriate to subcategorize boilers (energy recovery units under CISWI) in the Boiler MACT into coal, biomass, liquid, and gas boilers because these boilers are designed differently and the properties of the fuel affect the emissions from these units.

EPA established only one subcategory for energy recovery units within the CISWI proposal to address boilers that are burning solid waste. This subcategory is overly broad and does not take into consideration the variety of energy recovery units, including coal units, biomass units, combination boilers, liquid boilers, and even gas fired units. EPA has already acknowledged in the cost memo [see submittal for footnote] that the proposed new source emission limit for SO2 will not be achievable for a unit with baseline SO2 emissions greater than 75 ppm which illustrates the need for consideration for further subcategorization. As EPA has recognized in the Boiler MACT proposal, there are many categories of units that might burn solid waste, and including them all in the same category is not appropriate. EPA should properly utilize the flexibility provided in Section 129(a)(2) of the Clean Air Act: 'The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units) , and sizes of units within a category in establishing such standards."

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 3

Comment: Sections 112 and 129 of the Clean Air Act require that emissions from affected units meet the "the maximum degree of reduction that is achieveable." EPA should adopt similar standards for similar units regardless of whether they are considered a CISWI unit, a boiler located at a major source or a boiler located an an area source. For instance, the CO emission standard for a 150 MMBtu/hr unit firing primarily biomass should be the same regardless of whether it is classified as an incinerator or a boiler at an area or major source. Emissions from all

of these units depend on how the units are operated, their combustion efficiency, and the type and mix of fuels they combust. These are the variables and parameters that EPA should focus on to ensure adequate emissions reductions. The currently proposed regulatory scheme favors many major sources over area sources (ie. less stringent standards for facilities with higher overall HAP emissions), and creates a substantial disincentive for beneficial use of secondary materials by establishing very onerous standards for incinerators.

We recommend that EPA establish subcategories based on design capacity, with more limited testing and monitoring requirements for smaller units, as we are also recommending for the Area and Major Source Boiler MACT proposals. The costs of the proposed testing and monitoring requirements will be infeasible for many small sources with low facility-wide HAP emissions, such that the proposal would establish very high regulatory costs for little environmental benefit. The Maine DEP recommends that EPA establish more limited requirements for smaller units or those combusting materials that release less HAPs.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units. Further, see preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 7

Comment: In FR 75 page 31954, EPA discusses energy recovery units and states that most of these units combust a small percentage of their fuel as solid waste. EPA further states that these units have an emissions profile similar to boilers, as opposed to incinerators. EPA states that "Combustion of waste in these units impacts the emission profile to some degree, although emissions from these units often resemble emissions from boilers that combust traditional fuel."

We agree with those statements, but note that EPA does not follow through with this concept when establishing the emission limits. For example, there is just one category for energy recovery units, even though the variability within that group is very large with drastic differences between the primary fuels used, combustion technology, and size of the units. EPA has never established the same emission limits for coal, oil, gas or biomass units under boiler regulations. The boiler rules are subcategorized by fuel type and in the case of the proposed major source boiler MACT rules, even by combustor type. The energy recovery unit category under CISWI needs to be subcategorized in a similar way.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 1

Comment: In its rationale for Proposed Subcategories [pg. 31951], EPA states: "We are proposing to subcategorize CISWI units based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities. These proposed subcategories for CISWI have been established based on fundamental differences in the types and sizes of units that will be subject to the standards."

EPS further states: "Energy recovery units are also different from incinerators in terms of how the fuel is fed into the combustion chamber, the combustion chamber design (which typically includes integral heat recovery) and other operational characteristics. These differences can result in emission profiles for energy recovery units that are different from incinerators but similar to boilers. Combustion of waste materials in these units impacts the emission profile to some degree, although emissions from these units often resemble emissions from boilers that combust traditional fuels."

EPA has not considered the effect of unit design, fuel type, or load on emissions of these pollutants in setting the proposed emission limits, which is inconsistent with the arguments proposed for subcategorization by unit fuel type and design in the proposed Boiler MACT regulation. EPA has recognized that it is appropriate to subcategorize boilers (energy recovery units under CISWI) in the Boiler MACT into coal, biomass, liquid, and gas boilers because these boilers are designed differently and the properties of the fuel affect the emissions from these units. The FSI has further submitted comments presenting the justification for a bagasse boiler subcategory. The rationale is based on the unique design, operation, and fuel burned in bagasse boilers.

EPA established only one subcategory for energy recovery units within the CISWI proposal to address boilers that are burning solid waste. This subcategory is overly broad and does not take into consideration the variety of energy recovery units, including coal units, biomass units, bagasse-fired units, combination boilers, liquid boilers, and even gas fired units. As EPA has recognized in the Boiler MACT proposal, there are many categories of units that might burn solid waste, and including them all in the same category is not appropriate. EPA should properly utilize the flexibility provided in Section 129(a)(2) of the Clean Air Act: "The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards."

Therefore, FSI requests, if bagasse, wood, or other agricultural materials are ultimately defined as solid waste, and the FSI boilers are regulated under the CISWI rule, a separate subcategory for bagasse boilers should be established.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 2

Comment: EPA should take into account the size of the energy recovery unit by using a tiered approach when establishing the CISWI performance standards, rather than taking a "one size fits all" approach.

The vast majority of energy recovery units addressed in the proposed CISWI rule are very large units, with heat input capacity in excess of 200 MMBtu/hr. Roughly one-third of the units for which test data was presented rated in excess of 500 MMBtu/hr. For example, in establishing the proposed hydrogen chloride (HC1) emission limit, the five energy recovery units used as the basis range from 275 to 1084 MMBtu/hr. In the Dioxin Furan (D/F) standard (Total Mass Balance) evaluation, only two of the 15 units used to establish the proposed standard have heat inputs of less than 100 MMBtu/hr, with the remaining 13 units rated at 200 to 940 MMBtu/hr. In fact, in reviewing the data from the 24 out of 40 energy recovery units used to establish the various MACT floor baselines, US Environmental Protection Agency Docket EPA-1-1Q-OAR-2003-0119 August 23, 2010 there appear to be only five units with heat inputs of less than 100 MMBtu/hr and only two units with a heat input of 50 MMBtu/hr.

Clearly, a unit rated at 50 MMBtu/hr or less poses a much smaller environmental impact than does one rated at 10 or 20 times this heat input rate even if a less stringent standard is applied to the smaller unit. Rather than a "one size fits all" classification of all energy recovery units, EPA should propose a tiered standard, with a different baseline for the MACT floor defined for smaller emission units. Given the relative contribution of pollutants based on the heat input capacity, a separate sub-category within each of the five currently proposed categories (incinerators, energy recovery units, waste-burning kilns, burn-off ovens and small, remote incinerators) should be established for those units rated at less than 100 MMBtu/hr. A new baseline for these sources should be established based on relevant emissions data from like-sized units within these sub-categories.

An approach to provide a different set of limits for smaller units has merit and precedent. Given the small number of sources in the small unit category, the overall impact of a relaxed standard for this group subject to the CISWI standards would be minimal, as the greatest reductions will be made from the larger units. In addition, a higher MACT floor for smaller units in the energy recovery category would allow these facilities to continue to combust solid waste for beneficial heat recovery, reducing the need for fossil fuels without requiring potentially cost-prohibitive upgrades to add-on controls which will have little emissions reduction benefit. Such an approach would be consistent with the thresholds established in the New Source Performance Standard for Small IndustrialCommercial-Institutional Steam Generating Units (40 CFR 60 Subpart Dc), which also sets an upper applicability threshold of 100 MMBtu/hr.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units. Further, see preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 3

Comment: Information provided in the docket for this rule indicates that, for the purpose of the CISWI rule, EPA has classified used oil burners as energy recovery units and has collected emissions and other data from one used oil burner (EPA-HQ-OAR-2003-0119-0041). EPA also has based its economic impact analysis for existing used oil burners on that one burner, identified in EPA documents as "AKBelugaRiverProduction," located at the Beluga River Unit Production Facility in Kenai, Alaska, owned by ConocoPhillips. (EPA-HQ-OAR-2003-0119-0056). According to EPA's compliance cost analysis for CISWI units, the total costs of complying with the proposed CISWI rule for a single used oil burner would be $973,084 and the annualized costs would be $276,371. (EPA-HQ-OAR-2003-0119-0054).

As discussed in the attached comments [see DCN: EPA-HQ-OAR-2003-0119-1948.2 through 1948.7 for attachments submitted by the commenter], ConocoPhillips is not representative of UOMA customers, most of which are small businesses.

Response: See the preamble and regulatory text on subcategories. Note that certain types of units are being deferred from regulation in the final CISWI rule.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 5

Comment: CISWI performance standards should be established that are specific to the type(s) of fuel being combusted.

The MACT floor determination does not take into consideration the type of fuels combusted in the CISWI units and, as a result, has the effect of an "apples to oranges" comparison between sources, even those within the same classification. In fact, the fuel usage data and the concentrations used to set the MACT floor represent a very disjointed combination of test results and fuel usage rates that often do not correlate, frequently with fuel usage from dates which differ from the dates of the test results used to select the MACT floor, making any comparison of fuel usage and resultant emissions impossible.

In addition, the MACT floor determination picks and chooses between multiple units and fuel mixtures for the various regulated pollutants, meaning that a source burning a low-emitting fuel or operating a control device that is effective for one pollutant may have little or no trouble meeting the standard for that particular pollutant, but may have considerable difficulty achieving the standard for other pollutants based on the fuel combusted or the particular add-on control employed. In the case of the energy recovery category, for example, the nine pollutants for which standards are proposed (cadmium, carbon monoxide, dioxins/furans total mass, hydrogen chloride, lead, mercury, particulate matter and sulfur dioxide) rely on emissions data from 23 different facilities to establish the top five sources for each pollutant, clearly indicating that attempting to set a single standard regardless of fuel combusted is inappropriate.

Establishing a MACT floor with no consistent method to compare emissions from like-fueled units, coupled with the lack of complete data for all pollutants from the emission units within a category, calls the entire standard setting process into question. Clearly a standard based on the type of fuel (i.e., wood waste, oil, etc.) within each category should be the basis of the MACT

floor, not the proposed approach that sets the baseline on the lowest emitting sources, regardless of the fuel.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 6

Comment: Boilers and Process Heaters are consolidated into single categories of affected units in the Proposed Rules. Boilers and Process Heaters are generally designed and operated for a very different purpose. Boilers are generally operated with a variable firing rate to accommodate changing steam demands. Process Heaters are generally operated with a steady state operation to maintain a steady state consistent process flow. The resultant Carbon Monoxide emissions will be significantly different between Boilers and Process Heaters. Boilers will generally have more Carbon Monoxide emissions and will be designed to handle fluctuating firing rates. Process Heaters are tuned to operate at steady state with minimal Carbon Monoxide emissions. The resultant organic HAP emissions from Boilers and Process Heaters at Major Sources will be minimal. The good combustion and residence time in the Boilers and Process Heaters will prevent the formation of organic HAP emissions, even with some Carbon Monoxide emissions.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 13

Comment: EPA Must Develop Additional Subcategories

EPA has not acknowledged the effect of boiler design, fuel type, or load on emissions of these pollutants in setting the proposed emission limits, which is inappropriate and inconsistent with the arguments proposed for sub categorization by unit fuel type and design in the proposed Boiler MACT regulation. EPA has recognized that it is appropriate to subcategorize boilers (energy recovery units under CISWI) in the Boiler MACT into stoker coal, pulverized coal, fluidized bed coal, stoker biomass, fluidized bed biomass, fuel cell biomass, suspension biomass, liquid, gas 1, and gas 2 boilers because these boilers are designed differently and the properties of the fuel and unit design affect the emissions from these units.

EPA established only one subcategory “energy recovery unit” within the CISWI proposal to address those boilers that are burning solid waste. However, this subcategory is overly broad and

does not take into consideration the variety of energy recovery units, including coal units, biomass units, combination boilers, liquid boilers, and even gas fired units. As EPA has recognized in the Boiler MACT proposal, there are many categories of units that might burn solid waste and including them all in the same category is not appropriate.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 17

Comment: In defining energy-recovery units ("ERUs") as a distinct subcategory, EPA has not properly justified in the record that ERUs require distinct subcategorization. EPA claims that ERUs are "generally larger than incinerators," that they "typically fire a mix of solid waste and other

fuels," and they have a different emissions profile. 75 Fed. Reg. at 31,951.

EPA's claims that ERUs are "generally larger" than incinerators is not well-supported in the record. For both incinerators and ERUs, the record indicates that their size can vary greatly. For example, ERUs are shown to have design capacities from 25 MMBtu/hr to as high as 940 MMBtu/hr, with an average design capacity of 405.07 MMBtu/hr, and a median design capacity of 306.425 MMBtu/hr. Correspondence with OMB at 269. Capacity data on incinerators is less consistently found in units of MMBtu/hr. Nonetheless, of the few incinerators described in units of MMBtu/hr, EPA has documented incinerators with design capacities of up to 210 MMBtu/hr. Id. at 270. It is unclear from the record that the size of ERUs as compared to incinerators differs enough to support two distinct subcategories of CISWI.

Most troubling among EPA's justifications for subcategorizing ERUs as distinct from incinerators is the agency's reliance on fuel mix as a basis for subcategorization and its claim that ERUs have different "emission profiles" from those of incinerators. EPA notes in the docket that among those units defined as ERUs, there is a wide range of materials being burned in addition to solid waste. Among the ERUs listed, both wet and dry biomass, bituminous coal, natural gas, distillate, and residual liquids are burned. Correspondence with OMB, at 57–72. Incinerators, on the other hand, are listed as only burning coal in addition to solid waste. Id. at

71. Though it seems that the fuel mixes of the two types of units are somewhat different, by defining the subcategories on the basis of fuel mix and emissions profile, EPA sets up disincentives to meet the MACT standard through switching to cleaner fuels. MACT standards

must be set to reflect the performance actually achieved by the best performers, however that performance is achieved, including through a change in inputs such as fuel. See Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 861 (D.C. Cir. 2001) (addressing similar MACT requirements in § 112 of the Act and focusing on emission reductions achieved). Moreover, the sparse record, paired with the statement of different "emission profiles," strongly suggest that the

real motivation behind these subcategories was differentiation on the basis of emissions, rather than "class, type, and size" of sources. EPA has not shown that burning a different fuel mix

makes ERUs a different class or type of unit. Emissions-based groupings would allow certain segments of the industry to evade the stringent emissions standards that other units in their industry must comply with. This is unlawful, as well as arbitrary, and moreover defeats the Act's directive to set standards that ensure that all sources will match the emission levels achieved by the best performers in the industrial category. See 42 U.S.C. § 7429(a)(2). Though it is possible that there are differences between incinerators and ERUs that warrant subcategorization, EPA must justify its decision to subcategorize ERUs as distinct from incinerators and provide more information on the basis for this decision. There is nothing in the Act that requires MACT standards to be based on subcategories designed so that units can continue to operate unchanged, or so that nearly every source in the industry will be able to meet final standards without making some adjustment or adding controls in order to do so.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 44

Comment: Boilers burning any solid waste have been put into a single subcategory called energy recovery units. The floor memo indicates there are 40 existing units in this subcategory

under EPA's primary definition of solid waste. Of the units in this group having usable emissions data, nearly all are boilers designed to combust solid fuels rather than just liquid or gaseous fuels.

In the proposed Boiler MACT and GACT emission standards, EPA has subcategorized boilers by fuel type, recognizing there are considerable differences in design, operating characteristics, emissions, and emission control technologies. In the CISWI proposal, EPA acknowledges the characteristics of energy recovery units are similar to boilers and that they have emission profiles similar to boilers combusting traditional fuels. Therefore it seems logical to further subcategorize according to major fuel type within the CISWI energy recovery unit subcategory. To be consistent with the Boiler MACT and GACT standards, the subcategories would be gaseous, liquid, biomass and coal.

By placing all boilers burning any solid waste in a single subcategory, EPA is ignoring the dominant role boiler design and fuel/waste type have on emissions. As an example, suppose EPA decides used oil is a solid waste. When used oil is burned a boiler designed for liquid and gaseous fuels, emissions should be very similar to those from burning virgin fuel oil. However, if the used oil is co-fired with biomass or coal in a solid fuel boiler, the emissions will reflect the solid fuel characteristics and boiler design, as well as the installed control devices. Materials EPA is inclined to label as nonhazardous solid wastes under its preferred regulatory approach typically constitute a small portion of the total boiler heat input when combusted in a solid fuel

boiler. Thus solid wastes will have minimal influence on emissions, as indicated in the "floor memo," page 3: "Combustion of waste materials in these units impacts the emissions profile to some degree, although emissions from these units often resemble emissions from boilers that combust traditional fuels."

Even though only 4 energy recovery units with gas or oil as primary fuel have emission test results appearing in the CISWI database, these results have a disproportionate influence on the emission limits for CO and NOx.

Emissions data for energy recovery units in Appendix B (Tables B-21 through B-29) of the April 26 ERG memorandum indicate most tests are for units having biomass or coal as their primary fuel type. Three units have natural gas as their primary fuel type – WAEmeraldKalama U-2 and U-7, and LADeltech HB-512. There is also a waste heat boiler/regenerative thermal oxidizer with fuel oil listed as the primary fuel – MEPioneerPlastics Boiler#5/Thermal Oxidizer. Unit U-2 has tests for CO and NOx, unit U-7 has tests for CO, NOx, and filterable PM, unit HB-512 has tests for CO and NOx, and Boiler#5/Thermal Oxidizer for filterable PM. None of these four units has tests for Cd, HCl, Hg, SO2, or dioxin/furan.

U-2 and U-7 are among the five energy recovery units with the lowest CO and NOx emission tests, and HB-512 is among the lowest five units for NOx. For Unit U-2, the

CO value is 0.65 ppm and NOx is 52.57 ppm (both at 7% O2). For Unit U-7, the CO value is 11.65 ppm and the NOx is 69.44 ppm (both at 7% O2). For Unit HB-512, the NOx value is 69.44 ppm at 7% O2.

The proposed Boiler MACT CO limits (in ppmv at 3% O2, 30 day rolling average) for existing units are 1 for liquid fuels, 30 to 90 (depending on boiler type) for coal, and 250 to 1010 (depending on boiler type) for biomass. EPA obviously believes CO exhibits significant differences among fuel and boiler types and that it is appropriate to set CO limits accordingly. In contrast, a single CO limit of 150 ppmv at 7% O2 (193 ppm at 3% O2), 3-hour average, has been proposed for existing energy recovery units under CISWI.

For new energy recovery units, the proposed CO limit is 3 ppmv at 7% O2. This limit is derived from two tests on unit U-2. Likewise, the proposed NOx limit for new energy recovery units is 75 ppmv at 7% O2, also derived from two tests on unit U-2.

It is unreasonable to use CO and NOx test data from gas/oil boilers to set CO and NOx limits for solid fuel boilers. If EPA had data from a few more gas/oil boilers, the limits for all energy recovery units would be entirely based on gas/oil test results and it would be unlikely that boilers whose main fuel was coal or oil could meet those limits. Furthermore, if gas/oil units had data for the other CISWI pollutants (metals, SO2, dioxin/furan), these data would drive those limits as well. The only approaches for achieving compliance would be to either abandon biomass and coal use, or to stop burning the materials EPA designates as solid wastes.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)

Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 54

Comment: The "energy recovery unit" subcategory is overly broad and

should be subcategorized

Section IV.B of the preamble states that EPA is proposing to subcategorize CISWI units "based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities." We agree that incinerators and waste burning kilns should be in a different subcategory from boilers; however, EPA's proposed inclusion of all types of energy recovery units (coal units, biomass units, combination boilers, liquid boilers, and even gas fired units) into one subcategory falls short. EPA should create separate subcategories as it proposed in the Boiler and Process Heater MACT. The following excerpt from the Boiler MACT proposed rule preamble makes this point very well:

"The CAA allows EPA to divide source categories into subcategories based on differences in class, type, or size. For example, differences between given types of units can lead to corresponding differences in the nature of emissions and the technical feasibility of applying emission control techniques. The design, operating, and emissions information that EPA has reviewed indicates differences in unit design that distinguish different types of boilers. Data indicate that there are significant design and operational differences between units that burn coal, biomass, liquid, and gaseous fuels. Boiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other

than those originally specified is fired. While many boilers in the population database are indicated to co-fire liquids or gases with solid fuels, in actuality most of these commonly use fuel oil or natural gas as a startup fuel only, and operate on solid fuel during the remainder of their operation. In contrast, some co-fired units are specifically designed to fire combinations of solids, liquids, and gases. Changes to the fuel type would generally require extensive changes to the fuel handling and feeding system (e.g., a stoker using wood as fuel would

need to be redesigned to handle fuel oil or gaseous fuel). Additionally, the burners and combustion chamber would need to be redesigned and modified to handle different fuel types and account for increases or decreases in the fuel volume. In some cases, the changes may reduce the capacity and efficiency of the boiler or process heater. An additional effect of these changes would be extensive retrofitting needed to operate using a different fuel.

The design of the boiler or process heater, which is dependent in part on the type of fuel being burned, impacts the degree of combustion. Boilers and process heaters emit a number of different types of HAP emissions. Organic HAP are

formed from incomplete combustion and are influenced by the design and operation of the unit. The degree of combustion may be greatly influenced by three general factors: time, turbulence, and temperature. On the other hand, the formation of fuel dependent HAP (metals, mercury, and acid gases) is dependent

upon the composition of the fuel. These fuel dependent HAP emissions generally can be controlled by either changing the fuel property before combustion or by removing the HAP from the flue gas after combustion.

We first examined the HAP emissions results to determine if subcategorization by unit design type was warranted. We concluded that the data were sufficient for determining that a distinguishable difference in performance exists based on

unit design type. Therefore, because different types of units have different emission characteristics which may influence the feasibility of effectiveness of emission control, they should be regulated separately (i.e., subcategorized). Accordingly, we propose to subcategorize boilers and process heaters based on unit design in order to account for these differences in emissions and applicable controls.

For the fuel-dependent HAP (metals, mercury, acid gases), we identified five basic unit types as subcategories. These are the following: (1) units designed to burn coal, (2) units designed to burn biomass, (3) units designed to burn liquid fuel, (4) units designed to burn natural gas/refinery gas, and (5) units designed to burn other process gases. Within the basic unit types there are different designs and combustion systems that, while having a minor effect on fuel-related HAP emissions, have a much larger effect on organic HAP emissions. Therefore, we decided to further subcategorize based on these different unit designs but only in proposing standards for organic HAP emissions. We have identified the following 11 subcategories for organic HAP:

Pulverized coal units,

Stokers designed to burn coal,

Fluidized bed units designed to burn coal,

Stokers designed to burn biomass,

Fluidized bed units designed to burn biomass,

Suspension burners/Dutch Ovens designed to burn biomass, Fuel Cells designed to burn biomass,

Units designed to burn liquid fuel,

Units designed to burn natural gas/refinery gas,

Units designed to burn other gases, and

Metal process furnaces."

To further support this rationale used by EPA in the Boiler and Process Heater MACT proposal and to justify its use in the CISWI rule, we offer the following comments:

(1) since the Clean Air Act requires EPA to set sulfur dioxide limits for CISWI units and since coal contains significant concentrations of sulfur and biomass generally would contain little or no sulfur, a subcategory for coal-fired boilers should be established. Expensive control devices such as a spray dryer absorber could not reduce the outlet

concentrations of sulfur dioxide to the single ppm levels equivalent to those of a biomass boiler; (2) observation of the proposed Boiler MACT floor standards proposed for biomass and coal units shows that there are significant differences in outlet emissions of HCl, mercury, and carbon monoxide; (3) likewise, the NOx emissions from the top performing biomass, coal, liquid, and gas-fired units would all be significantly different due to inherent differences in the design of these units.

AF&PA members have coal-fired boilers that burn material that may meet the proposed definition of secondary materials that are non-hazardous solid waste. Thus, the MACT floor applicable to these units needs to be based on data representative of these units and EPA should properly utilize the flexibility provided in Section 129(a)(2) of the Clean Air Act: "The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards." Otherwise, AF&PA members would likely have to seek alternative treatment/disposal options for their residual streams, including land disposal and onsite or off-site incineration with no energy recovery, as the proposed limits will not be achievable by coal-fired boilers. EPA has already acknowledged in the cost memo that the proposed new source emission limit for SO2 will not be achievable for a unit with baseline SO2 emissions greater than 75 ppm [Footnote: see DCN: EPA-HQ-OAR-2003-0119-0054, Page 14.]

Combination boilers burning greater than 50 percent biomass

should be placed in an energy recovery unit subcategory with biomass units rather than coal units.

Assuming EPA responds to the above comment and separates coal and biomass units into separate subcategories, EPA should then place "combination units" (such as those at pulp and paper mills that burn a combination of biomass and coal) in the biomass subcategory if they burn greater than 50 percent biomass on an annual basis. As mentioned above, sulfur dioxide, mercury, and HCl emissions are directly related to the fuel. Including a combination unit which burns a majority of biomass in a category with coal units will bias the MACT floor.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 1

Comment: The level of emissions of HAPs anticipated from well-performing units will differ substantially depending on the fuel that is being combusted. Accordingly, NACAA agrees that the large subcategories identified by EPA in its ICI Boiler MACT proposal – coal-fired, biomass-fired, liquid-fired and gas-fired – are reasonable and warranted by the differences in technology and expected performance, given the nature of the fuel consumed. EPA acknowledges that the properties of the fuel being combusted contribute significantly to the level of HAP emissions [Footnote: "[B]ased on recently obtained information, we now understand that factors other than the controls (e.g., waste mix and combustion conditions) affect HMIWI performance, and those emission reduction strategies must be accounted for in MACT floor determinations." 73 Fed. Reg. at 72,970, 72,975. See also 74 Fed. Reg. at 51,377-79. "Based on the Brick MACT decision, we believe a source's performance resulting from the presence or absence of HAPs in fuel materials must be accounted for in establishing floors; i.e., a low emitter

due to low HAP fuel materials can still be a best performer." p 22.] However, the proposed rules fail to properly address this fundamental point in several important ways.

While the section 112 limits are based on MACT floor analyses that recognize this principle, the proposed section 129 limits are not. The section 129 categories are based on the purpose of the unit and traditional waste management categories (incineration, energy recovery, waste-burning kilns, etc.). While these subcategories are consistent with the language of section 129, they make no distinction between coal-fired, biomass-fired, liquid-fired and gas-fired energy recovery units. Industrial boilers combusting waste coal should not be expected to meet mercury limits achieved by biomass or oil-burning units; units combusting wet (low BTU) waste wood would have a difficult time meeting CO levels expected of coal-fired units. While we are loath to suggest even more subcategories than EPA has proposed [Footnote: Some of the existing subcategories serve no useful purpose.] NACAA believes the "energy recovery unit" [Footnote: EPA concludes that most ICI Boilers that combust solid waste would fall into this subcategory] section 129 subcategory should be further divided by fuel type. In order to avoid a situation where the use of subcategories with only a few units gives rise to MACT floors that are unreasonably lax because of the calculation of small sample variability, NACAA suggests that EPA use its authority to establish "beyond the floor" limits to conform emission limits for section 129 energy recovery units and section 112 boilers burning similar fuels.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 1

Comment: Additional subcategories need to be established.

EPA has proposed CISWI rule requirements for five subcategories- incinerator, energy recovery units, waste burning kilns, burn-off ovens, and small, remote incinerators. The energy recovery unit subcategory includes all types of units firing all fuel types- coal units, biomass units, combination boilers, liquid boilers, and even gas fired units are combined into one subcategory. This approach obviously ignores the inherent differences between such diverse combustion designs and fuel types. EPA has recognized the need for further subcategorization in the Subpart DDDDD proposed rule (75 Fed. Red. 32016-17):

"The CAA allows EPA to divide source categories into subcategories based on differences in class, type, or size. For example, differences between given types of units can lead to corresponding differences in the nature of emissions and the technical feasibility of applying emission control techniques. The design, operating, and emissions information that EPA has reviewed indicates differences in unit design that distinguish different types of boilers. Data indicate that there are significant design and operational differences between units that burn coal, biomass, liquid, and gaseous fuels. Boiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other than those originally specified is fired."

EPA has also subcategorized based on fuel type in the Subpart JJJJJJ Area Source Boiler rule. Energy recovery units under §129 are no different than units under §112 relative to emissions characteristics. However, such units are handled quite differently based on MACT Floor emission limits proposed for Subpart DDDDD subcategories on the basis of fuel and combustor types. Since energy recovery units under CISWI have similar design and fuel characteristics as non-waste combustors, it is logical that a similar approach relative to recognizing inherent differences with unit design and fuel characteristics is appropriate for CISWI sources. EPA should create additional separate subcategories and establish appropriate limits similar to the approach taken in the Boiler and Process Heater MACT Subpart DDDDD.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 1

Comment: GPI — Macon Mill supports EPA's statements regarding the need to establish emission standards specific to energy recovery units within the proposed regulation. Attempting to regulate energy recovery units in a manner identical to a typical incinerator is inappropriate given the differing characteristics of such units, as described in the preamble.

However, GPI — Macon Mill is concerned that additional subcategorization may be necessary within the energy recovery unit category. As EPA clearly discusses within the proposed Boiler MACT preamble, the type of fuel combusted significantly impacts the emissions profile of a combustion unit, as does the type of combustion unit. Accordingly, within the Boiler MACT proposal, EPA has proposed to establish different emission limits on the basis of both the combustor design and the type of fuel combusted. It is unclear why EPA has not taken a similar approach when considering energy recovery units under the CISWI NSPS, particularly in the event the alternative solid waste definition is promulgated. For example, GPI Macon Mill's existing No. 2 Biomass Boiler has the capability to combust biomass, coal, oil, natural gas and pulp mill residuals (i.e., sludge). If sludge is considered a solid waste, the emissions profile of this boiler would likely differ greatly from other energy recovery units within the subcategory that do not combust such a wide range of traditional fuels. GPI — Macon Mill encourages EPA to consider additional subcategorization within the energy recovery units category.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 1

Comment: The "energy recovery unit" subcategory is overly broad and should be subdivided and separate emission standards set.

Section IV.B of the preamble states that EPA is proposing to subcategorize CISWI units "based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities." Eastman agrees that incinerators and waste burning kilns should be in a different subcategory from boilers, however, EPA's proposed inclusion of all types of energy recovery units (coal units, biomass units, combination boilers, liquid boilers, and even gas fired units) into one subcategory falls short. EPA should create separate subcategories as it proposed in the Boiler and Process Heater MACT. The following excerpt from the Boiler MACT proposed rule preamble makes this point very well:

"The CAA allows EPA to divide source categories into subcategories based on differences in class, type, or size. For example, differences between given types of units can lead to corresponding differences in the nature of emissions and the technical feasibility of applying emission control techniques. The design, operating, and emissions information that EPA has reviewed indicates differences in unit design that distinguish different types of boilers. Data indicate that there are significant design and operational differences between units that burn coal, biomass, liquid, and gaseous fuels. Boiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other than those originally specified is fired. While many boilers in the population database are indicated to co-fire liquids or gases with solid fuels, in actuality most of these commonly use fuel oil or natural gas as a startup fuel only, and operate on solid fuel during the remainder of their operation. In contrast, some co-fired units are specifically designed to fire combinations of solids, liquids, and gases. Changes to the fuel type would generally require extensive changes to the fuel handling and feeding system (e.g., a stoker using wood as fuel would need to be redesigned to handle fuel oil or gaseous fuel). Additionally, the burners and combustion chamber would need to be redesigned and modified to handle different fuel types and account for increases or decreases in the fuel volume. In some cases, the changes may reduce the capacity and efficiency of the boiler or process heater. An additional effect of these changes would be extensive retrofitting needed to operate using a different fuel.

The design of the boiler or process heater, which is dependent in part on the type of fuel being burned, impacts the degree of combustion. Boilers and process heaters emit a

number of different types of HAP emissions. Organic HAP are formed from incomplete combustion and are influenced by the design and operation of the unit. The degree of combustion may be greatly influenced by three general factors: time, turbulence, and temperature. On the other hand, the formation of fuel dependent HAP (metals, mercury, and acid gases) is dependent upon the composition of the fuel. These fuel dependent HAP emissions generally can be controlled by either changing the fuel property before

combustion or by removing the HAP from the flue gas after combustion.

We first examined the HAP emissions results to determine if subcategorization by unit design type was warranted. We concluded that the data were sufficient for determining that a distinguishable difference in performance exists based on unit design type. Therefore, because different types of units have different emission characteristics which may influence the feasibility of effectiveness of emission control, they should be regulated separately (i.e.,

subcategorized). Accordingly, we propose to subcategorize boilers and process heaters based on unit design in order to account for these differences in emissions and applicable controls.

For the fuel-dependent HAP (metals, mercury, acid gases), we identified five basic unit types as subcategories. These are the following: (1) units designed to burn coal, (2) units designed to burn biomass, (3) units designed to burn liquid fuel, (4) units designed to burn natural gas/refinery gas, and (5) units designed to burn other process gases.

Within the basic unit types there are different designs and combustion systems that, while having a minor effect on fuel-related HAP emissions, have a much larger effect on organic HAP emissions. Therefore, we decided to further subcategorize based on these different unit designs but only in proposing standards for organic HAP emissions. We have identified the following 11 subcategories for organic HAP:

Pulverized coal units,

Stokers designed to burn coal,

Fluidized bed units designed to burn coal,

Stokers designed to burn biomass,

Fluidized bed units designed to burn biomass,

Suspension burners/Dutch Ovens designed to burn biomass,

Fuel Cells designed to burn biomass,

Units designed to burn liquid fuel,

Units designed to burn natural gas/refinery gas,

Units designed to burn other gases, and

Metal process furnaces."

To further support this rationale used by EPA in the Boiler and Process Heater MACT proposal and to justify its use in the CISWI rule, Eastman offers the following comments: (1) since the Clean Air Act requires EPA to set sulfur dioxide limits for CISWI units and since coal contains

significant concentrations of sulfur and biomass generally would contain little of no sulfur, a subcategory just for coal-fired boilers should be established. Expensive control devices such as a spray dryer absorber could not reduce the outlet concentrations of sulfur dioxide to a level equivalent to those of a biomass boiler; (2) observation of the proposed Boiler MACT floor standards proposed for biomass and coal units shows that there are significant differences in outlet emissions of HCl, mercury, and carbon monoxide; (3) likewise, the NOx emissions from the top performing biomass, coal, liquid, and gas-fired units would all be significantly different due to inherent differences in the design of these units.

While we are not commenting on EPA's Alternative Approach to the definition of solid waste, Eastman believes these distinct subcategories (biomass, coal, liquid) for energy recovery units is appropriate for whichever approach EPA takes.

Eastman has a direct interest in this issue as we operate three coal-fired boilers (stokers) that periodically burn a wastewater treatment sludge that may meet the criteria of a solid waste as proposed in the CISWI Redefinition Rule. Thus, we are concerned that the so-called MACT

floor applicable to these units be based on data representative of these units and that EPA properly utilizes the flexibility provided in Section 129(a)(2) of the Clean Air Act: "The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards." Otherwise, we would likely have to seek alternative treatment/disposal options for this residual stream, including land disposal and onsite or off-site incineration.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 4

Comment: Combination-type units burning greater than 50 percent biomass should be placed in a subcategory with biomass units rather than coal units.

Assuming EPA responds to the above comment and separates coal and biomass units into separate subcategories, EPA should then place "combination units" (such as those at pulp and paper mills that burn a combination of biomass and coal) in the biomass subcategory if they burn greater than 50 percent biomass on an annual basis. Sulfur dioxide, mercury, and HCl emissions are directly related to the fuel. Coal-fired boilers will inherently have higher emissions of HCl and mercury whereas biomass boilers will inherently have higher CO emissions. Eastman recommends EPA use data from boilers burning at least 90 percent coal to set standards for the coal subcategories and to use data from boilers burning less than 10 percent coal to set standards for the biomass subcategories. For combination boilers, EPA should allow compliance to be determined using weighted averages such as in NSPS Db where EPA used this methodology for sulfur dioxide and NOx. We do not see any issues related to enforceability of such weighted average standards that cannot be overcome with today's information technology.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 11

Comment: NACAA supports the development of subcategories in MACT rule development, where such subcategories are based on meaningful differences in anticipated fuels and unit designs. Because NACAA's technical team identified significant differences in the anticipated emission profiles of wood-fired and coal-fired units, the NACAA Model Permit Guidance

separated EPA's solid-fuel category into two subcategories, but, seeing no clear technical difference supporting EPA's limited use subcategory, deleted it.

In the vacated ICI Boiler MACT rule, EPA had established four categories – solid-fuel, liquid-fuel, gas-fuel and limited-use boilers. In the 2000 CISWI rule there was but one category – incinerators. The proposed ICI Boiler MACT rule has 11 subcategories while the proposed CISWI rule would have five subcategories. In support of the explosion in the number of subcategories EPA explains the differences in design between, for example, a coal-fired stoker boiler and a coal-fired PC boiler. However, large boilers do not come off an assembly line [Footnote: Even mass-produced automobiles will exhibit design differences within and between models and manufacturers.] and last for up to 50 years. Almost every large boiler will have differences in design from every other large boiler. Even smaller boilers will have differences in design from small boilers produced by other manufacturers. Accordingly, it is insufficient to simply identify design

differences. Where EPA seeks to establish additional subcategories it must explain why those differences matter and point to information in the record that supports its conclusion. In particular, we note that EPA's Boiler MACT categories are based on the nature of the fuel that is consumed while the proposed CISWI rule categories are based on the purpose of the combustion, not the fuel. EPA should identify a consistent rationale for establishing new subcategories.

Within the Boiler MACT "coal-fired" category, EPA proposes separate subcategories for stoker, fluidized bed and pulverized coal designs. However, we know of no reason why well-controlled units of these designs should differ significantly in levels of HAP emissions. EPA's subsequent MACT floor analysis leads to calculated MACT floor levels that are often identical and are within the variability expected of such measurements, thus documenting the lack of a basis for a separate subcategory. Similarly, EPA proposes to establish four subcategories of wood-fired boilers [Footnote: NACAA has raised a concern that differences in the combustion properties of "wet" wood and dry wood might warrant development of a separate subcategory] – stoker, fluidized bed, suspension and "fuel cell" – as well as separate subcategories for natural gas and other process gases. Again, EPA provides no demonstration that such subcategories are warranted.

The "fuel cell" subcategory of wood-fired boilers is especially problematic. A fuel cell is generally understood to create electricity directly from a fuel gas without combustion [Footnote: See, e.g., Standard Handbook of Powerplant Engineering, Section 8.6, Elliot (ed), McGraw Hill, 1998.] As such, a true fuel cell would not be subject to the ICI Boiler Rule. One does not find in the technical literature a discussion of "fuel cell" combustion units. A visit to the website of one of the manufacturers of a unit (Wellon, Inc) that EPA asserts is a wood-fired fuel cell combustion unit reveals that the company does refer to certain of its units as fuel cells, but this reference is to a marketing approach to the sale of modular units, rather than a particular design [Footnote: The company will sell a fuel cell that is either top-fired or bottom-fired.] The units in EPA's database that it styles as "fuel cell" units appear to be newer than most, and for that reason, relatively fuel efficient and low emitting, but there does not appear to be any difference in fundamental design that would warrant establishment of a separate category.

Creating larger numbers of subcategories usually leads to higher MACT floors in two ways. First, if a small number of the best performers (e.g., fuel cells) can be culled from a larger group into their own subcategory, the MACT floor for the larger group (the wood-fired boilers) will

rise. Second, because the small group will have a small number of tests, the statistical variability of the small group will also increase, leading to MACT floor increases for both the larger group and the smaller group [Footnote: EPA's proposed MACT standards for wood-fired boilers are identical for all pollutants except CO.]

NACAA agrees that fluidized bed combustion units (either biomass or coal-fired) are of sufficiently different design and anticipated performance that a separate subcategory may be warranted, but does not see a justification for the other subcategories proposed by EPA for the Boiler MACT rule. EPA has advised that ICI Boilers that combust solid waste would largely fall within the "Energy Recovery Unit" subcategory of the proposed CISWI rule. When burning similar materials, such units would show similar differences in emissions as ICI Boilers, irrespective of whether the material being combusted was "discarded." For this reason, those units should be subcategorized into coal-fired, wood-fired, oil-fired (if any) and gas-fired (if any). EPA should then use its "beyond the floor" authority to ensure that the resulting MACT standards are reasonable.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Michael I. Holzman
Commenter Affiliation: M.I. Holzman & Associates, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2102.1
Comment Excerpt Number: 3

Comment: If waste biomass or other waste fuels not considered traditional fuels will not be considered homogenous waste for purposes of the small power production facility exemption from CISWI, and if such materials, even in de minimis amounts after sorting and processing at recycling facilities, will continue to be considered solid waste subject to CISWI rules, then separate emissions limits need to be established for subcategories of energy recovery facilities that utilize waste biomass, whole tires, scrap tires not meeting legitimacy criteria or other waste fuels, that can be met with technically feasible, available and cost-effective controls.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and rationale for subcategories-cement kilns.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 4

Comment: These rules as drafted appear to take a boiler such as our 1976 stoker-fired biomass boiler and insert it into the incinerator category without regard to boiler design or function. The rules then appear to apply the best-of-the-best incinerator limits to such units.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 8

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

Assignment of more limited-use subcategories for boilers such as ours

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 15

Comment: EPA should use its authority to create subcategories reflecting the significant differences among units regulated as energy recovery units, further subcategorizing based on fuels and boiler types.

However, doing so changes the data pools from which the levels of standards are calculated. This means that achievable, pragmatic limits, which is our primary concern and need, are not assured even with subcategorization. This degree of uncertainty makes specific meaningful comment on how to sub-categorize impossible. EPA should first finalize the definition of non-hazardous solid waste based on an understanding of the true costs and potential adverse environmental impacts inherent in the decision as more fully spelled out in the IP and AF&PA comments on the NHSW rule. Then, EPA must establish a pragmatic and legally acceptable "calculus" for determining emissions limits including effects of variability in emissions rates and then iterate on various subcategory combinations checking each alternative against standards of achievability for affected units and pragmatism regarding cost and economic impact. This task admittedly may be herculean, but necessary.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units, the CISWI Promulgation Schedule and 112(c)(6) Obligations, and the MACT Floor Analysis.

Commenter Name: Terry Walmsley
Commenter Affiliation: Fibrowatt LLC

Document Control Number: EPA-HQ-OAR-2003-0119-2118.1
Comment Excerpt Number: 2

Comment: While Fibrowatt recognizes that EPA cannot make the applicability of MACT or CISWI revolve around energy recovery versus incineration, the distinction between the functionality of a boiler (applicable to the National Emission Standards for Hazardous Air Pollutants for Major Sources and Area Sources for Industrial, Commercial, and Industrial Boilers and Process Heaters) versus the function of an incinerator

as stipulated under the proposed CISWI Rule can not be overlooked. Unlike typical incinerators with energy recovery, Fibrowatt utilizes a standard spreader stoker grate designed for the unique fuel characteristics of poultry litter and other types of biomass fuel material. The technology has been developed over several decades and has resulted in innovative technology for boiler design, operational management, and importantly energy efficiency.

If such a spreader stoker boiler were to be regulated under CISWI as an incinerator, such categorization will result in the application of limits and performance standards that would go counter to the primary function of such unit for energy production and exportation to the electrical grid. There are fundamental technical differences reflected in the boiler technology of Fibrowatt plants verses incinerator units designed with supplemental energy recovery.

Fibrowatt accomplishes the primary goal of exporting electricity by utilizing the (chemical) energy from poultry litter and other forms of biomass in conjunction with optimizing boiler heat recovery surfaces and the furnace combustion environment for the most efficient conversion of energy. The conversion seeks to optimize combustion parameters to achieve an efficient balance of combustion characteristics and total energy conversion efficiency and the minimization of the use of generated energy for purposes of operating the plant.

For solid fuel combustion, in any form, a limit prescribed under CISWI would have been developed from a set of categorized incinerators very different than a Fibrowatt boiler. [Footnote: A statement in the CISWI Rule indicates the number of facilities that burn agricultural biomass and also recover energy total one unit, presumably the Fibrominn Biomass Power Plant referenced previously.] Such solid waste incinerators would have been designed for the presumed destruction of pathogens in waste material and to decrease the mass of such material for the purpose of more efficient land filling. Performance for waste destruction is totally incompatible with the optimum amount of total combustion air required for efficient energy recovery.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units. As the commenter has described it, this particular unit would appear to be an energy recovery unit designed to combust biomass.

Commenter Name: Ron Barmore
Commenter Affiliation: Energy Launch Developments, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2146.1
Comment Excerpt Number: 2

Comment: EPA Rationale

EPA defines an energy-recovery unit is Section IV., Part B.:

Energy-recovery units: Energy recovery units combust solid waste materials as a percentage of their fuel mixture and are designed to recover thermal energy in the form of steam or hot water. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste. Energy recovery units are generally larger than incinerators. They typically fire a mixture of solid waste and other fuels, whereas incinerators burn predominantly solid waste, although sometimes a small amount of supplemental fuel is fired in an incinerator to maintain combustion temperature. Energy recovery units are also different from incinerators in terms of how the fuel is fed into the combustion chamber, the combustion chamber design (which typically includes integral heat recovery) and other operational characteristics. These differences can result in emission profiles for energy recovery units that are different from incinerators but similar to boilers. Combustion of waste materials in these units impacts the emission profile to some degree, although emissions from these units often resemble emissions from boilers that combust traditional fuels. (p. 31951)

The definition illustrates the differences of energy recovery units from incinerators including fuel feeding, chamber design, and operational characteristics. Specifically, the EPA calls out the fact that energy recovery units have emissions profiles different than incinerators and are more similar to boilers combusting traditional fuels. The facilities sited above clearly meet the EPA's definition of Energy recovery units. The EPA itself acknowledges that boilers are more similar to energy recovery units than incinerators in emissions, design, and operations.

Suggested Revision – The EPA should exempt energy recovery units from the CISWI rule and make them subject to the proposed boiler MACT. Energy recovery units can meet the emissions levels of similar units defined as boilers and still protect human health and the environment. This is in line with the allowance of pulp and paper sludge, wood residuals, and some tire-derived fuel to be excluded from solid waste.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Melissa Mullarkey
Commenter Affiliation: Recycled Energy Development, LLC (RED)
Document Control Number: EPA-HQ-OAR-2003-0119-2213.1
Comment Excerpt Number: 3

Comment: The CISWI MACT rule includes only a limited number of categories. To appreciate the real-world complexity, however, EPA would do well to list numerous sub-categories. As currently proposed in the energy-recovery unit category, for example, a facility that burns biomass (wood

waste) would face the same restrictions as one burning traditional solid waste, even though the former, as noted above, provides numerous clean-energy benefits. Similar to what EPA has done with Major Sources, the agency should impose different limits for different types of technologies. EPA should take advantage its ability to subcategorize units enabled under Section 129 and provide facilities with the opportunity to meet the standards at reasonable costs.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 4

Comment: It is worth noting that the plants selected by EPA are totally unrepresentative of the biomass industry—they assume dry, specialized fuel and as such are not typical for biomass boilers in use today.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Terry Walmsley
Commenter Affiliation: Fibrowatt LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2118.1
Comment Excerpt Number: 4

Comment: To further articulate the differences of boiler verses incinerator technology, the combustion characteristics in a boiler designed for energy production typically has an exit level of oxygen (O2) of approximately 3 .5 % on a wet basis (exiting the stack). Conversely, oxygen levels exiting what might be considered a typical CISWI unit is postulated to be closer to 5% O2 on a wet basis exiting a stack. Oxygen levels are referenced because they are an indicator of the amount of air flowing through the system, requiring supplemental heating and fan power.

While Fibrowatt suggests through its comments to the Solid Waste Identification Rule Rule [see DCN: EPA-HQ-OAR-2003-0119-2118.2 for comments on the proposed Solid Waste Identification Rule] that its plants should not be regulated as incinerators with energy recovery under the proposed CISWI Rule, if such units were to be regulated under this Rule it would be necessary to further categorize such units according to their function and material combusted, specifically as energy recovery units designed for the combustion of agricultural materials identified as non-cellulosic biomass. Such materials require combustion technology that is uniquely designed for this form of solid feedstock. Such distinction is important in so far as the primary material combusted in these units, poultry litter, has physical ash characteristics which require the avoidance of high combustion temperatures in combination with appropriate levels of excess air necessary both to efficiently recover energy and balance the emissions of NOx associated with the fuel-bound nitrogen found in poultry litter.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units. As the commenter has described it, this particular unit would appear to be an energy recovery unit designed to combust biomass.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 5

Comment: To the extent that EPA determines, contrary to the statutory directives of Sections 112 and 129 of the CAA and decades of historic regulation of coal refuse as a fossil fuel, that coal refuse-fired EGUs are subject to regulation as CISWIs, the Proposed Rule must be modified to establish appropriate emission limitations based on a subcategory comprised of sources combusting, in significant part, coal and its derivatives. Distinct from the questions regarding the accuracy and completeness of EPA's current database, EPA has derived

proposed emission limitations based on emission reports from sources (notably including biomass units) that cannot be defensibly classified as comprising the same source category as sources combusting coal and its derivatives. To the extent that such sources are rendered subject to CISWI (which they should not be for the reasons summarized above), the Proposed Rule must be modified by including emission limitations appropriately derived for a source category comprised of sources combusting, in significant part, coal and its derivatives.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 12

Comment: EPA has not acknowledged the effect of unit design, fuel type, or load on emissions of these pollutants in setting the proposed emission limits, which is inappropriate and inconsistent with the arguments proposed for subcategorization by unit fuel type and design in the proposed Boiler MACT regulation. EPA has recognized that it is appropriate to subcategorize boilers (energy recovery units under CISWI) in the Boiler MACT into coal, biomass, liquid, and gas boilers because these boilers are designed differently and the properties of the fuel affect the emissions from these units.

EPA established only one subcategory for energy recovery units within the CISWI proposal to address boilers that are burning solid waste. This subcategory is overly broad and does not take into consideration the variety of energy recovery units, including coal units, biomass units, combination boilers, liquid boilers, and even gas fired units. EPA has already acknowledged in the cost memo that the proposed new source emission limit for SO2 will not be achievable for a unit with baseline SO2 emissions greater than 75 ppm which illustrates the need for

consideration for further subcategorization. As EPA has recognized in the Boiler MACT proposal, there are many categories of units that might burn solid waste, and including them all in the same category is not appropriate. EPA should properly utilize the flexibility provided in Section 129(a)(2) of the Clean Air Act.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 12

Comment: Combustion MACT Determinations Must Be Subcategorized To the Fuel Burned

CAA Section 129(a)(1)(A) provides that EPA "shall establish performance standards and other requirements . . . for each category of solid waste incineration units." 42 U.S.C. § 7429(a)(1)(A). In doing so, EPA "may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards (emphasis added)." 42 U.S.C. § 7429(2). Indeed, in the preamble to the Proposed Rule, EPA explains that it has "substantial discretion" under the CAA "to distinguish among classes, types and sizes of incinerator units within a category while setting standards." 75 Fed. Reg. 31940.

EPA has historically identified subcategories of sources when establishing MACT floors under CAA Section 129. For example, in Northeast MD Waste Disposal Auth. v. EPA, EPA subcategorized "small" municipal waste combustor units – i.e., units with a capacity of equal to or less than 250 tons per day – based on aggregate plant capacity for municipal solid waste. 358 F.3d 936, 941 (D.C. Cir. 2004). In this case, the D.C. Circuit confirmed that such subcategories were appropriate for distinct regulatory standards, based on the express language of CAA Section 129(2). Id. at 946. Similarly, in the CAA Section 112 context, EPA has identified broad categories for purposes of establishing categorical MACT standards generally, and then subcategorized these categories when developing MACT floors. See, e.g., 40 C.F.R. Part 63, Subpart OOOO (establishing broad categorical MACT standards for "Printing, Coating, and Dyeing of Fabrics and Other Textiles", as well as specific emission limits and other requirements for subcategories of affected operations). See also NRDC v. EPA, 489 F.3d 1364, 1372 (D.C. Cir. 2007) (acknowledging that EPA has "broad sub categorization authority" under CAA Section 112).

Indeed, in the context of the Proposed Rule, EPA acknowledges that distinct emission standards should be developed for different categories of solid waste incineration units subject to CISWI. Specifically, EPA notes in the preamble to the Proposed Rule that it is "proposing to subcategorize CISWI units based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities. These proposed subcategories for CISWI have been established based on fundamental differences in the types and sizes of units that will be subject to the standards." 75 Fed. Reg. 31951.

Although EPA appropriately undertakes through the Proposed Rule to subcategorize affected sources under CISWI, and to establish distinct emission standards for certain subcategories, EPA does not sufficiently extend this approach to propose emission standards specific to regulated sources that combust coal as a material part of their fuel source.

As another example, the top five facilities that set the CISWI standard for CO for existing units all appear to be biomass fired. According to the EPA database, the fuel category wood, plywood, and particleboard have average sulfur contents of less than <0.05%. The same database shows that all the coal samples together have an average sulfur content of 1.1%. It is simply impossible to control a coal fired boiler to the sulfur emissions of a biomass fired boiler. The MACT standards must be achievable and one way to accomplish this is by assigning appropriate subcategories. A 4.1 PPM standard is not achievable by a coal fired boiler.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 15

Comment: We note that EPA established MACT limits for boilers based on the technology of the combustion unit and also on the fuel source. We assume that EPA recognized that the differences in fuel between coal and biomass, for example, made it imperative to separate the analyses to avoid results that neither of the groups could meet in every case. ARIPPA believes that same consideration must be extended to the CISWI MACT standard. The fuel analysis provided in the MACT development record shows unequivocally that all fuels cannot be lumped into one category based on the type of combustion envisioned. As an example, lead levels in wood: bark are frequently less than detectable but the detectable results averaged to 0.36 PPM in the MACT database. Bituminous coal, on the other hand had an average lead content of 6.67 PPM, eighteen times higher than wood. Yet the MACT new source limit is set by a source that burned only 18-23% coal in the tests that established it as the best performing source. Of the 5 sources setting the limit for existing sources, no others burned any coal. ARIPPA plants have waste coal with lead as high as 77 PPM. Thus, if coal refuse is deemed to trigger CISWI at a coal refuse plant that plant would have to effect controls approximately one hundred times higher than the plants used to set the MACT standard, which are already the best performing sources. EPA must surely recognize that there is a point where it becomes technically impossible for a coal fired plant to meet the metals limits established by the best performing biomass fired plant.

The situation is pretty much the same for the cadmium and mercury limits. All of the plants contributing to the limit were biomass fired. Any significant coal firing would make the limits practically unachievable.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 15

Comment: EPA is Using Some Data to Set Floors that are not Representative of the Subcategory

ACC believes that EPA should further subcategorize the energy recovery units to ensure the promulgated limits are achievable. [Footnote: Additional comments on subcategorization are presented later in these comments.] EPA should subcategorize the energy recovery units by primary fuel type to be consistent with the approach the Agency has taken under the proposed Boiler MACT, where EPA has made clear that "data indicates there are significant design and operational differences between units that burn coal, biomass, liquid, and gaseous fuels."[Footnote: 75 FR 32,017.]

Under this proposed CISWI rule, EPA placed all boilers burning any solid waste into a single subcategory called energy recovery units. The floor memo indicates there are 40 existing units in this subcategory under EPA's primary definition of solid waste. Despite the mix of fuel sources in this subcategory, nearly all of the units in this group having usable emissions data are boilers designed to combust solid fuels rather than just liquid or gaseous fuels.

EPA's subcategorization decisions in this rule should be consistent with those used in the Boiler MACT and area source rules. In those two rules EPA proposed subcategorized boilers by fuel type, recognizing there are considerable differences in design, operating characteristics, emissions, and emission control technologies. Further, in the CISWI proposal, EPA acknowledges the characteristics of energy recovery units are similar to boilers and that they have emission profiles similar to boilers combusting traditional fuels. Therefore, EPA should similarly subcategorize according to major fuel type within the CISWI energy recovery unit subcategory. To be consistent with the proposed Boiler MACT and GACT standards, EPA should establish at least gaseous, liquid, biomass and coal subcategories.

By placing all boilers burning any solid waste in a single subcategory, EPA is ignoring the dominant role boiler design and fuel/waste type have on emissions. As EPA acknowledges, the boiler design and fuel type are likely to have a more significant influence over the emissions profile than will the particular solid waste being burned. Solid wastes will have minimal influence on emissions, as indicated in the "floor memo," page 3: "Combustion of waste materials in these units impacts the emissions profile to some degree, although emissions from these units often resemble emissions from boilers that combust traditional fuels." As an example, if EPA decides used oil is a solid waste, the emissions profile from burning that waste oil will primarily be determined by whether it is being burned in a boiler designed for liquid and gaseous fuels or whether it is being co-fired with biomass or coal in a solid fuel boiler. Thus, subcategorization by fuel type is warranted. Further subcategorization is also warranted because

EPA is currently proposing to use a cleaner burning subcategory of units (units that are primarily gas or oil fired) to set standards for a justifiably distinct set of "dirtier" burning units (units that are primarily biomass or coal-fired units). Even though only 4 energy recovery units with gas or

oil as primary fuel have emission test results appearing in the CISWI database, these results have a disproportionate influence on the emission limits for CO and NOx.

Emissions data for energy recovery units in Appendix B (Tables B-21 through B-29) of the April 26 ERG memorandum indicate most tests are for units having biomass or coal as their primary fuel type. Three units have natural gas as their primary fuel type – WAEmeraldKalama U-2 and U-7, and LADeltech HB-512. There is also a waste heat boiler/regenerative thermal oxidizer with fuel oil listed as the primary fuel – MEPioneerPlastics Boiler#5/Thermal Oxidizer. Unit U2 has tests for CO and NOx, unit U-7 has tests for CO, NOx, and filterable PM, unit HB-512 has tests for CO and NOx, and Boiler#5/Thermal Oxidizer for filterable PM. None of these four units has tests for Cd, HCl, Hg, SO2, or dioxin/furan.

The three units that have natural gas as their primary fuel type are driving the emissions standards for energy recovery units. U-2 and U-7 are among the five energy recovery units with the lowest CO and NOx emission tests, and HB-512 is among the lowest five units for NOx. For Unit U-2, the CO value is 0.65 ppm and NOx is 52.57 ppm (both at 7% O2). For Unit U-7, the CO value is 11.65 ppm and the NOx is 69.44 ppm (both at 7% O2). For Unit HB-512, the NOx value is 69.44 ppm at 7% O2. For new energy recovery units, the proposed CO limit (3 ppmv at 7% O2) is derived from two tests on unit U-2. Likewise, the proposed NOX limit for new energy recovery units (75 ppmv at 7% O2) is also derived from two tests on unit U-2.

As demonstrated by its proposal for the Boiler MACT, EPA clearly believes CO exhibits significant differences among fuel and boiler types and that it is appropriate to set CO limits accordingly. The proposed Boiler MACT CO limits (in ppmv at 3% O2, 30 day rolling average) for existing units are 1 for liquid fuels, 30 to 90 (depending on boiler type) for coal, and 250 to 1010 (depending on boiler type) for biomass. The difference in CO emissions profiles between different fuel/boiler types further justifies additional subcategorization. In contrast, a single CO limit of 150 ppmv at 7% O2 (193 ppm at 3% O2), 3-hour average, has been proposed for all of the existing energy recovery units under CISWI, regardless of fuel type.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 22

Comment: In the event that EPA concludes that coal refuse-fired EGUs are subject to regulation as CISWI units, notwithstanding the clear statutory directives of CAA Sections 112 and 129, as well as the longstanding historical classification of coal refuse as a fossil fuel, the Proposed Rule must be revised to establish appropriate emission limitations based on a subcategory consisting of sources that combust, in significant part, coal and coal derivatives. Such approach would be consistent with prior categorical determinations made by EPA in developing other MACT standards. By contrast, if EPA subjects coal refuse-fired EGUs to CISWI standards based upon the evaluation of emissions from biomass units, such standards will not be achievable in practice

for these coal refuse-fired sources. This approach is contrary to the statutory requirement for establishing MACT standards under Section 129.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 27

Comment: The "Energy Recovery Unit" Subcategory is Overly Broad and Should Be

Subcategorized

Section IV.B of the preamble [Footnote: 75 FR 31951]states that EPA is proposing to subcategorize CISWI units "based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities." ACC agrees that incinerators and waste burning kilns should be in a different subcategory from boilers; however, EPA's proposed inclusion of all types of energy recovery units (coal units, biomass units, combination boilers, liquid boilers, and even gas fired units) into one subcategory falls short of what Congress intended. EPA should create at least as many separate subcategories as it proposed in the Boiler MACT, but at a more refined level to adequately address the types of secondary materials combusted. The following excerpt from the Boiler MACT proposed rule preamble makes this point very well:

"The CAA allows EPA to divide source categories into subcategories based on differences in class, type, or size. For example, differences between given types of units

can lead to corresponding differences in the nature of emissions and the technical feasibility of applying emission control techniques. The design, operating, and emissions information that EPA has reviewed indicates differences in unit design that distinguish different types of boilers. Data indicate that there are significant design and operational

differences between units that burn coal, biomass, liquid, and gaseous fuels. Boiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other than those originally specified is fired. While many boilers in the population database are indicated to co-fire liquids or gases with solid fuels, in actuality

most of these commonly use fuel oil or natural gas as a startup fuel only, and operate on solid fuel during the remainder of their operation. In contrast, some co-fired units are specifically designed to fire combinations of solids, liquids, and gases. Changes to the fuel type would generally require extensive changes to the fuel handling and feeding system (e.g., a stoker using wood as fuel would need to be redesigned to handle fuel oil or gaseous fuel). Additionally, the burners and combustion chamber would need to be

redesigned and modified to handle different fuel types and account for increases or decreases in the fuel volume. In some cases, the changes may reduce the capacity and efficiency of the boiler

or process heater. An additional effect of these changes would be extensive retrofitting needed to operate using a different fuel.

The design of the boiler or process heater, which is dependent in part on the type of fuel being burned, impacts the degree of combustion. Boilers and process heaters emit a number of different types of HAP emissions. Organic HAP are formed from incomplete combustion and are influenced by the design and operation of the unit. The degree of combustion may be greatly influenced by three general factors: time, turbulence, and temperature. On the other hand, the formation of fuel dependent HAP (metals, mercury, and acid gases) is dependent upon the composition of the fuel. These fuel dependent HAP emissions generally can be controlled by either changing the fuel property before combustion or by removing the HAP from the flue gas after combustion.

We first examined the HAP emissions results to determine if subcategorization by unit design type was warranted. We concluded that the data were sufficient for determining that a distinguishable difference in performance exists based on unit design type. Therefore, because different types of units have different emission characteristics which may influence the feasibility of effectiveness of emission control, they should be regulated separately (i.e., subcategorized). Accordingly, we propose to subcategorize boilers and process heaters based on unit design in order to account for these differences in emissions and applicable controls."

To further support EPA's rationale in the Boiler MACT proposal and to justify its use in the CISWI rule, ACC offers the following comments. Since the Clean Air Act requires EPA to set sulfur dioxide limits for CISWI units, and since coal contains significant concentrations of sulfur and biomass generally contains little or no sulfur, a subcategory for coal-fired boilers should be established. Expensive control devices such as a spray dryer absorber could not reduce the outlet concentrations of sulfur dioxide to single ppm levels. Observation of the proposed Boiler MACT floor standards proposed for liquid, biomass, and coal units shows that there are significant differences in outlet emissions of HCl, mercury, and carbon monoxide. The NOx emissions from the top performing biomass, coal, liquid, and gas-fired units would all be significantly different due to inherent differences in the design of these units.

ACC members have coal-fired boilers that burn material that may meet the proposed definition of secondary materials that are non-hazardous solid waste and therefore would be regulated under section 112. Or, depending on EPA's final rule defining "solid waste for purposes of section 129, these boilers may end up regulated under section 129. If so, the MACT floor

applicable to these units needs to be based on data representative of these units and EPA should properly utilize the flexibility provided in section 129(a)(2) to further subcategorize to group like types of units. Otherwise, ACC members would likely have to seek alternative

treatment/disposal options for their residual streams, including land disposal and onsite or off-site incineration with no energy recovery, as the proposed limits will not be achievable by coal-fired boilers. EPA has already acknowledged in the cost memo that the proposed new source emission limit for SO2 will not be achievable for a unit with baseline SO2 emissions greater than 75 ppm.[Footnote: EPA-HQ-OAR-2003-0119-0054, Page 14.]

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 28

Comment: EPA has Broad Discretion to Distinguish Among Classes, Types and Sizes of Sources, Even Within Subcategories.

EPA has broad authority to distinguish among groups of sources within a source category or subcategory in setting a MACT standard. The statute provides that EPA "may distinguish among classes, types and sizes of sources within a category or subcategory" when establishing MACT standards. 42 U.S.C. § 7412(d)(I). Congress's use of the broad terms "class," "type," and "size" shows that EPA is intended to have broad discretion in the appropriate factors that warrant distinguishing among sources, and EPA's proposed subcategories fall squarely within the meaning of "types" and "sizes." It is a well-established canon of statutory construction that courts "give the words of a statute their ordinary, contemporary, common meaning, absent an indication Congress intended them to bear some different import." Williams v. Taylor, 529 U.S. 420, 431 (2000) (quotations omitted).

Webster's Third New International Dictionary Unabridged (1993) defines "class" to mean "a group, set or kind marked by common attributes or a common attribute." It defines "type" as "qualities common to a number of individuals that serve to distinguish them as an identifiable class or kind," further clarifying that '''[t]ype', 'kind' and 'sort' are usually interchangeable" and that '''kind' in most uses is likely to be very indefinite and involve any criterion of classification whatsoever." To the extent that EPA may distinguish among sources within a category or subcategory on the basis of "any [reasonable] criterion of classification whatsoever," and may create subcategories as appropriate, the CAA clearly grants EPA authority to create subcategories of industrial boilers as CIBO proposes in the following discussion.

Subcategorization of boilers where differences among sources affect the applicability of control technology is consistent with MACT precedent and is appropriate because of the impact of these factors on the ability of these sources to maintain the same level of control as non-similarly situated sources. For example, EPA created subcategories in the 1999 polyether polyols production MACT standard, finding "[s]ubcategorization was necessary due to the distinctively different nature of the epoxide and THF processes and its effect on the applicability of controls." 64 FR 29421. Similarly, in the 1998 flexible polyurethane foam production MACT standard, EPA found that "Subcategorization was necessary to reflect major variations in production methods, and/or HAP emissions that affect the applicability of controls." 61 FR 68407. Based on similar rationales, EPA created subcategories in the Group I polymers and resins MACT and the primary aluminum production MACT, and proposed to create subcategories in the polyurethane foam production MACT. Subcategorization based on fuel type is appropriate because the type of fuel affects the applicability of control technology.

EPA also has created subcategories in numerous cases where differences among sources affected the performance of control technology and, hence, the achievability of the MACT standard. For example, in the steel pickling MACT, EPA excluded specialty steel because the technology that

is effective for removing acid gas (HCl) emissions from carbon steel manufacturing "may not be as effective" for removing acid gas (H2S04) emissions from specialty steel manufacturing. 64 FR 33208. Similarly, the phosphoric acid manufacturing MACT subcategorized the submerged combustion process and the vacuum evaporation process because the "submerged combustion process is not amenable to the same level of control as is the vacuum evaporation process." 64 FR 31362. In the leather finishing operations MACT, EPA "observed differences in achievable emission levels between the types of leather products produced ... [and therefore] we have established four different performance standards for the various leather products produced." 65 FR 58705. And in the proposed secondary aluminum production MACT, EPA "examined the processes, the process operations, and other factors to determine if separate classes of units, operations, or other criteria have an effect on air emissions from emission sources, or the controllability of those emissions." 64 FR 6960. In sum, EPA's proposed subcategories are amply supported by the language of the statute, the legislative history, applicable case law and the Agency's own past practices.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 30

Comment: EPA Should Create Subcategories Based On Fuel Type

EPA states, in section IV.B of the proposed rule, that its subcategorization decisions were "based on technical and other differences in the processes, such as combustor design, draft type and availability of utilities." 75 FR 31951. EPA further states that it based its proposed subcategories " on fundamental differences in the types and sizes of units that will be subject to the standards." Id. CIBO strongly supports this initial step, and also agrees with EPA that incinerators, waste burning kilns and burn-off ovens should be categorized differently from boilers. However, CIBO believes that, as written, the energy recovery unit category is too broad and needs further refinement. This is because, as currently proposed, that subcategory fails to recognize the design and operational differences between units that burn coal, biomass, liquid and gaseous fuels and the varying emissions profiles that result from those differences.

For example, coal-fired units face issues with SO2 emissions that biomass-fired units do not. Coal contains significant concentrations of sulfur, whereas biomass generally contains little or no sulfur. Under the proposed rule, biomass-fired units would likely be the best-performing units for SO2, and coal-fired boilers would be held to an emissions standard impossible to meet using available control technology. Further, reference to the proposed Boiler MACT floor standards for proposed biomass and coal units show that there are also significant differences in NOx, HCl, CO and mercury emissions, due to inherent differences in the design of those units, and also due to technological limitations with respect to available emissions control technologies for these units.

In, the Boiler MACT proposed rule, EPA acknowledged that "[b]oiler systems are designed for specific fuel types and will encounter problems if a fuel with characteristics other than those originally specified is fired." [Footnote: Specifically, EPA explained: "Changes to the fuel type would generally require extensive changes to the fuel handling and feeding system[.] Additionally, the burners and combustion chamber would need to be redesigned and modified to handle different types and account for increases or decreases in the fuel volume. . . . An additional effect of these changes would be extensive retrofitting needed to operate using a different fuel." 75 Fed. Reg. 32,017] 75 FR 32017. However, the CISWI proposed rule establishes emissions limitations for subcategories that do not address these different fuel types and the problems units of one fuel type may have in trying to meet the emissions profiles of best performing units, which may likely be utilizing a different fuel type. Thus, as proposed, the rule forces fuel switching, which even EPA concedes is technologically problematic for affected units. Neither Congress nor EPA intended this result. The best way to proceed with EPA's goals of establishing attainable emissions limits is to create additional subcategories for boilers based on fuel type.

Within the Coal Subcategory, EPA Should Create Subcategories for Circulating Fluid Bed Units and For Combination Units That Do Not Exclusively Burn Coal Within the coal subcategory, EPA should create a subcategory for circulating fluid bed units, at least with respect to SO2 floors. This is because, due to the unique design feature of circulating fluid bed units, it is common practice to control SO2 via limestone injection in the circulating bed. Compared to add-on control options such as spray dryer absorbers, wet scrubbers or duct sorbent injection, this technology is much more cost-effective and also results in lower SO2 emission rates. Within the group of units burning some amount of coal and reporting SO2 emissions in EPA's database for the Alternative Solid Waste definition scenario, two of these units (GASPNewsprintPB2 and PAPHGlatfelterPB5) stand out with lower SO2 emission rates. To compare the other types of boilers which naturally would not have this type of technology available, to circulating fluid bed units is inappropriate.

Further, it is nonsensical to include combination units such as the unit at Packaging Corporation in Tennessee (which only burns about 30% coal), or the unit at Domtar in North Carolina (which only burns about 25% coal) in a floor determination along with units that burn nearly 100% . As discussed above, the biomass burned in these other units would have little or no sulfur, and thus these units' SO2 emissions will be lower than non-combination units burning coal exclusively.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 38

Comment: EPA Needs To Establish Achievable Subcategory Standards For Units

Burning Secondary Materials For Purposes of Discard

For boilers or process heaters burning secondary materials for purposes of discard, EPA should establish achievable subcategory standards (e.g., coal-fired, oil fired, biomass fired) separate from traditional incinerators currently provided in 40 C.F.R. 60 Subparts CCCC and DDDD. CIBO members have coal-fired boilers that burn material that may meet the proposed definition of secondary materials that are non-hazardous solid waste. Thus, CIBO is concerned that the MACT floor applicable to these units be based on data representative of these units and that EPA properly utilizes the flexibility provided in Section 129(a)(2) of the Clean Air Act. This can only be done if EPA creates new subcategories for these units, and establishes achievable limits for included units.

Response: See preamble Section V. for the responses on rationale for subcategories-energy recovery units and the MACT Floor Analysis.

7.4 Subcategories: Waste-burning kilns

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 1

Comment: An important point to consider in this Proposed Rule is that cement kilns are not and should not be considered to be a solid waste incinerator. Incinerators burn waste materials solely for the purposes of destruction. Likewise, boilers may burn wastes for energy recovery, but do not use ingredients or make any product other than steam. Conversely, the product produced by our cement kilns must meet strict quality standards. We feel that a significant flaw in EPA's proposal is its failure to recognize the differences between Portland cement kilns as compared to incinerators and boilers. For this reason, CEMEX urges EPA to re-propose this rulemaking and consider the emission standards that the cement industry is currently regulated under, particularly CAA Sections 111 and 112.

Response: See preamble Section V. for the response on rationale for subcategories-waste burning kilns.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 19

Comment: Improper Inclusion of Units in Floor Determination

The Cemex Miami Soil Treatment Facility is a unique facility. It is so different from the nominal kiln being regulated, that it does not belong in the floor determination. The unit is permitted to treat soil contaminated with petroleum and coal tar and was processing petroleum contaminated soil at a rate of 40 tons/hr during its emissions tests. As noted elsewhere, "treating" is not

"combusting". This kiln does not "combust" anything except traditional fossil fuel. It is equipped with a natural gas or oil-fired burner, a 99.9% efficient baghouse and a 99.5% efficient gas or oil-fired afterburner. It does not fire coal or tires, and the configuration and operation of the unit are unlike any kiln producing clinker. Furthermore, the maximum soil dryer temperature is under 1400° F as opposed to the 2700° F of a cement kiln. EPA should exclude this unit from the floor determination as we have done in the alternative floor analysis presented below.

Response: See preamble Section V. for the response on rationale for subcategories-soil treatment units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 30

Comment: EPA may establish subcategories when there is evidence that the emissions performance of regulated units differs in a fundamental way as a function of unit type, size, configuration, or other relevant factors. EPA used this discretion to establish a subcategory for waste-burning cement kilns for the reasons detailed in Section IV.B of the preamble to the Proposed CISWI Rule. Waste-burning cement kilns differ among themselves significantly in terms of type, size, configuration and other relevant factors that can influence emissions, and EPA should consider the further sub-categorization of kilns on this basis. For example, in its evaluation of organic emissions from kilns in support of the cement MACT rulemaking, PCA found significant differences due to configuration and raw materials.

PCA has not developed specific recommendations for sub-categorization of cement kilns under the Proposed CISWI Rule due to the limited data and the limited time EPA has allowed for comment in this rulemaking. Instead, our time has been used to identify and correct more basic problems in the emissions data on best performers and the statistical methodology that underlies EPA's proposed floors. The analysis needed to support recommendations on sub-categories will require that EPA acquire more data and that emissions data on other kilns (that are not best performers) be subjected to the same scrutiny and correction that we have given to the data for best performers in these comments. PCA requests the opportunity to conduct an analysis of an expanded and corrected database to develop sub-category recommendations in future comments.

Response: See preamble Section V. for the responses on rationale for subcategories- waste burning kilns and a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 21

Comment: EPA has noted the concerns of commenters who have "expressed concerns that section 129 mandates stringent requirements for emissions control, monitoring and reporting for all sources irrespective of size, while section 112 allows EPA discretion to treat smaller sources differently by setting standards based on generally available control technology for sources emitting less than 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs (i.e. area sources)." (75 FR 31886)

There are a number of documents in the dockets for the SWI and CISWI rules from individuals and environmental activist groups that echo these concerns. Without exception, these groups and individuals have expressed concerns and issued complaints about "unregulated" and/or "uncontrolled" emissions from small area source incinerators, boilers, and process heaters. To the extent those concerns and complaints are accurate (which we have not attempted to verify), we can understand and even support them. And it would be reasonable for EPA to try to correct such deficiencies.

However, including regulated cement kilns and the fully regulated use of secondary materials by cement kilns in these rules does nothing to address potentially legitimate concerns about area source incinerators, boilers, and process heaters. First of all, very few cement kilns are area sources. Secondly, EPA has made it clear to the cement industry that the final PC NESHAP, scheduled to be promulgated very soon, will regulate all cement kilns as major sources for all but one pollutant [Footnote: HCl is the only pollutant that will not be identically regulated.] So to the extent there ever was a legitimate issue in the CISWI rule of whether a cement kiln is an area source or major source will soon become virtually moot.

EPA has shown that regulating cement kilns under CISWI will produce zero environmental benefit and the Agency has stated that regulating kilns under CISWI will induce "negative growth" in the use of secondary materials; and that the rule will cause "diversion" of those materials to "alternative [i.e., land] disposal" options. CKRC has shown that diverting secondary materials, particularly scrap tires, to land disposal will cause significant environmental harm. Now, in light of the facts cited above, EPA can demonstrate to concerned "commenters" that regulating kilns under CISWI will do nothing to address their concerns about "unregulated" area source units.

Cumulatively, these facts make it very easy for EPA to justify withdrawing the cement kiln subcategory from consideration in these rules and doing nothing to upset existing secondary material recovery/reuse activities at cement kilns pending further careful study and reconsideration of all relevant factors. EPA has the authority to make that decision and there is no legal, judicial, or technical impediment standing in the way.

Response: See preamble Section V. for the response on rationale for subcategories- waste burning kilns.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 25

Comment: Because the operating characteristics necessary to produce quality cement inherently destroy or incorporate into the clinker most of the potential air pollutants that could be

derived from the fuels and raw materials, cement kilns are well suited to utilizing a variety of alternative fuels and raw materials (AFRs) to replace more traditional fuels and raw materials [Footnote: In addition to these inherent characteristics, cement kiln emissions are stringently regulated under the Portland Cement NESHAP, or PC MACT standards (40CFR Part 63, Subpart LLL).] Some of these operating characteristics include:[Footnote: World Business Council for Sustainable Development, Guidelines for the Selection and Use of Fuels and Raw Materials in the Cement Manufacturing Process, December 2005, Version 1.0.]

* High operating temperatures, which the process requires: 2,000°C in the flame of the main burner, 1,450°C material temperature to make clinker, and 1,000 to 1,200°C to calcine limestone.

* The typical residence time of combustion gases in the kiln is more than five seconds at a temperature higher than 1,000°C. (By contrast, gas residence time in a typical incinerator is only two seconds.)

* Residence time for solid materials varies from tens of minutes to an hour depending on the cement process.

* The process takes place under oxidizing conditions.

* The stable nature of thermal conditions in a well-operated kiln guarantees the complete destruction of the organic components of fuels and materials introduced into the kiln's high-temperature zones.

* Fuel combustion gases are in well-mixed contact with a large flow of alkaline (basic)

raw materials that neutralize acidic components that may exist in the gas stream.

Any inorganic mineral residues from combustion – including most heavy metals – are permanently trapped in the complex matrix of the clinker and cement [Footnote: Some volatile heavy metals are not completely immobilized in this way so their content in raw and/or waste materials must be assessed and controlled.]

* Complete combustion and the trapping of mineral residues means there is no ash residue from the process.

b. Emission Impacts of AFRs Used in Cement Kilns

The use of AFRs in cement kilns may have certain impacts on air emissions. For the

most part, the characteristics of the cement process itself, listed above, will be the primary determinant of whether or not emissions will be impacted by replacing virgin process inputs with secondary materials.

Response: See Preamble Section V. for discussion on subcategories- cement kilns.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 43

Comment: In the preamble to the Solid Waste rule [Footnote: 75 FR 31885 – 31887], EPA has proposed an alternative wherein all nonhazardous secondary materials that are burned as a fuel or used as an ingredient in a combustion process would be solid wastes subject to the CAA section 129 standards. In addition, all materials that result from processing of discarded non-hazardous secondary materials would be solid wastes under this alternative. SYA finds that the alternative approach does not directly affect the analysis above or cement kilns in general. However, the alternative approach would add 13 lime sludge kilns to the pool of data for calculation of emission reductions and costs for the waste-burning kiln subcategory. All of these additional facilities would require significant emission reductions to meet the CISWI standards. Thus, in the "waste-burning kiln" subcategory, lumping cement kilns and lime kilns together makes it appear as though cement kilns will be required to substantially reduce emissions even further under the alternative approach in comparison to the proposed option, when in actuality only lime kilns are impacted.

Conducting an RIA analysis on this alternative approach might appear to show a reasonable return on cost per total pollutants removed, but it would camouflage the fact that none of the benefit comes from cement kilns.

Lime kilns and cement kilns are not the same. The manufacturing processes and the products they create are very different. Combining these two processes into one category is not technically appropriate, nor does it make sense from an AFR perspective. While both processes utilize lime (although in different forms) as their major raw material component, the similarity ends there. Lime kilns at pulp/paper mills do not add other ingredients such as clay, shale, silica, and iron that are necessary to produce Portland cement. It is these "other ingredients" that are most typically substituted with alternative raw materials in the cement process. Lime kilns also operate at significantly lower temperature. Lime kilns and cement kilns should be categorized and analyzed separately for purposes of this rule.

Response: EPA thanks the commenter for their input. See preamble Section II.C. for a discussion on how the solid waste definition is addressed in the final rule.

7.5 Subcategories: Burn-off Ovens

Commenter Name: Carlton Mann
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-0065
Comment Excerpt Number: 2

Comment: Burn-off ovens really do not belong in the same category as mass-burn incinerators. Incinerators are designed to reduce waste material to ash as quickly as possible. Burn-off ovens are designed to remove material from metal parts so they can be reused. It is a reclaiming process.

As the regulation stated "These units typically are very small (<1 MMBtu/hr), batch operated, combustion units that are used to clean residual materials off of various metal parts, which are

then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases)"

Heat-cleaning ovens, as they are known in the industry, really don't burn the material in the oven. If they did, they would damage valuable parts. These ovens operate in a low-oxygen atmosphere to convert the organic material to combustible "smoke" and then burn that smoke in an afterburner. It's a much slower process than incineration because water sprays are used to protect the parts from extreme temperatures. Heat-cleaning ovens make very poor incinerators because they are so slow.

Certainly, there is some combustion in the oven, but with only 9% to 15% oxygen, it is mostly a pyrolysis process.

Burn-off ovens should be regulated, and in most states they are, but they really should not be grouped with mass-burn incinerators.

Burn-off ovens are required to meet rigorous standards for VOC emissions and this is achieved by using integral afterburners that operate between 1,500 F and 1,800 F with more than 1/2 second residence time. These high temperatures create thermal NOx which exceeds the proposed standards. On a volume basis, the NOx for burn-off ovens is about 120 PPM corrected to 7% O2. However, on a mass basis, the

quantity is very small, on the order of 0.1 pounds per hour for a mid-size oven which is virtually the same as the EPA Tier 1 standard for light trucks driving 60 miles per hour (0.092 pounds per hour).

So does it really make since to force burn-off oven operators to add $100,000 of control equipment for such a small source? I don't think so and I hope you will decide to remove burn-off ovens from this regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dale Olson
Commenter Affiliation: Montana Electric Motors, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-0693
Comment Excerpt Number: 1

Comment: We are in Opposition to to proposed regulation to include electric motor shop burn-off ovens that the EPA is proposing. [See EPA-HQ-OAR-2003-0119-0693.1 for attached letter concerning burn-off ovens.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Kevin M. Toor
Commenter Affiliation: Birclar Electric and Electronics
Document Control Number: EPA-HQ-OAR-2003-0119-0694

Comment Excerpt Number: 1

Comment: I am a small business person in Michigan doing my best during these tough times. I use my burn off oven in my business and it would be difficult to operate my business with out it. [See EPA-HQ-OAR-2003-0119-0694.1 for attached letter concerning burn-off ovens.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Andy Butterfield
Commenter Affiliation: Butterfield Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-0563
Comment Excerpt Number: 1

Comment: This is not a way to help out small business. Why is it that we are always the ones who have to take the hit. This level of government controll will wipe our industry out. The balance that you are trying to achieve in our existance with nature is not acceptable. Many more jobs will be lost because of this regulation as well of the potential for total colapse of the repair inustry. We strive very hard to keep up with standards and value our on efforts to help clean our environment. But with the amount of regulation that you are about to put on us, no one will be able to perform at any capacity. Why not just shut us down and put us on the unemployment roles now. We could not afford any amount of change at this time because of the economy in its state right now. Please don't go down this rode. Many more lively hoods will suffer. When there are no more businesses for you to regulate, you will not have a job either. [See EPA-HQ-OAR-2003-0119-0563.1 for attached letter concerning burn-off ovens.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Andy Butterfield
Commenter Affiliation: Butterfield Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-0563.1
Comment Excerpt Number: 1

Comment: We are writing in vehement opposition to the subject proposed rule, which we believe will do tremendous and long-lasting harm across all industries in our country, in addition to eliminating thousands of jobs. As a company that uses a burn-off oven in providing electric motor repair and rewinding service, here are the major reasons for our objection:

* Burn-off ovens should not be included in the same category as mass-burn solid waste incinerators. Use of burn-off ovens in electric motor and generator repair/rewind is a vital reclaiming and recycling process.

* The proposed emissions standards were developed by analyzing stack test results from only 10 burn-off ovens, whereas oven manufacturers estimate as many as 10,000 units are in use in the U.S. by several industries. Simply put, the sample is far too small.

* The harmful economic impact (direct and indirect) of the proposed regulation would be enormous. Companies like mine are not well-known, but the country could not function without electric motors, and we keep them operating. This regulation will disrupt and negatively impact virtually every industry; utilities and major infrastructure; our military; and municipal, state and federal governments. Untold critical equipment for which new motors or generators are not readily available (or not available at all) will be idled. Common examples would be a large refrigeration compressor motor for a hospital or trauma center, or an essential forced draft fan motor for a power plant.

* Based on the numbers in the proposed regulations, the average capital cost of compliance would be $146,777 per oven, with $88,861 in annual cost. My company certainly could not afford this; in addition to losses here, we believe it would result in the loss of thousands of jobs in the U.S. related to electric motor repair and rewinding.

* We use our burn-off oven on a very limited basis each month (perhaps 18-20 hours), and it is critical to providing environmentally responsible service. This proposed regulation would essentially mean we could no longer provide this service (possibly even putting us out of business). We are very concerned that there may be other firms that would resort to environmentally uncontrolled combined mechanical and heat methods or environmentally undesirable chemical methods of winding removal. This would lead to reductions in the energy efficiency of repaired motors and generators, conflicting with our company goals and those of the Department of Energy and Electrical Apparatus Service Association (EASA). The safety aspects of such methods are also a serious concern.

We believe this proposed regulation is contrary to the interests of our nation

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Steven S. Skenzick
Commenter Affiliation: HPS Electric Motors
Document Control Number: EPA-HQ-OAR-2003-0119-0696
Comment Excerpt Number: 1

Comment: Docket ID No. EPA-HQ-OAR-2003-0110 40 CFR Part 60 needs your immediate attention. The attached letter shows my belief as to why we must oppose this proposed regulation and support small business everywhere. If this is left to stand it will affect my small business with probable closure and the lose of 10 full time jobs. [See EPA-HQ-OAR-2003-0119-0696.1 for attached letter concerning burn-off ovens.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Chuck Yung
Commenter Affiliation: EASA
Document Control Number: EPA-HQ-OAR-2003-0119-1084
Comment Excerpt Number: 1

Comment: The other sad part of this is that our industry recycles so much material. We recycle as much copper as is mined in the US each year. Imagine having twice as many open pit mines, or importing enough copper to make up the difference. The trade deficit will take a serious hit, as will the environment.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Canniff
Commenter Affiliation: Guspro Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1092
Comment Excerpt Number: 1

Comment: On page 31973, the 3rd paragraph down states "This proposed action establishes national emission standards for new and existing CISWI. The EPA estimates that there are approximately 176 such units including incinerators, burnoff ovens, cement kilns and energy recovery units, covered by this rule".

This number is a gross underestimate of the actual quantity across the USA. Our customer list alone accounts for almost 1500 customers operating burnoff ovens in the USA, several of which have multiple ovens at their facility. We are only one burnoff oven manufacturer, with our customer base just accounting for a fraction of the burnoff oven market. If you were to multiply that figure by at least 4 or 5 you would get a better estimate of the actual quantity of burnoff ovens in the USA. Therefore from our projection alone the basis for the EPA report is flawed.

Alternative cleaning methods

EPA knowingly claims that companies with burnoff ovens would likely cease to operate if the regulation were to go ahead. The EPA also states "facilities with burnoff ovens would use abrasive blasting". It is clear that the EPA has not researched burnoff ovens and the variety of applications served by burnoff ovens. For example, how would you blast the coatings off motor windings in the motor rebuild market? Several parts cleaned by ovens cannot be blasted and/or it would adversely affect the surface finish of the parts.

Companies are continuously processing parts through burnoff ovens to recycle them back into production. The batch clean operation of an oven provides significant time savings in labour versus blasting operations. The only other alternative presented is landfill disposal. The value of parts being run through burnoff ovens can be quite high, so landfill is not a viable option either in most cases.

Burnoff ovens provide a cleaner alterative to several toxic chemical cleaning processes (such as caustic tanks, fluidized beds, etc.). They do not involve the handling and/or disposal of

hazardous chemicals. It is unclear what study and evaluation has determined that storing chemicals in the earth presents a better alternative to the minimal emissions from a burnoff oven.

The gross assumption that companies would just shift to blasting shows that the research was not done into the variety of burnoff oven applications and properly determining alternative procedures. If that legwork had been performed, the cost figures of alternate methods would grossly escalate.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Canniff
Commenter Affiliation: Guspro Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1092
Comment Excerpt Number: 3

Comment: Burnoff oven throughput

On page 31951, in the middle of the third column, the report states:

Burnoff ovens: These units typically are very small, batch operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices.

The EPA recognizes that the overall emissions from burnoff ovens are small relative to the other equipment classified as a CISWI. This is logically the reason burnoff ovens have been granted an exemption to the CISWI classification in the past. It is unclear why now burnoff ovens need to be regulated like a mass burn incinerator. The processing capacity of burnoff ovens is rated in pounds per hour, why should these ovens be held against standards for incinerators processing tons per hour.

Throughout the proposed standard, it is stated over and over that companies with burnoff ovens will likely cease to operate due to the new limits and control measures. Clearly the EPA recognizing that by implementing these standards, they will knowingly kill the burnoff oven industry and the industries that we supply would grind to a halt. As explained earlier, the quantity of ovens in the USA is grossly underestimated. By rough calculations, there are likely over 6000 companies operating burnoff ovens that will be affected. In addition to that, there are several burnoff oven manufacturers that will be forced to close.

Rather than killing the burnoff oven industry and crippling the numerous industries we support, we ask that the EPA revisit the calculations within the study. The report shows how insignificant the projected emissions from burnoff ovens are relative to other CISWI. Could the EPA not see fit to maintain the exemption for burnoff ovens, and in the process, save thousands of jobs in an already troubled economy?

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: J. F. Zajac
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1150.1
Comment Excerpt Number: 1

Comment: My questions and comments concerns to the proposed Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Waste Incineration Units (CISWI) rule as it may relate to the Lost Wax Investment Casting Process and industries that utilize this process.

The Lost Wax investment casting process is used in a wide range of industries including but not limited to manufacture of high precision parts such as turbine blades, manufacture of automobile parts, manufacture of valves, manufacture of medical devices such as hips and knees as well as manufacturing of various types of jewelry.

The process of lost wax casting starts with a sculptor crafting a representation of the desired piece out of wax, creating a pattern with the same intricate detail that will appear on the metal piece in its final form

Wax "sprues" are included in the creation of the pattern, which are wax rods or wires that delineate the strategic placement of channels that will remain open when the final mold is made. Sprues are not a design element of the final piece, but rather allow for spaces to remain open in the mold through which the molten metal that will constitute the final piece will be injected. The channels imprinted by these sprues will also allow for the wax to exit the mold.

Once the wax model and its attached sprues are in the desired form, the wax pattern is covered with a pliable ceramic substance through pouring, dipping, or both. Care must be taken during this process to ensure that air bubbles are not present, as any imperfections in the mold will be visible on the final piece. Once the mold surrounding the wax pattern reaches the desired thickness, it is allowed time to harden.

The wax and ceramic is then typically transferred to a kiln or oven where it is heated. The heating can be accomplished most typically by either gas, electric, or liquid fuels. As temperatures rise, the wax within is melted and eradicated through the channels left by the sprues, hence the name "lost wax" In some cases, the now melted wax is ignited and burns off. In many operations the actual amount of wax combusted is less than 100 pounds per day.

Since the wax is no longer needed it could be considered a waste at this point in the process. In addition the wax could be considered a secondary material since it is not the primary product of a manufacturing or commercial process.

The result of this stage is a strong mold with a hollow opening in the shape of the original wax design.

Molten metal can now be inserted into the final mold through the channels. The metal is injected or poured in the now hollow mold so that the metal fills all intricately placed impressions and shapes in the mold. When the metal hardens, the mold is removed to reveal the piece. In the final stages, protrusions such as those created by the opened channels or other vents must be removed

and the metal is typically further processed by traditional metal working processes to obtain the desired product.

Since the above mentioned process includes burning of process waste (wax) material in a kiln (oven or furnace), would the EPA consider this process to be included in the proposed amendments to 40 CFR 60 Subpart CCCC and DODD as a CISWI unit?

If so, has the EPA considered a de minimis level (Le. pounds per hour or pounds per day of material combusted) for exclusion from the CISWI regulations?

I would contend that if the EPA decides that processes such as the lost wax investment process described above and the associated burning of wax is regulated as a CISWI unit, there could be hundreds if not thousands of additional facilities potentially regulated throughout the US.

Furthermore, if the EPA decides that this operation is regulated and does not establish some de minimis level of exclusion then I believe that there will be great financial hardship to facilities of all sizes in terms of capital and operating costs for control equipment necessary to comply with the proposed regulations.

In addition, facilities will face an additional burden of trying to decide what controls are most appropriate for their facility since there are apparently no AP-42 or similar emission factors available for this type of process.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jodi M. Satches
Commenter Affiliation: Bollinger Quick Repair, L.L.C. (BQR)
Document Control Number: EPA-HQ-OAR-2003-0119-1156.1
Comment Excerpt Number: 1

Comment: Bollinger Quick Repair (BQR) is a full service ship repair yard located on the Harvey Canal near New Orleans, LA. The on premise electric shop utilizes a cleaning oven in order to provide generator repair and motor rewind services to our customers. Bollinger Quick Repair provides services that are essential to the recovery of the Greater New Orleans area. The facility has repaired over 20 pump station engines that are vital to flood protection for hundreds of thousands of people, their property and their businesses. ‘BQR also services vessels engaged in shipping and commerce, public service and other industries locally, nationally and worldwide.

This letter is being submitted in strong opposition to the proposed subject rule, which should not include cleaning! burn-off ovens, will not reduce emissions at our facility, and will be detrimental to our industry.

Bollinger Quick Repair utilizes a Controlled Pyrolysis® Cleaning Furnace, manufactured by Pollution Control Products Co., to remove thin layers of varnish in order to repair coils during motor rewinding services. This furnace should not be categorized as a commercial and industrial solid waste incineration unit (CISWI) as it does not meet the definition of an incinerator. A CISW unit is defined by EPA "as any device used to burn solid waste at a commercial or industrial facility.’" The unit at BQR does not remove varnish by incineration or burning, rather

the unit thermally decomposes the material at relatively low temperatures in an oxygen deficient atmosphere by pyrolysis. The part being cleaned does not directly contact a flame, rather heated air is introduced into the cleaning chamber where the organic material is decomposed and exhaust is then treated with a highly efficient afterburner. With an incineration unit, the refuse material is ignited and reduced to ash for disposal. The use of a cleaning oven is an essential recycling step in a reclamation and reuse activity, as the parts introduced to the

cleaning oven are refurbished and put back into service.

Like many of the industries in the New Orleans area, Bollinger Quick Repair has been adversely affected by Hurricane Katrina, the national recession and most recently, the Gulf Oil Spill Disaster. The added initial and annual cost of compliance with the proposed regulation would be overly burdensome to our facility, which has already endured numerous obstacles in the recent years. The cleaning oven is used on a limited annual basis and air emissions are very low; compliance with the state air permit has been continuous since the cleaning oven was purchased in 2005. As stated in the proposed rule, 40 CFR Part 60.IV.2.B, "the amount of waste combusted in these unites is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices." If the potential for air emissions is so small and test methods and control devices aren't feasible, why are cleaning ovens being targeting in this proposed regulation?

The proposed rule also states that alternatives to the use of a cleaning oven include abrasive blasting. This is not a viable alternative for motor rewinding work, as the blasting media would be impossible to completely remove from the motor. Chemical cleaning would not be as effective as the current cleaning oven, and would result in increased VOC emissions, disposal costs, and health and safety concerns. There is no environmental advantage to these proposed alternatives, and they will have a more significant environmental impact than utilizing the existing cleaning oven process.

Bollinger Quick Repair urges the EPA to reconsider including cleaning ovens in the proposed rule. As discussed earlier, cleaning ovens do not meet the criteria of an incineration unit. The required testing, monitoring and recordkeeping would be economically infeasible and onerous.

The Electrical Apparatus Service Association (EASA) estimates that the initial cost is over $146,000 and the annual cost is over $80,000. The high cost of compliance is not in line with the nominal environmental benefit of reducing of air pollutants from such small sources.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dennis Bowns
Commenter Affiliation: Green Motors Practices Group
Document Control Number: EPA-HQ-OAR-2003-0119-1042.1
Comment Excerpt Number: 1

Comment: Upon reading the new "Proposed Rules" I am struck by the ill affect it may have on the electric motor repair industry and believe it to be in the environment's best interest to exempt

this particular industry. Eliminating the use of burn-off ovens from this group may very well have major unintended adverse environmental consequences. Has your agency considered the following overarching bullet points?

• Locally repairing by removing the wire and replacing (rewinding) recycles about 98% of the original electric motor. By repairing/rewinding an existing motor or transformer it eliminates mining a number of ores, processing , raw material transportation, founding, casting, machining, stamping, assembly, packaging and transportation of the final product to distribution and eventually to the end-user;

• Repairing an electric motor vs. replacing it with a new one of equal efficiency reduces carbon emissions by from 40% to 250% (which includes burn-off). That same green house gas reduction, in my opinion, should correspond to particulate and other emissions similarly;

• Electric motor craftsman with the proper tools, including a burn-off oven, can repair by rewinding most motors and transformers restoring their original efficiency values and providing a more reliable product than original;

• About one-third of all NEMA (industrial) sized electric motors are custom built and are unavailable or almost impossible to replace and must be repaired/rewound requiring burn-off to maintain the integrity of the original efficiencies.

Burn-off ovens are essentially the best and most environmentally friendly way of removing electric motor and transformer winding wire to facilitate necessary repairs. Using other mechanical or chemical emersion methods are ineffective and generally cause motor efficiency losses which are unacceptable when considering electrical consumption and the resulting added electrical generation green house gas emissions. It's difficult for me to believe, that it is better to manufacture new when an existing piece of equipment can be recycled thus protecting the environment. But to do the job right, apparatus repair facilities need burn-off ovens—I strongly recommend electric motor apparatus repair facilities be exempted from this new "Proposed Rule".

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Alan F. Johns
Commenter Affiliation: B&J Electric Motor Repair Company Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1328
Comment Excerpt Number: 1

Comment: I AM WRITING THIS LETTER TO INFORM YOU THAT THIS BILL WILL DESTROY MY BUSINESS.

I BELIEVE THAT WE WERE THE FIRST COMPANY IN CT TO DESIGN AND HAVE BUILT OUR FIRST BURN OUT OVEN, AS NONE WERE AVAILABLE AT THAT TIME. WE HAVE SINCE PURCHASED A VERY RELIABLE ENVIROMENTALLY FRIENDLY OVEN.

I HESITATE TO CALL IT AN INCINERATOR AS I DO NOT FEEL IT IS AS WE RUN IT AT 700 DEGREE F TO SAVE THE ALUMINUM, COPPER, STEEL, ETC.

WE DO NOT USE THE OVEN EVERYDAY AND PERHAPS AVERAGE 2 TIMES A WEEK FOR 8-10 HOURS OF RUNNING EACH TIME.

IF WE WOULD HAVE TO SPEND APPROX $140,000 TO CONFORM AND APPROX $88,000 A YEAR OR EVEN NUMBERS CLOSE TO THESE WE WOULD HAVE TO CEASE USING OVEN. THIS WOULD CAUSE A DEFINITE REDUCTION OF WORKERS. WE EMPLOY 9 FULL TIME AND 2 PART TIME EMPLOYEES. THIS PROBABLY WOULD CAUSE A 1/3 TO ½ REDUCTION IN OUR WORK FORCE, IF WE COULD EVEN SURVIVE!!!

ALSO WE USE OUR OVEN FOR THREE OTHER COMPANIES AND IF WE WERE NOT ABLE TO HELP THEM I AM SURE THEY WOULD ALSO HAVE TO REDUCE THERE LABOR FORCE.

THE SERVICES WE PROVIDE ARE WIDE BASED FROM THE FEDERAL, STATE AND LOCAL GOVERNMENTS, UNIVERSITIES, MANUFACTURING, RETAIL, CORPORATE BUILDINGS, AND HOSPITALS. IF WE OR OTHERS COULD NOT WIND THERE SPECIAL MOTORS, DUE TO OUR OVEN, EFFECTS COULD BE DEVASTING AND EVEN LIFE THREATENING TO THE HOSPITALS.

WE ARE A SMALL TO MEDIUM SIZE SERVICE CENTER AND FEEL MOST COMPANIES LIKE US WOULD NOT BE ABLE TO CONTINUE IN BUSINESS. I BELIEVE HUNDREDS OR PROBABLY THOUSANDS OF JOBS WOULD BE LOST, MANY COMPANIES WOULD CLOSE AND THE TRADE WOULD DISAPPEAR.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Richard G. Fraser
Commenter Affiliation: SteelMan Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1384
Comment Excerpt Number: 1

Comment: In your analysis of the financial impact of the regulations you assumed that there were 36 burn-off ovens operating in the U.S . . In fact, there are more than 5,000 of which we have manufactured almost 600. The financial impact of your proposed regulations is far, far greater than you assumed.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Howard W. Penrose
Commenter Affiliation: Dreisilker Electric Motors, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1400
Comment Excerpt Number: 1

Comment: Here at Dreisilker Electric Motors, Inc. we strongly and enthusiastically support the intent of the proposed rules which will improve the image of our industry, improve the environment, and advance the industry which has remained stagnant for at least a century. Alternate processes that are environmentally friendly do exist. I have been asked to respond to the EPA Proposed Rules document on behalf of the company due to my particular background in this area.

My background, in particular as it relates to this and other environmental and energy topics is attached [See DCN: EPA-HQ-OAR-2003-0119-1400.1 for attachment submitted by commenter.] Please note that I am fourth generation in the electric motor repair industry, started in the industry, and have recently returned to this industry to address some of the topics of concern by electric motor owners who are impacted by slow to no advances within the motor repair industry. Please also note that I am a five time recipient of the UAW-GM People Make Quality Happen Awards for programs directly related to reducing company emissions and energy improvements. I also served in the past as a Senior Research Engineer for the University of Illinois at Chicago's Energy Resources Center performing work and research directly related to these programs and had previously served in the Motor Challenge programs through Dreisilker and then other organizations including coordinating the 2000 industry funding of the US Department of Energy's MotorMaster Plus software (Dreisilker Electric Motors, Inc.; Pruftechnik; and, BJM Corp). At General Motors I coordinated GM through Robert Varcoe (UAW-GM) to be involved in the 'Save Energy Now' program as a consultant.

Dreisilker Electric Motors, Inc. has supported improvements to the industry to reduce emissions and maintain electric motor efficiency through **repair since the 1960s and has supported any such programs through today.**

In this letter (email), we are planning on putting forth our argument as to why the rules concerning burn-off ovens (as defined in the document) should be implemented as proposed utilizing both third party and information published. This will include specific information related to a non-third-party study performed by an organization known as the Electrical Apparatus Service Association (EASA) called the EASA/AEMT Motor Rewind Study in which the study was performed by users of the burn-off oven technologies to protect their existing practices. Unfortunately, this means that this letter will be a little longer than the norm.

The first items I will note which support the position of the US EPA are third party information from the Rocky Mountain Institute (Competitek) in 1989 and the Canadian Electrical Association in 1995:

Lovins, Amory, et.al., The State of the Art: Drivepower: A Proprietary Technical Report From Competitek, an Information Service of Rocky Mountain Institute, On Advanced Techniques for Electrical Efficiency, Rocky Mountain Institute, April, 1989, Colorado. [See DCN: EPA-HQ-OAR-2003-0119-1400.2 for attachment submitted by commenter.]

CEA-9205-U-984, Evaluation of Electric Motor Repair Procedures: Guidebook Final Draft, Canadian Electrical Association, November, 1995. [See DCN: EPA-HQ-OAR-2003-0119-1400.3 for attachment submitted by commenter.]

On pp. 180 to 184 of alternatives to burn-off (burnout) ovens are identified. These include mechanical stripping (outlined as the Dreisilker/Thumm method for when Henry Dreisilker first

introduced the method into the USA), water stripping, and other methods that are not harmful to the motor or environment.[See DCN: EPA-HQ-OAR-2003-0119-1400.2 for attachment submitted by commenter.]

On p. 185 of the authors discuss the resistance to changes within the motor repair industry. As a US Navy trained electric motor repair journeyman, I was just as appalled when I entered the civilian motor repair industry, working with burn off ovens at several locations during a time I was away from Dreisilker. [See DCN: EPA-HQ-OAR-2003-0119-1400.2 for attachment submitted by commenter.]

On pp 13-14 of the CEA study discusses the findings in relation to 'thermal stripping' of machines, which is the use of burn off ovens. This also includes the environmental, exhaust (emissions) and reliability impact on the electric motor. [See DCN: EPA-HQ-OAR-2003-0119-1400.3 for attachment submitted by commenter.]

On p. 15 of the mechanical method is discussed which includes: "There are no airborne by-products nor disposal problems and therefore considered a clean method." [See DCN: EPA-HQ-OAR-2003-0119-1400.3 for attachment submitted by commenter.]

A form letter sent out to EASA shop members came to our attention at the same time that the US EPA proposed ruling did. In this a number of issues arise [See DCN: EPA-HQ-OAR-2003-0119-1400.4 for attachment submitted by commenter]:

1 The statement: "Use of burn-off ovens in electric motor and generator repair/rewind is a vital reclaiming and recycling process." Would be an incorrect statement. Alternate technologies exist that are in use by my company and many of our competitors that have the same labor times as burn-off oven methods with no emissions, provide a faster turnaround to the end-user, assists in in-shop production, and will not reduce reliability or energy efficiency of the motor – a benefit to the motor owner.

2 It is scary noting that there are at least 10,000 of these units putting out the emissions identified within the body of the ruling. This is important as the letter also states that "We use our burn-off oven on a very limited basis each month (perhaps 18-20 hours), and it is critical to providing environmentally responsible service." The actual time to operate a burn-off oven to process a repair is 8-12 hours per repair. When I ran a small 5-man shop in Richmond, VA in 1990-1991, we ran the burn-off oven 8-12 hours PER DAY with complaints from the neighbors about the smell and the ash. That would represent an average of AT LEAST 200 hours per month. The burn-off ovens are normally run at night to protect employees.

3 The suggestion is that the ruling would put the motor repair industry out of business. This too is false. Alternate methods DO EXIST for repair that is beneficial to all involved. The primary resistance is actually based upon a desire to maintain the status quo as the leadership of the organization is made up of motor repair shop owners.

4 The remainder of the points are moot, in particular the statement that other 'uncontrolled' systems would be used. The facts are that any THIRD PARTY study that involved any other non-direct flame or overheating method along with burn-off ovens ALWAYS supported the alternate processes.

When alternate processes are represented, the EASA organization aggressively tries to stop any mention of the processes as an advantage. This was one of the reasons why Dreisilker Electric Motors, Inc. separated from EASA in 1976, although one of our branch repair centers remains a

member for some of the information that is beneficial to members. For example [See DCN: EPA-HQ-OAR-2003-0119-1400.5 for attachment submitted by commenter] when Dreisilker ran the ad in DCN: EPA-HQ-OAR-2003-0119-1400.5 it resulted in the letter (pp. 2-3) from EASA to Maintenance Technology Magazine. Our response (pp. 4-7) resulted in the association backing down from a continued battle on this topic. The response includes attempts to provide a third party review for the EASA/AEMT study on behalf of the US DOE through Chris Cockrill.

The purpose of this letter and email is not to go after a specific special-interest group, but to identify the need for changes to the motor repair industry. This has been known for decades.

Additional References:

Penrose, Howard, "Anatomy of an Energy Efficient Electric Motor Rewind," IEEE Electrical Insulation Magazine, Jan/Feb 1997 [See DCN: EPA-HQ-OAR-2003-0119-1400.6 for attachment submitted by commenter] "Penrose, Howard, "The Impact of Traditional Motor Repair Practices on Energy and Environment Including Meeting the Minimum Requirements of IEEE 1068-2009," Dreisilker White Paper, 2010 [See DCN: EPA-HQ-OAR-2003-0119-1400.7 for attachment submitted by commenter]

Penrose, Howard and Dreisilker, Leo, "The Mechanical Effects from Thermal Stripping Induction Motor Stators," EIC/EMCWA 1997 Proceedings, IEEE, 1997 [See DCN: EPA-HQ-OAR-2003-0119-1400.8 for attachment submitted by commenter] "Penrose, Howard, "Reliability, Maintenance, Energy, Environment: Consideration in Electric Motor Repair vs Replace Decisions," Uptime Magazine, Oct/Nov 2008 [See DCN: EPA-HQ-OAR-2003-0119-1400.9 for attachment submitted by commenter.]

Also included are specific pages on the use of burn-off ovens and alternate processes in IEEE Std 1068-2009, "IEEE Standard for the Repair and Rewinding of AC Electric Motors in the Petroleum, Chemical and Process Industries," [See DCN: EPA-HQ-OAR-2003-0119-1400.10 for attachment submitted by commenter] and a combined two articles on the 'Anatomy of an Energy Efficient Motor Repair' from Uptime Magazine in April/May 2008, and June/July 2008 editions [See DCN: EPA-HQ-OAR-2003-0119-1400.11 for attachment submitted by commenter.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Chris Fletcher
Commenter Affiliation: Pinellas Electric Motor Repair, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1217
Comment Excerpt Number: 1

Comment: As the business owner of an electric motor repair facility I have great concerns over the proposed EPA requirement that could affect the use of my heat cleaning/burn off oven. I hope you will understand that the economy has not been kind to our industry and the estimated cost of $146,777 to install some type of scrubber system and an annual estimated cost of $88,861 to maintain such a system would be insurmountable for not only my business, but I would imagine almost every electric motor repair facility in our country.

Please do not confuse our oven use with an industrial waste incinerator which burns all types of waste in a 24-7 operation. It would be inexcusable to put thousands people out of work over a misunderstanding of how our ovens are utilized.

The oven we use at our facility is an ACE Manufacturing, Natural Gas Fired 500,000 B.T.U. reclaim oven with afterburner system. The afterburner provides a minimum of 1500° F. with a residence time of at least

1/2 second in afterburner chamber. The discharge from the stack is smokeless and odorless. The stators and armatures that we clean with this oven are cast iron, steel and copper, the only combustible product is a very thin layer of insulating varnish that holds the wire in place to prevent mechanical abrasion and shifting of the winding. Although we may clean a large stator with a weight of 1000 lbs, the actual combustible material would probably not exceed 1 lb. The actual use of our oven averages a mere 150 hours or less annually.

It is also important to remember that our industry is actually reclaiming and recycling a very large amount of materials. For example, a 250 hp motor weight would be around 2500 lbs. consisting of 3 very large cast iron sections for the motor frame, hundreds of square feet of thin steel sheet to produce the stator iron & rotor lamination, 40 lbs of aluminum to die cast the rotor bars and about 250 lbs of copper wire to produce the motor winding. At our facility this same motor would only require 250 lbs of copper wire to be repaired and returned to service. How much air pollution is created in producing that same motor from raw materials?

Please help our industry to continue to recycle these motors and generators. In the long run, we are actually helping prevent and reduce air pollution.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jeremy Mader
Commenter Affiliation: Mader Electric Motors
Document Control Number: EPA-HQ-OAR-2003-0119-1376.1
Comment Excerpt Number: 1

Comment: I am writing today in utter disbelief to the above referenced docket # that is being proposed. This legislation will all but put an end to the electric motor rewinding industry which employs several hundred thousand people nationwide. The proposed legislation was meant to handle incinerator burn off ovens which is understandable, but to test only a handful of motor burn off ovens and lump them into the same class as incinerators makes no sense. For one thing we aren't burning the same things, motor repair shops are burning electric motors so that they can be rewound and the copper taken out of them can be recycled. Without this method of removing copper then it will no longer be cost effective to remove the copper for recycling and the scrap materials will now end up in a landfill instead of being reused, thus causing further damage to the same environment that you are trying to protect with this docket. The cost for a small 30 employee company like mine to bring my burnout oven up to the proposed standards is about $ 100,000. I can assure you that even if we could afford this, the cost of this and the repeated cost of the annual inspections would no longer make it cost feasible to rewind electric motors that are less than 1,000 HP, which is less than 5% of the electric motors in use today. On

top of that expense I would like to know how the EPA proposes that I recoup my $ 40,000 expense that I spent recently to buy a new pollution controlled burn off oven that now only 1 year later I will not be able to use because it doesn't meet the standards that were OK with the EPA when I made the purchase.

When I started in this business about 20 years ago we used a different type of chemical process to remove motor windings instead of the burn off method, that process was also outlawed. It was expensive for everyone in the industry to bring their operation up to the new standards, but still cost feasible, this however would not be. At an economic time like this it doesn't make sense to cripple an industry in this way, so I urge you to please reconsider before passing this docket and further hurting the economy, the jobless market, and the environment that you are trying to protect with this regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 2

Comment: We believe that the number of burn-off ovens has been significantly underestimated.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: John Carlisle
Commenter Affiliation: Redi Strip Company
Document Control Number: EPA-HQ-OAR-2003-0119-1318
Comment Excerpt Number: 2

Comment: RediStrip Company is a metal stripping and refinishing company in Roselle, Illinois. Metal cleaning is an important day to day function of a wide range of manufacturing activities throughout the nation. Since 1973, we have been providing Roselle and the Chicago metro area with industrial stripping and metal refinishing services including:

Rust Removal

Alkaline Electric Immersion

Sandblasting

Paint Stripping

Among the techniques we employ for metal refinishing are burn-off ovens (also known as heat-cleaning ovens). Associated businesses that are familiar to RediStrip operate many units, some at business that are doing commercial metal cleaning and others at various manufacturing facilities. Industries that send parts to our shop for cleaning represent a small fraction of the total number

of manufacturing operations that use this technology to maintain production tools, racks, dies, fixtures, and jigs.

The function and use of the burn-off oven is to ensure effective cleaning of tools, components, parts, etc. The critical nature of this cleaning is to do no harm to these high value parts and systems. Effective cleaning allows for these tools to retain their useful function instead of being replaced and disposed of. The common factor associated with the variety of uses of these ovens is to make an object reusable, extending the useful life, reducing the need for disposal of these

systems, and in the long run reducing both the cost and pollution that results from making new parts or systems.

A few examples of burn-off oven use:

Machine tool cutting heads in a wide variety of industries from plastics manufacturing to metal forming are cleaned in burn off ovens.

The electric motor rewind industry uses these ovens remove the original manufacturers varnishes from the motorwire windings prior to the rewinding and restoration of electric motors.

The restoration of part hooks used in painting processes. The cleaning of hooks ensures conductivity is maintained during the application of paints using electrostatic painting systems. These painting systems are designed to increase the transfer efficiencies thereby reducing the emissions of volatile organic compounds.

In Section V of the proposed rulemaking, published in the Federal Register June 4, 2010, USEPA states their obligation to evaluate the Impacts of the Proposed Action as follows:

A. What are the primary air impacts?

B. What are the water and solid waste impacts?

C. What are the energy impacts?

D. What are the secondary air impacts?

E. What are the cost and economic impacts?

F. What are the benefits?

Given that USEPA clearly did not have an understanding of the size or makeup of the universe of burn-off ovens in use, it would be impossible to conclude that the Agency could conduct an adequate evaluation of the impact of this rulemaking in any of the above categories. In particular:

Primary air impacts cannot be evaluated until USEPA can show that it has a more representative body of data of burn-off ovens in commercial use.

If burn-off ovens were not in use, other types of refinishing might be employed -all of which have energy and environmental impacts of their own. It is impossible to make any blanket statements about water, solid waste, energy or secondary air impacts without an evaluation of alternative metal refinishing technologies employed for each potential use.

USEPA in the rulemaking states "this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this proposed rule are facilities engaged in industrial or commercial operations, such as paper and paperboard

manufacturing and utility providers". Since USEPA's estimate of the number of affected sources appears to be off by at least two orders of magnitude-this analysis should be revisited. Many of our customers and competitors are in fact small entities on whom this rule could have a substantial impact.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Richard Fraser
Commenter Affiliation: SteelMan Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1317
Comment Excerpt Number: 2

Comment: We sell "burn-off" ovens into three industries :

1. Electric Motor Rebuilders -Our ovens are used to burn off the thin layer of varnish that coats the inside of a motor. This varnish must be removed before the motor can be rebuilt. The most efficient and environmentally sound method of doing this is to use a "burn-off' oven. Prior to the current "burn-off' technology, heat sources from open flames were used to remove the varnish. A YouTube video from 1985 shows how it was done (www.youtube.comlwatch?v=pAAegohHqNo). Not only was this method dangerous, it was environmentally less friendly than the current method which uses a high-temperature afterburner to treat the fumes that are generated. Other methods like "abrasive blasting" cannot be used because they damage the motor.

If electric motor rebuilders are deprived of "burn-off' oven technology they will be forced to either a) revert to earlier, more polluting technology, or b) see their industry disappear which would result in broken motors being taken to the dump rather than being rebuilt.

2. Plastics and Synthetic Fibers Manufacturers -Manufacturers in the plastics industry often find that their machines and molds become coated with the plastic that they are using. The best way they have found to clean them is to use a "burn-off' oven. Previously, liquid solvents or open flames were sometimes used. Abrasive blasting cannot be used because it would damage the machines and molds.

Here again, this industry would have to resort to environmentally less desirable processing methods to stay in business.

3. Coatings Industry such as powder and wet paint users -Products to be painted are often hung on paint hooks and over time the paint builds up and the paint hooks need to be cleaned. Historically, smaller manufacturers would put them in a barrel, dump in some gasoline, and light it on fire. Alternatively, they would put them on a wood pallet and light the wood pallet on fire. Larger manufacturers have used abrasive blasting methods but have found that "burn-off' ovens do a better, less polluting job.

All of our customers would be seriously hurt and the environment would be worse shape if "burn-off" ovens were ruled out of existence. Our industry is different from the incinerator industry because our purpose is to 1) facilitate clean, efficient manufacturing and 2) promote

recycling by removing relatively small amounts of coatings from valuable products. Incinerators are intended to destroy everything that is put into them.

We would like to see you remove "burn-off" ovens from your proposed rules because 1) we promote recycling which is different from what incinerators do, 2) the level of our emissions is very small, and 3) states already regulate the emissions from "burn-off" ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Craig T. Kenworthy
Commenter Affiliation: Puget Sound Clean Air Agency
Document Control Number: EPA-HQ-OAR-2003-0119-1844.1
Comment Excerpt Number: 1

Comment: The proposal does not clearly identify the reasons for regulating burn-off ovens as a separate category, and in addition, there are potential problems for sources in that subcategory. The proposal indicates that burn-off ovens as a category represent generally small units (<1 MMBtu/hr), are batch operated, and combust small amounts of waste. The proposal also indicates that the size and configurations of many of these units precludes using some EPA test methods and could affect the ability to install controls. However, the proposal also includes emission limits for the full range of pollutants to include various heavy metals and dioxins/furans. The EPA has identified that there would be problems testing some of these units but does not discuss or explain how a source would address this problem. EPA should explain more clearly in the final rule how a burn-off oven operation subject to the rule would demonstrate compliance.

The proposal also states there are a limited number of emission units that would be subject to these provisions and it is assumed most would stop operating rather than comply with this rule. That assumption is not an appropriate substitution for resolving a technical issue that results from the proposed rule. It would also appear the number of sources which may be subject to this rule is underestimated. For example, the proposal states there were approximately 176 units total (not just burn-off ovens) nationwide that would be covered by the rule. In our area alone (the metropolitan Puget Sound region), there are 35 emission units which may be classified as “burn-off ovens”. Note that it is not clear yet whether they will be subject to these regulations because the material burned in the oven must first be considered a solid waste (under a separate EPA proposed rule).

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jason Pitzl
Commenter Affiliation: Inthermo, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1833.1
Comment Excerpt Number: 1

Comment: I am writing in response to the proposed CISWI regulations. My experience includes ownership of a commercial paint stripping company located in the Minneapolis, Minnesota metropolitan area.

Our company removes paint and powder coating from paint line hooks, racks and fixtures. We also remove paint and powder coating from production parts in need of rework.

We have been in business for 16 years serving hundreds of companies. We count some of the region's most highly regarded manufacturers among our customer base. Our service area covers all of Minnesota, Western Wisconsin, Northern Iowa, Eastern North Dakota and Eastern South Dakota, with the majority of our business coming from the Minneapolis metropolitan area.

Prior to establishing our company, we did extensive research into the various proven processes for high volume paint and powder coating stripping. When considering safety, environmental impact, energy consumption and waste by-products, the Burn-Off Oven ("Cleaning Oven") was clearly superior to all other methods we could deploy. Cleaning Ovens are specially designed pieces of process equipment used as an integral part of a high volume paint or powder coating facility.

Cleaning Ovens remove small amounts of paint and powder coating from large volumes of very expensive paint line hooks, racks, fixtures and productions parts while at the same time significantly limiting the amount of VOCs released into the atmosphere. The primary by-products of the Cleaning Oven process are water, carbon dioxide and ash.

We continuously test the ash following EPA protocol and manage it as non-hazardous industrial waste. all cases, the value of the paint line hooks, racks, fixtures and production parts makes scrapping impossible. And the same is true for the majority of production part

reclamation as well. Scrapping the hardware and parts as an alternative to stripping would place an enormous demand on landfills and result in unsustainable cost to all parties involved.

Alternative paint and powder coating stripping methods, such as abrasive blasting and chemical stripping would generate much larger quantities of waste. The spent chemical

and sludge and the spent abrasive blast media would likely strain industrial landfill operations and chemical waste treatment plants.

It is very important to reiterate that Cleaning Ovens are pieces of manufacturing support process equipment. These are not incinerators for burning waste. We do not burn waste in our Cleaning Ovens.

Cleaning Ovens are required to meet rigorous standards for VOC emissions and this is achieved by using integral afterburners that operate between 1,500 F and 1,800 F with more than 1/2 second residence time. These high temperatures create thermal NOx which exceeds the proposed standards. On a volume basis, the NOx for Cleaning Ovens is about 120 PPM corrected to 7% Oxygen. However, on a mass basis, the quantity is very small, on the order of 0.1 pounds per hour for a mid-sized oven which is virtually the same as the EPA Tier 1 standard for light trucks driving a 60 miles per hour (0.092 pounds per hour).

On behalf of our company, and for the benefit of the environment, I would respectfully request that the EPA does not reclassify Cleaning Ovens as a type of CISWI. The purpose and use of Cleaning Ovens is not related in any way to the purpose and use of incinerators. Therefore Cleaning Ovens should not be included in the CISWI category under the proposed standards.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: R. Raney
Commenter Affiliation: City of Nashville TN
Document Control Number: EPA-HQ-OAR-2003-0119-1788
Comment Excerpt Number: 1

Comment: It has come to my attention that the proposed revision to Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units will apply to even the smallest of burn off ovens such as those used to burn small quantities of paint off of metal hangers in order for them to be reused. Some of the units are smaller than a standard size desk with burners as small as 500,000 BTU. A testing contractor has estimated that the first round of compliance testing alone could cost over $25,000. It also appears that these small ovens will require a Title V permit. These and similar small burn off ovens should remain exempt from the regulation. Otherwise facilities using these ovens will be forced to find some other way to clean the hangers which may result in a greater adverse impact on the environment than the impact from the small oven burning a few pounds of paint.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 1

Comment: Proposed expansion of the population of existing incinerator units which would be subject to this new proposed regulation and thus be considered a Commercial or Industrial Solid Waste Incinerator (CISWI).

The proposed regulation looks to include the small “cleaning systems” which, as part of the cleaning process, post-combust the small amounts of off-gases they produce. On page 31951 of the proposed rule, the EPA confirms that one talks about typically small ovens (<1 MM BTU/hr), batch operated, to clean various metal parts, which are then reusable. The amount of organic material removed in these units is generally small (pounds per year in some cases). Although we fully agree that these “cleaning systems” should have emissions limitations, by no means they can be considered “Solid Waste Incinerators.” Including them into the CISWI population, and thereby attaching CISWI emission requirements to them, would close down all industry in-house cleaning departments and the independent service cleaning companies, with the loss of all related jobs. In addition, it would create tons of waste of otherwise perfectly reusable parts and tools.

Therefore we sincerely request to the administration to reconsider their proposed rule and to exempt the “Tool and Parts Refurbishing Units” from the CISWI population.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 1

Comment: “Burn Off Ovens” Are Not “Incinerators."

Section 129 of the Clean Air Act uses the term “combusts” in the definition of solid waste incineration unit. Accordingly, any incinerator under Section 129 must combust material. Burn-off ovens do not, however, combust material. The term “burn-off oven,” therefore, is really a misnomer. To remove the coatings from parts and equipment, the process does not “burn” or “combust” the material off of the parts or equipment placed in the furnace. The following discussion shows why these furnaces are not “incinerators.”

A Description of the Furnaces that Pollution Control Manufactures Shows They Are Not "Incinerators."

Pollution Control manufactures Controlled Pyrolysis® Cleaning Furnaces. Introduced by the company in 1971, these cleaning furnaces were designed to help manufacturers comply with new EPA clean air standards. The primary purpose of the furnaces was then, as it is now, to provide manufacturers a safe, efficient, and environmentally friendly way to clean and reuse metal parts and industrial equipment.

Controlled Pyrolysis® Cleaning Furnaces are not marketed or used as an

incineration device and, in application and operation, they bear no resemblance to solid waste incinerators. The term “burn-off oven” is a holdover from the days when open fire pits were used to clean parts. In fact, Controlled Pyrolysis® Cleaning Furnaces do not burn organic material. Rather, they thermally decompose it in an oxygen deficient atmosphere using a process called pyrolysis. “Pyrolysis is the destructive distillation of a solid material in the presence of heat, and in the absence of air or oxygen. It is an endothermic reaction; that is, heat must be provided for the reaction to occur, whereas incineration will in itself produce heat (exothermic).”[Footnote: see Calvin R. Brunner P.E., Hazardous Air Emissions from Incineration, 86 (Chapman and Hall, New York, NY, 1985).]

Some of these processes occur in low, rather than no oxygen environments. Grease, sludge, paint and polymers that build up on manufacturing parts and equipment decompose leaving only small amounts of ash, while vapors and pyrolysis gases that are generated are processed with a pollution control afterburner.3

Unlike incinerators, 80% to 99% of what goes into a Controlled Pyrolysis® Cleaning Furnace is cleaned and put back into productive use. An average 260 cubic foot furnace can clean up to 5,000 pounds of parts and equipment daily. With an average life of 20 years, that furnace would

clean a total of 26,000,000 pounds of parts and equipment. The replacement cost of these parts and equipment, both financially and in lost production time, would be very significant. Controlled Pyrolysis® Cleaning Furnaces eliminate the use and expense of alternative methods, such as open fire pits, dangerous chemicals, abrasives and acids, and the associated disposal impacts and hazards. These furnaces dramatically extend the life of tools and parts, conserve natural resources, and save manufacturers and consumers billions of dollars annually.

After nearly four decades of service to American industry, the success and effectiveness of these furnaces is best illustrated by their widespread use, estimated at somewhere between 15,000 to 20,000 units in the U.S. alone. Their economic impact has been astounding, revolutionizing the efficiency and productivity of several major industry segments such as Electric Motor Rebuilders, Paint and Powder Coaters, and Automotive Engine Rebuilders. Cleaning Furnaces are used extensively in Manufacturing, Plastics, Chemicals, and Fiber industries and in over 800 Standard Industrial Classifications ("SIC"), including by the U.S. Army, the U.S. Marine Corp. and the U.S. Navy, which are in the National Security SIC. The safety and environmental record of these furnaces has been exemplary in this country, as well as in Europe and dozens of other countries around the world, where thousands of these furnaces are in service with companies like Volvo, Honda Power Equipment, Honeywell International, General Electric, General Motors, Ford Motor Company, Kawasaki Motor, and DuPont.

For your information, [see DCN: EPA-HQ-2003-0119-1767.2 through DCN: EPA-HQ-2003-0119-1767.7 for] a process description and flow diagram and literature on some of the various models of pyrolysis furnaces we manufacture.

EPA Should Not Classify a Cleaning Furnace as a Type of CISWI.

There are clear differences between a cleaning furnace and an incinerator and other waste burning devices as explained below.

An Incinerator Burns Waste.

An incinerator is used to destroy refuse materials by burning them to decrease their volume. The materials charged to incinerators are typically capable of burning on their own once ignited, and may consist of items such as wood, cardboard, trash, plastic, rags, or any form of combustible material. When the incinerator is started, a burner fires under a grate to help heat the material and start it burning. Additional air is typically added to encourage the material to burn. In the primary chamber of an incinerator, there are typically open flames and high temperatures (sometimes 1200ºF or higher) because the material is burning on its own. The incinerator operator rarely has any knowledge as to the overall make-up of the waste stream.

The incoming waste stream may contain materials which, when burned, produce emissions of Pb, Hg, HCl, HF, SO_x, and other toxic organics including chlorinated dibenzo-p-dioxins and dibenzofurans. The sole purpose of incineration is to reduce the volume of the materials so that the amount of material (if any) sent to a landfill is reduced. In a typical incinerator, the material is set on fire and burns with flames at high temperatures inside the primary chamber. A typical incinerator may be able to process several thousand pounds of refuse material per hour.

A Controlled Pyrolysis® Cleaning Furnace Cleans Metal Parts and Industrial Equipment.

Controlled Pyrolysis® Cleaning Furnaces are basically process furnaces operating at temperatures of 800-900°F (426-482°C) inside the primary cleaning chamber. The load placed in the furnace consists of metal parts such as paint fixtures and racks, automotive engine blocks,

electric motor stators, breaker plates, extrusion dies, nozzle tips, heat exchangers, or other metal parts coated with small amounts of cured paint, grease, cured varnish, cured polymer, or other organic material. The organic coatings are so thin that they typically do not burn on their own.

In other words, the material will only decompose as long as the parts are kept heated by some external means such as being heated inside the furnace compartment. This requirement is in direct contrast to an incinerator where the material will typically burn on its own once ignited.

For a cleaning furnace, the goal is to remove the small amounts of organic coatings so that the metal parts can be placed back in service or refurbished. The parts being cleaned vary in cost from several dollars for a paint hanger or paint hook to over $50,000.00 for some heat exchangers. There are no open flames inside the primary chamber of a cleaning furnace (called a burn-off oven by EPA), and the amount of metal loaded into the furnace usually accounts for 80% to 99% by weight of the load. Only small amounts of cured organic coatings are on the metal parts with the coatings typically averaging 1% to 20% of the load. This process is in direct contrast to an incinerator where the loads may be almost 100% combustible.

A letter written by a professor of engineering at the University of Southern Illinois at Carbondale in 1987 [DCN: EPA-HQ-2003-0119-1767.8] explains that the process in the furnaces is a pyrolysis process and that the furnaces are not incinerators. It also explains the key differences between pyrolysis and incineration.

In a Controlled Pyrolysis® Cleaning Furnace, No Flame Contacts the Parts.

On our furnaces, the primary heat input burner fires into a combustion chamber, which contains the flame so that only heat is discharged into the work area containing the parts. No flame actually contacts the parts. Other than the air required for combustion of the input burner fuel, no additional air is added to the furnace. Therefore, the oxygen content within the furnace is reduced to a level which prevents the material from catching on fire. The heat causes the organic material to decompose into vapors and pyrolysis gases which are then processed in a secondary direct-flame afterburner. In contrast to the incinerator operator, the operator of the cleaning furnace knows the make-up of the material being removed. He is not destroying refuse. He is, instead, removing a relatively thin organic coating from metal parts. He either has the MSDS sheet for the material, or he is the one who manufactured the material so he knows its composition. The coatings removed using these furnaces do not typically contain sulfur,

chlorine, fluorine, lead, mercury, or other such materials. If these compounds are not present in the organic coatings being removed, it is not possible for these units to produce emissions of Pb, Hg, HCl, HF, or chlorinated dibenzo-p-dioxins/dibenzofurans. Natural gas, which is used for firing the burners, contains a small amount of sulfur that is present in mercaptan (the chemical which gives natural gas its odor). As with any gas burner on any piece of equipment, a minimal amount of SO_x will therefore be produced. Since the burners are gas fired, some small amount of NOx will also be produced. All of the units we supply are equipped with afterburners for destroying the CO and VOCs.

A Controlled Pyrolysis Cleaning Furnace Decomposes Materials.

Basically, Pollution Control's Controlled Pyrolysis® Cleaning Furnaces operate as follows. With the furnace empty, the afterburner temperature is set to idle at approximately 1400°F (760°C) with the furnace temperature set at 800-900°F (426-482°C). The temperature is maintained by adjusting the air and gas flow rates to the afterburner during an "empty test run" when the

furnace is first installed. Once adjusted, the afterburner will then operate at about the same temperature each time the furnace is started. Since the materials processed in the furnace are cured, they do not give off any flammable vapors at room temperature, and most will not begin to breakdown to any significant extent until they are heated to temperatures above about 600°F. When the furnace is loaded with parts coated with cured paint, cured polymer, or other organic material, this material begins to decompose once the furnace reaches a temperature of 600-700°F (315-371°C). As the material starts to decompose into vapors, these vapors enter the afterburner chamber where they burn and raise the temperature of the afterburner exhaust gases. When enough vapors are entering the afterburner chamber to drive the exhaust gas temperature up to its set point of 1600°F (871°C), the furnace water sprays are activated to cool the furnace and the parts and slow down the evolution of vapors to the afterburner. This cooling process prevents overwhelming the afterburner with large amounts of vapors and pyrolysis gases. When all of the organic material has been removed from the parts, the afterburner temperature will drop back down to its idle point. Thus, the processing rate of the organic material is strictly limited by the size of the afterburner.

In summary, these furnaces are used to remove relatively thin coatings of paints, plastics, oils, and other organic materials from primarily metal components, using a process known as pyrolysis - a decomposition brought about by the action of heat in the absence or low concentration of air or oxygen. The materials are pyrolyzed into vapors and gases, and these potential emissions are controlled by an integrated afterburner to convert them to primarily CO_2 and water vapor with small amounts of particulate matter ("PM"), SO_x (from the mercaptan in the natural gas), NOx, VOCs and CO before being exhausted to the atmosphere. Thus, the afterburner acts as an air pollution control device.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 2

Comment: The Common Terms Used by Congress To Define Incinerator Do Not Include Cleaning Furnaces.

The D.C. Circuit Court in Natural Res. Def. Council v. United States Envtl. Prot. Agency [489 F. 3d 1250, 1257 (D.C. Cir. 2007)] points out that statutory interpretation begins with the plain language of the statute. Section 129 of the Clean Air Act uses the term "combusts" in the definition of solid waste incineration unit [42 U.S.C. § 7429(g)(1)]. Webster's Ninth New Collegiate Dictionary defines "combust" as burn and "combustion" as (i) an act or instance of burning or (ii) a chemical process (as an oxidation) accompanied by the evolution of light and heat.

Under Congress' definition of incineration and the common meaning of combust, pyrolysis furnaces do not incinerate waste. The language of the statute and its legislative history clearly demonstrate Congress' intent to regulate municipal and commercial facilities that directly burn

or combust wastes. To assert that a unit specifically designed to break down material with heat and without burning the material falls within the scope of incinerator defies the intent of Congress in drafting Section 129.

The entire concept of a pyrolysis furnace is to avoid combustion of material. Rather, the idea is to remove excess material and coatings from the parts and equipment so the parts and equipment can be reused. So "combustion" does not occur in these furnaces. Nevertheless, EPA is attempting to regulate these furnaces in the Proposed Rule. Because the Proposed rule is inconsistent with the plain language of Section 129, EPA is not following the DC Circuit's admonition to stick to the common meaning of the language of Section 129.

In other contexts, EPA is funding research to use pyrolysis to convert wood or oily material into biofuels [see http://www.biofuelsjournal.com/articles/EPA_Awards_TDA_Research_Inc___70_000_for_Pyrolysis_Project_in_W heat Ridge CO-92096.html]. If EPA includes these processes within the scope of incineration, even though they employ a pyrolysis process, the agency may kill this industry before it begins. Again, Congress's use of the term "combust" to define incinerator shows that Congress never intended to cover pyrolysis or other activities that do not burn or combust waste within the scope of incineration.

Potential Air Pollutants from Pyrolysis Are Burned in What Is In Essence a "Thermal Oxidizer," Designed for Air Pollution Control and Widely Used in Many Industries for This Purpose.

Controlled Pyrolysis® Cleaning Furnaces utilize a thermal oxidizer to control potential air emissions from the pyrolysis of the coatings in the furnace. Without the thermal oxidizer, the gases would be emitted into the ambient air. Thermal oxidizers are widely used as air pollution control devices. They are used with these furnaces to control pollution. EPA should reconsider its testing and evaluation of the different types of furnaces and their uses as it evaluates regulation under Section 129.

Thermal oxidizers are not incinerators. The definition of a CISWI in EPA's existing rule excludes "air pollution control equipment." [40 C.F.R. § 60.2265 (2009).] As an air pollution control device, the thermal oxidizer on the furnaces cannot cause the furnaces to become "incinerators." If this were the case, every unit in the country with a flare or thermal oxidizer would be regulated as a CISWI. This result would be absurd and create regulation far beyond anything Congress intended under Section 129.

The Parts or Equipment Being Cleaned Are Not Solid Waste.

The parts or equipment being cleaned in the furnaces are not solid waste. Customers who purchase and use the furnaces intend to reuse the parts and equipment cleaned in the furnaces. The furnaces simply remove the coatings so the parts and equipment can be reused. Some parts are quite valuable, and the inability to reuse them would cause financial loss, in terms of greater expense to clean or purchase new parts or equipment, to the parties that use the furnaces.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: James P. Brooks

Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 2

Comment: Like metal smelting, foundries and electric arc furnaces, burn off ovens would be more appropriately regulated under Section 112 of the Clean Air Act. Burn off ovens used at an electric motor refurbishing facility should be covered under the National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories which includes the Electrical and Electronics Equipment Finishing Operations. Burn off ovens for parts painting should be covered under the National Emission Standards for Hazardous Air Pollutants for Area Sources: Paint Stripping and Miscellaneous Surface Coating Operations, which covers the painting of metals.

On page 31958 of the Federal Register, EPA states, "Facilities with incinerator units and small remote incinerator units would use alternative landfill disposal and facilities with burn-off ovens would use abrasive blasting." Abrasive blasting may be appropriate for facilities burning off paint drying racks, but is not appropriate for refurbishing electronic motors. When burning paper, plastics and resins off a motor, the oven superheats the electrical resins covering the copper wire of the motor. Those resin-coated wires wind down through the "slot," which are the channels that run longitudinally in the motor and contain the copper windings. No amount of blasting will dislodge the resins to the extent necessary to remove the failed windings. EPA's assumption that abrasive blasting is an option for this type of work is incorrect. In reality, many facilities that refurbish motors will switch to the outdoor use of handheld torches to remove these resins to avoid regulation under the proposed standard. This will result in fully uncontrolled emissions and is completely contrary to the objectives of the rule.

We have attached a letter from AC Electric Corp, a Maine facility using a burn off oven to clean off motors for refurbishing.

[See DCN:EPA-HQ-OAR-2003-0119-1958.1 for letter from AC Electric Corp]

This type of activity recycles materials, reducing the demand for raw materials and the accompanying environmental impacts from their production. The Maine DEP recommends that EPA establish a subcategory for burn off ovens requiring work practices and/or the use of pollution control equipment such as an afterburner for the control of organic gases and dioxin.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 12

Comment: The Restrictions and Testing Proposed by EPA Are Not Necessary to Control Hazardous Air Emissions.

Because typical air emissions from pyrolysis furnaces are very low or nonexistent, EPA's attempt to regulate the furnaces under Section 129 is contrary to Congressional intent. Hazardous Air Pollutants ("HAPs") are not a significant emission concern for these units. This fact further demonstrates that these devices are not within the boundaries of what Congress intended to regulate.

The typical materials removed in a furnace (modern coatings, oils, etc.) are strictly organic compounds that do not contain elements such as lead, mercury, cadmium, chlorine, fluorine, or sulfur. Because the typical materials do not have any hazardous constituents, the furnaces will not produce emissions containing any of these compounds. The typical emissions from one of our large pyrolysis furnaces would be PM, NOx, a small amount of VOCs, SO_x and CO. Most of the VOCs are destroyed in the afterburner, and a typical emission rate for VOCs is less than 0.08 pounds per hour (even for our larger pyrolysis furnaces). Use of the afterburner reduces VOCs, but does slightly increase NOx emissions from fuel in the afterburner.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 15

Comment: Congress and EPA Have Historically Encouraged Reuse and Recovery of Metals as Evidenced, In Part, By the "Materials Recovery Facilities" Exception.

Congress provided an exclusion from the definition of "solid waste incineration unit" for "materials recovery facilities" ("MRFs") [see 42 U.S.C. § 7429(g)(1)]. Under the Clean Air Act, MRFs, including primary or secondary smelters, which combust waste for the primary purpose of recovering metals are not considered solid waste incineration units [Id. 7429(g)(1)(A)]. Accordingly, the CISWI rule lists MRFs among the fifteen types of units that are exempt from regulation, including "[u]nits that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters."[Footnote: 40 C.F.R. 60.2020(h) Specifically, the CISWI rule exempts "[u]nits that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters."] Because pyrolysis furnaces are used primarily to recover metal equipment, the furnaces may qualify for the regulatory exemption even if the furnaces qualify as incinerators. If EPA believes that the furnaces are incinerators and do not fall directly within the MRF exemption, the furnaces definitely fall within the spirit and purpose of the MRF exemption. The MRF exemption promotes sustainable practices that will reduce air emissions (including greenhouse gas emissions), water use, generation of process water, use of natural resources, generation of solid waste, and use of landfill space. Promoting sustainable practices also promotes environmental justice because large emission sources and landfills are often located in areas with low socio-economic status. Avoiding the need for production of new metal equipment has the same benefits as metal recovery, i.e., no need to mine and process ore, so no greenhouse gas emissions associated with mining equipment or ore processing among

other benefits. Because pyrolysis furnaces have a net environmental benefit, EPA should find ways to encourage their proper use, not unreasonably and unnecessarily restrict them.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 16

Comment: How Does the EPA Intend to Treat Competitive "Burn-Off" Devices?

Under the Proposed Rule, we would like to point out that some cleaning devices that basically perform the same process as a cleaning furnace do not appear to be covered possibly because they are described using different terminology. Two of these devices are fluidized sand beds and vacuum ovens. Both of these types of devices remove organic material from metal parts by breaking it down thermally at temperatures of 800-900ºF just like in a cleaning furnace. A brief description of how these devices operate is provided below. We apologize if this description is not 100% correct as we do not manufacture these devices and so do not have first hand knowledge of all aspects of their operation. Some hot chemical processes also perform these same functions. How does EPA intend to treat these processes?

In a fluidized sand bed, a fan or blower forces hot air and combustion gases through a bed of sand to raise its temperature to 800-900ºF. The hot air helps to "fluidize" the sand. Once heated, the parts to be cleaned are lowered into the fluidized sand and the material is removed from the parts by the high temperature of the sand and a slight scrubbing action produced by the sand. Once the sand bed is heated up to temperature, cleaning is generally very fast, but if the amount of organic material on the parts is too great, the parts may catch on fire when they are lowered into the sand bed. The resulting vapors and pyrolysis gases are either vented out a stack directly to atmosphere, or in some cases they may be channeled through a separate afterburner.

A vacuum oven is electrically heated. Before the heaters are turned on, a vacuum is pulled on the primary chamber to remove most of the air. This vacuum keeps the parts from catching on fire when the material is heated. Once the heaters are turned on, the oven chamber is heated to 800-900ºF to decompose the organic material on the parts. The ultimate emissions usually end up in a wastewater stream rather than an air stream.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 22

Comment: We believe the rule as proposed by EPA is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, in excess of statutory jurisdiction, authority, or limitations, or short of statutory right, and contrary to procedure required by law.

We ask that EPA craft a solution that allows this industry to survive, while ensuring that emissions from these units do not become a significant source of HAPs. A more creative solution would ensure environmental protection and adherence to Congressional intent while not putting people out of work and causing other economic harm. Keeping the industry in existence and ensuring a more environmentally safe process for addressing coating removal argues in favor of EPA taking another look at this rule as it applies to these furnaces.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Scott Roberts
Commenter Affiliation: AC Electric Corp.
Document Control Number: EPA-HQ-OAR-2003-0119-1958.1
Comment Excerpt Number: 1

Comment: Complying with the law is certainly doable, but, we believe, extremely cost prohibitive. On one hand, oven manufacturers are being cagy about the costs to upgrade or replace ovens with units that could meet the regulations. This cost, while likely significant for each of us in this industry, pales in comparison to the ongoing costs of ensuring compliance with the limits. There is near universal agreement that the cost of stack tests will be excessively burdensome for almost all of us. The cost of a single test is estimated, by the EPA's own numbers, to run from $25,000 up to $60,000. This is an enormous annual cost, but it is our understanding that multiple stack tests might be required if the system has an issue and fails the test. Shops the size of AC's will have an average additional cost of at least $200 per motor burned off with smaller shops perhaps seeing double or triple that based upon their annual volume of rewinds.

Cost increases of this kind will likely cause some players in our industry to either avoid acknowledging they are running ovens or switching to more primitive technology, and such moves would likely have unintended and undesirable consequences. First when some operators attempt to move off the radar screens of regulators it will further penalize the players who are working to comply. But, even more importantly it will have the overall consequence of worsening air pollution rather than lessening it as the regulation had hope to do. A second consequence is that motors that are "burned off" by operators skirting the law are less likely to maintain their original design efficiency. Less efficient motors need more electricity for the same amount of work and will require more electricity be produced, resulting in all the environmental and carbon footprints issues associated with unnecessary energy consumption. Lastly, if all these additional costs are incorporated into repairs, it is very likely that the end users will be deterred from repairing motors and will purchase new ones. This, again, will result in an increased carbon foot print raising all the issues associated with energy consumption.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Kelly McCabe
Commenter Affiliation: Associated Finishing Incorporated
Document Control Number: EPA-HQ-OAR-2003-0119-2107.1
Comment Excerpt Number: 1

Comment: I am writing to voice my opposition to the proposed CISWI regulations. Burn Off ovens should not be classified with solid waste incinerators. Burn off ovens are used to safely remove organic materials from metal. It is among the most economic and environmentally friendly ways to re-claim the metal for continued use.

As a metal finisher, the burn off oven is a critical part of our overall process. If this regulation becomes law we will be forced to take our new oven out of process. As would thousands of similar companies in the country. This would have a HUGE economic impact on almost everything that gets produced or improved on in this country.

Also, alternative coating removal processes will greatly increase the amount of hazardous waste that is created. The burn off oven emissions are minimal and greatly reduce the amount of VOC's emitted which is not noted on the list of pollutants.

It is obvious to me that the EPA does not have any idea on the national impact a decision like this will have economically everywhere in the country. The environmental improvements suggested are not even realistic based on the sample size of 10 emissions tests done.

Burn Off Ovens should be eliminated from this category. Failure to do so will cause a terrible ripple through the economy which cannot be risked by any questionable emission improvements.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 1

Comment: EPA has estimated 36 sources in the subcategory for burn-off ovens [75 FR 31953-4]. Material suppliers and processors in the plastics industry may operate their own units, use commercial services or use a combination of both for the removal of polymeric material from processing equipment, e.g., extrusion dies, screws and other metal parts. One SPI member indicated it has at least a dozen of these units and another company indicated it accounts for nine; none of these units are included in the EPA database. The American Chemistry Council (ACC) has noted four of its members account for 25 units that were not included in EPA's database, in which the plastics industry is not fully represented.

A consideration is how CISWI units and burn-off ovens are defined, and were understood to be defined, when EPA conducted its combustion survey. The NPRM states:

We are proposing to define a CISWI unit as any combustion unit at a commercial or industrial facility that is used to combust solid waste (as defined under the RCRA). See proposed 40 CFR 60.2265 (NSPS) and 60.2875 (EG). In this proposed rule, CISWI units include incinerators designed to discard waste materials; energy recovery units (e.g., units that would be boilers if they did not burn solid waste) designed for heat recovery that combust solid waste materials; kilns and other industrial units that combust solid waste materials in the manufacture of a product; and burn-off ovens that combust residual materials off racks, parts, drums or hooks so that those items can be re-used in various production processes" [emphasis added; 75 FR 31941].

The NPRM also describes burn-off ovens:

These units typically are very small (<1 MMBtu/hr), batch-operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. [emphasis added; 75 FR 31951.]

The term "burn-off oven" is a misnomer when applied to ovens used to clean parts in the plastics industry. Many such ovens are used in the plastics industry to either melt materials from parts or decompose the materials via pyrolysis, not by combustion. Operating and utilized this way, companies may have omitted them in their response to EPA's combustion survey because they do not combust anything.

SPI supports ACC's comments urging EPA to take measures, such as contacting oven suppliers, to more accurately determine the number of these units in the United States and how they are being used. This is needed for an appropriate determination of the maximum achievable control technology (MACT) floors for existing and new sources, as well as the economic impact of EPA's proposal. However, SPI believes EPA should continue to exempt burn-off ovens from regulation under the CISWI rule, especially those that use pyrolysis.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Lisa Johnson
Commenter Affiliation: Johnson Electric Motor Shop
Document Control Number: EPA-HQ-OAR-2003-0119-1842
Comment Excerpt Number: 1

Comment: The proposed regulations as they apply to burnout ovens utilized in the Electric Motor Repair Industry are ones that will have a devastating impact on not only the repair shops directly affected by them but entire communities and the already struggling industries that support them.

I am a third generation owner of a now struggling small (very small) motor shop. Based on the dollars involved to meet standards and then stay in compliance, in six months a family owned and community oriented business for over 84 years will simply close its doors. There is very little industrial work in today's economy due to the mass exodus overseas of so many companys and what little is left would never support the huge dollar amounts it will take to comply annually. This will then be a chain reaction throughout our community both from an economic

standpoint but a morale standpoint when most Americans are finding so little to be proud of or very few reasons to try and get this country back on its feet.

I urge you to take a more realistic look at the true data involved with burnout ovens in our industry. The use of chemicals that will ultimately harm our environment is not an acceptable alternative to a "problem" that has only been identified through flawed studies and data collection.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 1

Comment: Burn-off Oven Applicability:

i-Whirlpool Corporation believes the pyrolitic process of the “burn-off” oven is not incineration. The coating material is not “combusted”. These are pyrolytic ovens operated in a starved oxygen atmosphere.

ii-Further, the process is used for tooling recovery, not waste incineration. It allows Whirlpool to recover part hangers for reuse. Not to incinerate wastes.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)
Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 1

Comment: After extensive review of the proposed rule, EASA strongly opposes the provisions that apply to so-called “burn-off ovens” as legally, environmentally, and economically unsound. We urge EPA to clarify based on the plain meaning of the Clean Air Act that the CISWI Rule does not apply to burn-off ovens that utilize pyrolysis rather than combustion. If EPA somehow declines to follow the clear intent of the statute, it must in the alternative at least conduct additional review to fairly regulate these units.

We believe that EPA lacks even a basic understanding of how many burn-off ovens are in use, how they are used, and what role they play in the recycling and reclaiming process. Thus, EPA cannot rationally adopt the provisions of the proposed CISWI rule that apply to burn-off ovens.

EASA is an international trade association headquartered in St. Louis, Missouri, of over 1,900 member electromechanical sales and service firms in 58 countries. We have more than 1,425

members in the United States employing nearly 24,000 people. More than half of our members employ 10 people or less, with the average member employing approximately 16 people.

EASA serves members who sell and service electrical, electronic, and mechanical apparatus by educating, informing, and promoting the highest standards of performance and ethics for the benefit of the industry as a whole. One of the tenants of our organization is to promote environmental stewardship as exemplified by the following excerpt from the EASA Environmental Policy: "The preservation of our environment is of major importance to the members of the Association. Members will conduct their business activities so as to preserve and, in all ways practical, to improve our environment by eliminating or reducing the amount of pollutants they release into the environment."

The CISWI Rule, as proposed, would affect nearly all of our U.S. members, almost all of whom use burn-off ovens to conduct repair and rewinding activities on electric motors and generators. EASA members use a burn-off oven with a calibrated control device maintaining part temperatures at 700 degrees F or lower. A motor or generator's electrical windings are heated (not burned) in a safe, uniform, and controlled manner so that they can be readily removed for rewinding without damage to the steel core into which the windings are embedded. Thus, burn-off ovens play a critical role in the recycling and reclaiming process.

EPA Lacks the Authority Under Section 129 of the Clean Air Act to Regulate Burn-Off Ovens.

As an initial matter, EPA lacks the authority under Section 129 of the Clean Air Act to regulate burn-off ovens as solid waste incinerators.

Pursuant to Section 129(a) of the Clean Air Act, EPA is required to establish standards of performance and other requirements "for each category of solid waste incineration units." 42 U.S.C. § 7429(a)(1)(A). A "solid waste incineration unit" is "a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels)." 42 U.S.C. § 7429(g)(1) (emphasis added). Thus, by definition, a unit is a solid waste incineration unit only if it combusts solid waste.

Despite their name, burn-off ovens used in the motor and generator repair and rewinding industry do not combust solid waste. The word "combust" means "to burn," which, in the common sense of the word, means "to consume fuel and give off heat, light, and gases." Merriam-Webster's Collegiate Dictionary at 166 (11th ed. 2007). Congress is presumed to intend, absent any indication to the contrary, that statutory language be given its common meaning. Engine Mfrs. Ass'n v. South Coast Air Quality Mgmt. Dist., 541 U.S. 246, 252 (2004).

Contrary to EPA's apparent assumption in the CISWI Rule, burn-off ovens used by our members do not combust materials like an incinerator; rather, our burn-off ovens pyrolize materials to clean them by thermally degrading the varnish/resin bonding coil wires and coils together, the insulation material coating the winding wires, the insulation lining the slots that the coils are placed in, and the insulation between coils. Unlike combustion, which burns organic matter, pyrolysis thermally decomposes matter, without an open flame, often in an oxygen deficient atmosphere. Also unlike combustion, which produces heat, pyrolysis produces no heat, and, in fact, requires a heat input for the endothermic reaction to occur. These units are equipped with afterburners that convert carbon to carbon dioxide, hydrogen to water vapor, and produce a non-visible exhaust; and thus already have air pollution controls.

More fundamentally, incinerators are used to destroy waste materials through combustion to reduce their volume. Burn-off ovens, in contrast, are used to clean valuable parts so that they can be reclaimed and reused.

Thus, the D.C. Circuit's decision in NRDC v. EPA, 489 F.3d 1250 (D.C. Cir. 2007), vacating and remanding the CISWI Definitions Rule, is inapplicable here. That decision merely confirms that EPA must regulate, in the words of the Clean Air Act, "any" solid waste incineration unit, thus invalidating EPA's attempt to distinguish between incinerators and boilers by excluding from the Rule those units that recover thermal energy. Id. at 1257-58. That decision says nothing, however, about whether a burn-off oven meets the definition of a solid waste incineration unit in the first place. In other words, EPA's initial attempt in 2005 to exclude burn-off ovens from the CISWI Rule was the correct result, but for the wrong reasons. Rather than trying to exclude them because they did or did not include energy recovery, EPA should have excluded them because they do not involve combustion.

Accordingly, pursuant to the plain language of the statute, burn-off ovens that do not engage in combustion are not solid waste incineration units. EPA is not free to ignore this plain language in expanding the scope of the CISWI Rule. Id. at 1257 (when "Congress has directly spoken to the precise question at issue" courts must give effect to the "unambiguously expressed intent of Congress," and may defer to an agency's interpretation only where the statute is "silent or ambiguous"). As a result, EPA should clarify that burn-off ovens using pyrolysis are not subject to the CISWI rule because they are not solid waste incineration units.

Even If EPA Concludes that Burn-Off Ovens Are Solid Waste Incinerators, the CISWI Rule Must Be Revised.

Even if EPA somehow concludes, contrary to the plain language of Section 129, that burn-off ovens are solid waste incinerators, the CISWI Rule requires extensive revisions to address EPA's inadequate data, incorrect assumptions about alternatives to burn-off ovens, and incomplete analysis of the economic impacts of the Rule. In fact, if indeed it is EPA's intention to regulate our members' burn-off ovens, it is clear to us that EPA is not adequately informed about even very basic information on their use and value to our economy [Footnote: It is important to recognize that EPA has adequate time to conduct this rulemaking properly by gathering more data about burn-off ovens. Nothing in the NRDC decision mandates that EPA promulgate a final rule by a date certain. NRDC, 489 F.3d at 1262 (vacating and remanding CISWI rule, but omitting any discussion of timing)]. 42 U.S.C. § 7607(d)(3) (requiring EPA to provide a rational "statement of basis and purpose" in proposed rules).

EPA's Data Is Inadequate to Establish Defensible Standards.

As a starting point, EPA's data collection is grossly inadequate to establish defensible standards for burn-off ovens. EPA estimates that there are only 36 such ovens, and bases some of the emissions standards on results from just 10 (or, in some cases, as few as 2) sources. 75 Fed. Reg. at 31953 (Tables 4-6 identifying 36 sources); EPA-HQ-OAR-2003-0119-0059 (e.g., Tables B12-B29, D21-D30 detailing 10 sources). In reality, however, based on estimates from burn-off oven manufacturers, who we understand will also be commenting on this rulemaking, there appear to be 15,000 or more burn-off ovens in use in this country. Our members alone, for example, likely account for more than 1,300 such units. We are also aware that at least one burn-off oven manufacturer has questioned whether all of the units studied actually are burn-off ovens, particularly the unit at SCINVISTACamdenPlant.

This strongly suggests that EPA did not understand the scope of the class of units it is proposing to regulate, and failed to obtain adequate data to make informed judgments about burn-off ovens generally. It would be arbitrary and capricious to establish a MACT floor on the basis of data from 0.002% or less of all burn-off ovens. Thus, we believe that EPA needs to re-visit its analysis of the burn-off oven industry before it can adopt these provisions of the CISWI Rule.

Moreover, according to a memorandum in the rulemaking record (EPA-HQ-OAR-2003-0119-0043) from Brian Shager to Toni Jones regarding "Burn Off Oven Clarification Request Summary," dated April 14, 2010, EPA was operating with responses from only 11 facilities, only one of which (Newport News Shipbuilding Dry Dock Unit) is used for electric motors and generators. The emissions from a burn-off oven would seem to vary widely depending upon, among other factors, the materials being cleaned. EPA does not explain why it believes that a burn-off used to clean windings of electric motors and generators should be subject to the same controls as one used to clean paint off of racks or plastics off of molds. At the same time, the burn-off ovens studied appear to be among the largest units in the country, which are not representative of our members' units.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Martha Rudolph
Commenter Affiliation: The Clorox Company (Clorox)
Document Control Number: EPA-HQ-OAR-2003-0119-1907.1
Comment Excerpt Number: 1

Comment: We believe it is not appropriate to categorize burn-off ovens as incinerators as most burn-off ovens are not actually combusting material. Instead, they use lower temperature processes such as melting or pyrolysis and are specifically designed to avoid flaming conditions, which would damage the parts being cleaned. Alternatively, the exclusion for a materials recovery facility also should cover burn-off ovens. (See CAA §129(g) (1)) ("materials recovery facilities (including primary and secondary smelters) which combust waste for the primary purpose of recovering metals"). EPA's own description of burn-off ovens as units "used to clean residual materials off of various metal parts, which are then reused" recognizes that the primary purpose of these units is the recovery of metals. 75 Fed. Reg. 31951.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 2

Comment: Primary Source of Emissions: It is unclear what data supports the statement that these units are a primary source of HAP emissions. Whirlpool assessment of our own ovens does not support this position.

Sampling & Test Method Procedures: Due to the unique physical configuration and operating parameters of the burn-off units, standard sampling and test methods are not practical.

i- Stack configurations and sizes prohibit use of standard methods sampling. The small diameter and short stack height will preclude accurate sample for particulates. It is not possible to insert inline particulate cyclones for particulate sampling. In addition, the cyclones would not survive the stack temperature of our afterburners.

ii- The nature of the burn off unit batch operations, and the rule's rescinding of the "startup, shutdown and malfunctions" exemption, will inherently create compliance issues.

iii- Due to the short cycle time runs current sampling methods would not be viable.

iv- In Whirlpool units the addition of water is a required design aspect of our ovens. The injected water stabilizes the pyrolysis temperature and keep the chamber particulate level low to prevent overloading of the afterburner. This will be problematic in obtaining accurate results for moisture sensitive testing

v- Indeed, the above noted constraints were realized by EPA in the MACT survey exercise and thus only required WHR to sample for CO, CO_2 SO2, NOx & particulates. Other analysis proved to be impractical or unnecessary.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 2

Comment: Dies with Polymeric Residue are Cleaned, Reused and do not Constitute Solid Waste.

Polymeric materials may be produced in batches or processed by methods such as extrusion molding. As parts of the manufacturing process unit (MPU), extrusion dies are reused and must be clean for each use; they are not discarded and are not solid waste. Dies are removed from the equipment so that the polymeric residues can be removed, e.g., in an oven on site or at an off-site service. The exemption for hazardous waste states:

A hazardous waste which is generated...in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under parts 262 through 265, 268, 270, 271, and 124 of the chapter or to the notification requirements of section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials. [emphasis added; 40 CFR 261.4(c)]

Clarification has been provided by EPA; as an example:

It was not the Agency's intent to regulate wastes in these units unless the waste exits the unit or remains in the unit for more than 90 days after the unit is no longer in operation. Therefore, the Agency is changing its interpretation. The accumulation period for a tank, vessel, or unit that ceases to be operated for its primary purpose would begin either when the waste exits the unit, or if the waste remains in the unit for more than 90 days, the accumulation period would begin on day 91... Thus, hazardous waste which is generated... in a manufacturing process unit or associated non-waste-treatmentmanufacturing unit, may remain in the unit for up to ninety days after the unit has been shut down, and may then be stored for an additional ninety days in a tank, container, drip pad, or containment building in the compliance with the requirements of 40 CFR 262.34, without an RCRA storage permit. [60 FR 57779-57780]

Additional clarification also exists in communications concerning the cleaning of tubes (grouped in "bundles") from heat exchangers used in petroleum refining processes. It was determined that "the point of generation [occurs] when the sludge is removed from the bundle," "sludge resulting from his cleaning operation forms the listed waste" and that the sludge "was generated as a hazardous waste when heat exchanger bundles were cleaned." [Footnote: See communications (last accessed August 19, 2010 at: http://yosemite.epa.gov/OSW/rcra.nsf/Documents/1464EE0525A71A0C852565DA006F05B8.] Applied to plastics processing machinery, dies with residual polymeric material are part of the MPU and any waste generated would result from the cleaning of the residual polymeric material from the dies. The residual polymeric material itself would not be waste; the waste would be generated after cleaning, when pyrolyzed material is removed from the oven. Therefore, pyrolysis ovens used for polymer operations should not be regulated under CISWI.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 3

Comment: Burn-off Ovens Operating by Pyrolysis Should Not Be Regulated Under CISWI.

These ovens are being used to clean parts for reuse, not for the incineration of solid waste. EPA has proposed to define CISWI units as combustion units at a commercial or industrial facility that are used to combust solid waste. SPI supports the comments of ACC in that ovens used to clean parts in the plastics industry are not solid waste incinerators, and EPA should retain the exemption for these ovens under the CISWI rule.

Our member companies indicate they use ovens that operate by pyrolysis in an oxygen-deficient atmosphere – not combustion or incineration – or simple melting to clean machined parts to which polymeric and other materials have adhered. Machined parts are placed into such an oven and the temperature is increased; melted materials may be collected in a drip pan in an initial step before the temperature increases to the point where pyrolysis occurs and the resulting chemical change decomposes any remaining material. Combustion is undesirable in that it could

result in damage to both the machined parts being cleaned in the oven and the oven itself. Pyrolysis ovens are advertised as being equipped with water suppression systems, and designed so that there are no open flames inside the primary cleaning chamber.[Footnote: See product information at: http://www.globalfinishing.com/industrial/ind_products/ind_burnoff.html and http://www.pcpconline.com/wheres_the_fire.html (last accessed August 19, 2010.) These examples; EPA could further investigae burn-off oven designs and specifications.] Ovens that operate by pyrolysis in an oxygen-deficient atmosphere would therefore be inappropriately regulated under this proposed rule.

While some combustible materials may be released at lower temperatures before pyrolysis is reached, these fumes are combusted in an afterburner chamber, are not being incinerated as solid waste, and would not appear to be in the scope of the NPRM.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Martha Rudolph
Commenter Affiliation: The Clorox Company (Clorox)
Document Control Number: EPA-HQ-OAR-2003-0119-1907.1
Comment Excerpt Number: 3

Comment: The final rule should provide an exemption for all burn-off ovens, or at least those that process "clean" non-chlorinated plastics such as un-painted polyethylene. In the alternative, the final rule should apply more reasonable work practice standards for small burn-off ovens.

For example, a work practice standard specifying clean feed materials and annual burner tune-ups would be more reasonable and appropriate. Some states require air permits that contain standard permit conditions for burn-off ovens mandating the operation of an afterburner at more than 1,400 degrees Fahrenheit. The state permits require that records of afterburner operating temperatures be maintained whenever the units are in operation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 5

Comment: In the preamble to the proposed C1SWI rule (FR p. 31964), the EPA describes the operation of a CISWI unit: "We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures." This does not describe

operation of a burn-off oven. Burn-off ovens fire natural gas to clean paint off of racks that are used to support parts that require coating, to remove insulation from electrical wires and motors, and other similar cleaning functions. The proposed CISWI definition of "solid waste incineration unit" excludes "materials recovery facilities." In one important sense, a burn-off oven is a "materials recovery facility" because the reusable paint racks or wires or metal motor parts are recovered for reuse or recycling so burn-off ovens would be excluded from regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 24

Comment: EPA has underestimated the number of CISWI units affected by this proposal, and therefore, the cost impact of this rule has been underestimated. EPA has estimated the number of burn-off ovens at 36, but we believe that that is a huge underestimate. For example, one vendor of part reclamation units advertises that they have supplied more than 7,000 units worldwide. Since the vendor is headquartered in Texas, the majority of their units are likely used in used the U.S. They are also only one vendor of many for part reclamation units, and a part reclamation unit is only one type of burn-off oven.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Atwood
Commenter Affiliation: CARDONE Industries Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1974
Comment Excerpt Number: 1

Comment: FR page 31941 3rd column

"...most of the CISWI units that operate without heat recovery are not equipped with add on controls." (definition unclear as to what is considered add on other than those mentioned) Each of our burn off ovens comes standard with an afterburner (secondary chamber) required

under our air emissions permit. The afterburner is required to run at a specific temperature and dwell time during the operation of the primary burners as an emission control device. The manufacturers can confirm if an afterburner is standard practice across their market. On page

31942 1st column it is stated that secondary chamber residence time and temperature has a direct effect on emission reduction/destruction so they are a recognized control device.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 1

Comment: Proposed requirements for burn-off ovens are not appropriate for ovens used to remove varnish from motor winding during overhaul.

DoD uses burn-off ovens to remove insulating varnish from reclaimed electric motor components for purposes of rewinding (rebuilding) the motors for subsequent installation. The varnish must be removed from the existing induction windings and ferrous core components prior to preparation of the components for installation of new copper wire windings (i.e., rewinding). Once placed in the burn-off oven, the electric motor components are heated to nearly 700 deg. F, where the electrical varnish undergoes pyrolysis without the heat causing damage to the substrate. The components are allowed to cool, removed from the burn-off oven, and the decomposed electrical varnish is cleaned off the motor components with a pressure washer.

Electric varnishes are required to have a high dielectric strength (electrical resistance). A typical electrical varnish that is used on electric motors has a dielectric strength of 4150 volts/mil. By definition, a mil is 0.001 inches of dry film thickness. For example, a cured layer of this varnish that is the thickness of sheet of copy paper will insulate against 12,000 volts. This required mechanical property of insulating varnishes precludes them from containing any significant amount of conductor, such as metals. Furthermore, the Material Safety Data Sheet for the varnishes used in this application does not list any metal content. For this reason, it would not be reasonable to suspect that pyrolysis of electrical varnishes in a burn-off oven at less than 700 deg. F would cause any significant emission of the metals lead, cadmium or mercury (all pollutants targeted by CISWI).

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 1

Comment: In this proposed regulation, EPA has retained the exemption for "rack, part and drum reclamation units" (§60.2020(k)) as defined in §60.2265. INVISTA requests that EPA clarify the "parts reclamation" definition to include parts that are coated with polymer as also being exempt from this regulation. The following language accomplishes this:

Part reclamation unit means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused. This includes parts and piping that are coated with polymer incidental to a manufacturing process.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Atwood
Commenter Affiliation: CARDONE Industries Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1974
Comment Excerpt Number: 2

Comment: FR page 31951 3rd column:

"Burn off ovens...the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices."

FR page 31956 3rd column:

"We have determined that most facilities with units in the... burn off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."

FR page 31965 2nd column:

"However we realize that some CISWI owners and operators are likely to determine that alternatives to waste incineration are viable such as sending the waste to a landfill or MWC, if available (underline mine). In fact, sources operatiing incinerators, burn off ovens and small remote incinerators where energy is not a goal, may find it most cost-effective to discontinue use of their CISWI unit altogether."

Using category specific control requirements based on an incinerator combusting 100% waste for determining the requirements for burn off ovens is not practical and, as stated above, would likely shut down operations that are using them for the purpose of recycling or remanufacturing. It seems clear from the comments above that there is very little understanding of the process that a burn off oven is used for. Based solely on CARDONE's experience the burn off oven is primarily a cleaning process not a waste destruction process. We cannot just throw out the parts with the waste! The option, when talking about burn off ovens, suggested above to just put it in a local landfill is not possible and directly contradicts all of EPA's efforts in the areas of Recycling, Remanufacturing, Waste Reduction, Sustainability, Resource Conservation and Recovery and others!

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 2

Comment: In the preamble to the proposed regulatory changes EPA states "We have determined that most facilities with units in the incinerators, small remote incinerators or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated." 75 FR 31956. The EPA further elaborates in their beyond-the-floor analysis for the incinerator, small remote incinerator and burn-off oven category that "Facilities with incinerator units and small remote incinerator units would use alternative landfill disposal and facilities with burn-off ovens would use abrasive blasting." 75 FR 31958.

First, INVISTA strongly opposes being in a position of having to shutdown these burn-off ovens. As stated previously, these ovens recycle a valuable metal part that has only lost its functionality due to polymer coating/plugging. The coating is easily removed by the established burn-off process and the part is restored to full functionality. To dispose of these parts, e.g., in a landfill, would run directly counter to EPA's overall waste reduction and pollution prevention efforts. Second, due to the nature of lengthy runs of pipe being clogged by polymer and the finely machined dies and spin packs, abrasive blasting is not an option for these parts. As summarized by CRWI, historically, solvents (chlorinated, caustics) had been used for this purpose. Ultimately, these methods were seen to be less environmentally friendly and resulted in potential exposure issues for employee. The resulting "optimization" for these purposes was the selection and implementation of these parts reclamation ovens.

INVISTA opposes EPA's position that setting the compliance requirements for burn-off oven requires such burdensome emission limits and testing, which, even according to EPA would require most regulated burn-off units to cease operations. (75 FR 31956) In addition to the direct costs and costs and risks associated with ceasing operations, the requirements, as currently drafted, would increase waste for land disposal or companies would revert to historic cleaning techniques utilizing solvents.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 3

Comment: Each facility's burn-off material has a different emissions profile. INVISTA recognizes that EPA is seeking to find a set of emission limits that would apply across the source category. However, for the burn-off oven category the resulting emission reductions are so low that the costs compared to the benefits would be very high. INVISTA recommends that EPA reconsider including the burn-off oven source category in this regulation. INVISTA's units subject to this regulation remove man-made polymers (i.e., nylon and PET) from metal parts so these parts can be reused. This burn-off process is accomplished with natural gas firing. Due to the "clean" nature of these polymers and the fuel used (natural gas), these burn-off ovens have extremely low emission rates of the regulated compounds as shown for PET in the following table.

[See submittal for Table 1 provided by commenter showing the maximum compound emissions from a PET Burn-off oven.]

Given the fact that these low levels of regulated compounds present in the burn-off polymer result in extremely low annual emissions, INVISTA requests that EPA reconsider the cost benefit analysis for the burn-off oven category as the current analysis likely overstates the benefits of implementing this proposed requirement.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 3

Comment: EPA Should Follow Its Statutory Mandate Exempting Material Recovery

Processes From CISWI Regulation To Rescind Its Burnoff Oven Proposal.

As established above, EPA does not posses the statutory authority to regulate material recovery processes. Regulating such processes also conflicts with existing EPA RCRA regulatory positions encouraging recycling and discouraging unnecessary solid waste landfill use. However, at proposed Table 8 of Subpart CCCC and Table 9 of Subpart DDDD, EPA improperly proposes limits regulating emissions from burnoff ovens under CISWI. EPA should rescind these proposals, along with related regulatory text throughout proposed Subparts CCCC and DDDD of Part 60.

EPA does not reconcile its proposed definition of "burnoff oven" at proposed §§ 60.2265 and 60.2875 ("any rack reclamation unit, part reclamation unit, or drum reclamation unit") with the statutory material recovery prohibition. "Reclamation" and "recovery" are synonyms. If recovery cannot be regulated under § 129, neither can reclamation. On a statutory basis, EPA should withdraw proposed burnoff oven regulation.

In addition, § 261.4(a)(8) exempts from solid waste regulation secondary materials, with certain conditions. While most of the conditions in this exemption do not apply to metal parts being cleaned in a burnoff oven, condition (b), the controlled flame combustion, could be controlling. Burnoff ovens work on the theory of pyrolysis, a cleaning process in a low oxygen atmosphere where a controlled flame is not required or desired. These ovens are typically designed as indirect heat units, where the material on the part is oxidized without flame. Some Arkema units are electrically heated, with no flame present, even in the indirect heating section. Many units in plastics service are designed to recover, instead of an ash, molten and re-solidified plastic that is disposed of as a Subtitle D solid waste. Because these activities meet the § 261.4(a)(8) exemption, parts managed in burnoff ovens are excluded from RCRA solid waste regulation. Units processing materials excluded from solid waste regulation should not be regulated under a Clean Air Act authority designed to regulate solid waste management. Therefore, EPA contradicts existing regulations in the CISWI burnoff oven proposal and should not finalize burnoff oven portions of proposed Subparts CCCC and DDDD.

In this exemption, plus several heat-related solid waste management exemptions, EPA recognizes that the solid waste point of generation for materials contained on or with the recovered material is during the exempted process, not the point where the material is first identified as available for recovery or recycling. This principle is best illustrated in § 261.4(a)(17), where EPA requires primary mineral processors to evaluate if spent material is a listed hazardous waste. EPA took this position to resolve a point of generation question, where, absent the exemption, the point of generation of the waste

would otherwise be removal of the part from the manufacturing equipment. Were the point of generation before the exempt reclamation process, many § 261.4(a) exemptions would not work in practice. In the burnoff oven question, the point of generation, applying existing EPA RCRA solid waste exemptions, is not the removal of the part from the manufacturing equipment, but the removal of residue from the burnoff oven.

At 75 Fed. Reg. 31958, EPA attempts to claim that alternate technologies exist to replace burnoff ovens that EPA correctly claims would be removed from service if this CISWI proposal becomes final. However, EPA does not attempt to justify this claim. Due to the nature of the parts that Arkema typically cleans in its five burnoff ovens, no alternate technology exists. EPA suggests that owners and operators may use abrasive or water blasting to clean materials from parts now processed through burnoff ovens. In four Arkema burnoff oven applications, the parts being cleaned are finely machined components of plastics extrusion systems, where the company invests heavily in heavy-duty precision machinery to manufacture products to strict quality standards. Any cleaning method that would subject this equipment to abrasion risks damaging the dimensional stability of the part, where the part may no longer properly fit into the equipment. Parts that no longer fit into plastics manufacturing and extrusion equipment become very expensive solid waste. Potential cryogenic solutions would also risk dimensional stability and are unsuitable for plastics parts cleaning. In the fifth situation, chemical residue is cleaned from the parts after all other feasible technologies, including purging, mechanical cleaning, and chemical cleaning, have been completed.

Arkema also investigated methylene chloride based halogenated cleaning systems as an alternate technology. While some polymers Arkema manufactures would be amenable to halogenated solvent cleaning, the nylon based polymers manufactured at one Arkema facility would resist halogen cleaning. The other problem is worker exposure. EPA promulgated the halogenated solvent cleaning MACT standard at 40 CFR 63 Subpart T

in 1994. Subpart T placed substantial restrictions on halogenated parts cleaning, driving many companies to replace parts cleaners with burnoff ovens. This proposal, which will by EPA's admission discourage burnoff ovens, returns industry to a world that EPA closed down 15 years ago. Manufacturers have since adapted, reducing employee exposure, eliminating a source of HAP emissions that in practice were not necessary, and improving cleaning performance by implementing burnoff ovens. With this proposal, often the only remaining option, especially in cases where manufactures must clean parts before a vendor will perform maintenance on the part, is to dispose of the part as a solid waste. As described above, Congress wrote § 129 to avoid sending unnecessary solid waste streams to landfills. The net result of EPA's attempted burnoff oven regulation is to circumvent Congressional intent in a manner that will compromise the plastics industry.

Had EPA completed a full and reasoned analysis of the burnoff oven source category, it would have found that potential regulatory action unjustified. First, these sources, in the aggregate, do not represent a substantial source of any air emissions. The amount of materials to be cleaned charged from parts is insignificant compared with other CISWI source category facilities. Typical burnoff ovens only clean between five and 20 pounds of material from the charged parts per batch, and can only clean a few batches of parts per day. The CISWI units Congress believed it was regulated typically charge several tons of material per day, without the intended recovery of most of the mass charged into the unit. On this basis, the expected $50,000 initial test cost of a unit that is not expected to emit more than a ton of total pollutant per year far exceeds any "above the floor" cost threshold EPA has identified in the MACT program.

Courts have noted the burdens of unnecessarily imposing regulatory burdens on facilities that cause "absurd results" (See, Alabama Power v. Costle, 636 F.2d 323 (D.C. Cir. 1980)). EPA correctly notes that it has the authority, when absolutely necessary, to avoid absurd results when a Congressional mandate, created to apply to an earlier set of facts not reasonably anticipated during the Congressional debate, causes results that the Agency cannot justify and EPA cannot reasonably defend. The Chevron U.S.A. v. NRDC (467 US 837 (1984)) deference logic allows EPA, when Congress has not spoken clearly to a question, to use its reasoned judgment to resolve a problem. In Alabama Power, the D.C. Circuit allowed EPA to act on "administrative necessity" when an existing authority defies logic. Burnoff oven regulation is one situation where EPA should use its administrative necessity discretion to avoid the absurd result of imposing unduly burdensome regulations on burnoff ovens emitting extremely small amounts of regulated air pollutants.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1
Comment Excerpt Number: 3

Comment: EPA is proposing to regulate our plant in the "burn-off oven" category. EPA's description of a "burn-off oven" is at page 31951:

Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch operated,

combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions

Our drum reclamation furnace looks nothing like the facilities described by EPA. Our drum furnace is a continuous-operated (not batch) combustion unit that is in excess of 10 MMBtu/hr, with an air volume in excess of 1000 cubic feet, and operating temperatures of between 1,200° F and 1,500° F.. The "burn-off oven" description fits "parts-reclaimer units" designed specifically for racks, hooks and other parts. These units are much smaller (some less than 30 cubic feet), and operate at significantly lower temperatures – in the range of 700° F to 900° F.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 3

Comment: DoD Recommends EPA establish a separate CISWI subcategory for burn-off ovens used exclusively for electric motor component reclamation. Establish a MACT floor for the new subcategory based on emissions expected from reclaimed electric motor components rather than conventional coatings removed during drum and rack reclamation. Reduce monitoring requirements to keep the additional annual costs for electric motor component burn-off oven operation on par with operation of a vapor degreaser. Creation of this new subcategory with corresponding alternate emission limits and cost effective monitoring requirements could effectively eliminate the need for installing a new vapor degreaser. This would prevent a 6000 percent increase in total emissions, an even larger increase in total organic HAP emissions, and a new exposure pathway for workers.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Atwood
Commenter Affiliation: CARDONE Industries Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1974
Comment Excerpt Number: 4

Comment: While burn off ovens are part of the CISWI category, CARDONE would strongly suggest that the specific process they are used for as noted above is significantly different from an incinerator and the other sub categories used for the destruction of waste and therefore is not completely understood. Again, we are not looking for unregulated use of the ovens, but would ask that their actual function and use be better understood so that realistic requirements can be put in place and the value added benefits of the burn off oven not be lost to the market when

Resource Conservation and Sustainability are such important considerations in today's world.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 6

Comment: BURN-OFF OVENS, particularly PART and RACK RECLAMATION UNITS - Dow requests that EPA retain the existing exemption for these units.

By proposing to eliminate the exemption for burn-off ovens (especially part and rack reclamation units) in Section 60.2020 of Subpart CCCC and Section 60.2555 of Subpart DDDD, EPA may have inadvertently created a multitude of issues regarding these units, including increasing the applicability of these standards by a huge number. Dow believes, that in many cases, this action by EPA will lead to useless results. In addition, Dow believes that the regulation of these units employing melting or pyrolysis is unsupported by the language of Section 129. Our description of the issues and potential solutions for these units follows.

1. EPA has underestimated the number of burn-off ovens because of flaws in the data collection activity, which has also resulted in underestimating the economic impact of the proposed emission standards.

a. Description of their use - It is common practice in industry (such as plastics or latex manufacturers, plastics or latex processors, as well as others) to use on-site ovens (electric or gas-fired) to clean solidified material off of small metal parts (extrusion dies, screen packs, extrusion screws, filters, gears) during maintenance so these parts can be reassembled properly after the maintenance is completed. Larger pieces of equipment are usually shipped to large commercial ovens since they require more control to protect the integrity of more complex metal parts. In many cases, the on-site units may be no larger than a residential or commercial self-cleaning oven or have BTU ratings of 1MM BTU/HR or less.

b. Data collection flaws – As in the case for laboratory analysis units, EPA may not know about the potential large number of these devices because they have been previously exempt from Subparts CCCC and DDDD. The 2008 CAA Section 114 ICR did not make it clear that these units were included in the scope of the survey or that EPA was planning to remove the exemption. Since many, if not most, of these units practice pyrolysis as opposed to combustion, it is quite likely that respondents did not think of responding for that type of unit. Lastly, the request did not include area sources which could also be a significant contributor to the number of units. For example, the vendor for one of Dow's cleaning ovens advertises that they have supplied more than 7,000 units worldwide and estimates 4,500 installations in the U.S. alone. They are also only one vendor of many for cleaning ovens, and they estimate 15,000-20,000 U.S. installations when including their competitors. Since EPA stated in the "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" that there are only 36 existing burn-off ovens, Dow believes that EPA's database for these units is inadequate. In addition, proposing to eliminate the exemption for burn-off ovens, especially the part and rack reclamation units, and creating a sub-category for them has potential to cause a host of difficulties such as the sheer number of them, lack of regard for the size of many of these units, and the difficulty in conducting performance testing.

c. Requested change - Dow questions whether or not these units should be included in this Section 129 program at all and presents comments to that effect later. However should EPA believe that the rule must include these units, EPA must conduct a more thorough analysis of them before proposing emission standards.

2. Dow questions whether or not these units should be included in this Section 129 program at all.

a. Low potential for emissions - Some states, if not most states, already realize that the potential for emissions from these units is inconsequential because of the small amount of material that they remove and the small amount of emissions that these units could conceivably produce. One of Dow's vendors advertises in their literature that many states have long recognized that regulating the emissions from these units is a somewhat useless activity. The vendor lists the states of Alabama, Connecticut, Georgia, Hawaii, Iowa, Kansas, Maine, Minnesota, Montana, Nevada, North Carolina, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin as having various mechanisms for addressing this miniscule concern (e.g., exemptions based on amount of emissions, exemptions based BTU release rate, exemptions based on solids capacity, permits by rule with only minimal requirements). To include these units as CISWI's would force these states, if not more of them, to regulate something that they have long known to be a useless activity.

b. Pyrolysis - Another issue with most, if not all, of these units is that they are generally designed to prevent the combustion of the residual material on the parts that they clean. In general, these units are pre-loaded with the parts to clean. Then, the temperature is ramped up. As that ramp occurs, the initial cleaning is accomplished by melting, in which the molten material can be collected in a pan or separate chamber. At some point in the temperature ramp, the conditions are such that the physical change (melting) is replaced by a chemical change (pyrolysis) to any remaining material. Pyrolysis is not defined in Section 129 or in the proposed regulation, but is defined in common dictionaries. Using a common dictionary, these are some important terms:

Pyrolysis is "a special case of thermolysis, and is most commonly used for organic materials."

Thermolysis is defined as "a chemical reaction in which a compound breaks up into at least two other substances when heated. The reaction is usually endothermic as heat is required to break chemical bonds in the compound undergoing decomposition."

Combustion or burning is "the sequence of exothermic chemical reactions between a fuel and an oxidant accompanied by the production of heat and conversion of chemical species. The release of heat can result in the production of light in the form of either glowing or a flame."

Melting is "a physical process that results in the phase change of a substance from a solid to a liquid."

Dow includes these definitions since there are distinct differences between pyrolysis, melting, and combustion that are commonly understood. It is important to understand these differences, especially since the prevention of combustion is particularly desired in a part or rack reclamation unit (i.e., cleaning oven) so as not to damage the metals parts being cleaned. Combustion would create "hot spots" on a metal part and could easily damage it beyond repair. Since many of these parts can have intricate designs and would be very expensive to replace, the design and operation is to prevent combustion, not encourage it. A description of several types follows:

i. Dow has at least two pyrolysis units that are equipped with water sprays and means of detecting conditions that could lead to flame generation, so that the water sprays can prevent a flame and protect the integrity of the part being cleaned. If combustion is employed at all, it would generally only occur in a separate chamber designed to receive vapors from the oven. Conceivably these vapors would not be contained gases under the definition of solid waste. In

essence, in these units there would be the pyrolysis of solids followed by the combustion of vented gases. Combustion of solids is purposely avoided by design. In all cases, the primary function of the units is to generate a clean part.

ii. Dow has at least one very small pyrolysis device that is electrically heated, and is also equipped with a small pan for collecting melted residue. The emissions from this oven are currently subject to state regulation but exempt from emissions control since the emissions amount is insignificant. In addition, the vent size from the oven is only 2-3 inches in diameter and could not accommodate any sampling equipment. Further, the vendor for the unit said their devices should not be subject to this proposal since they employ pyrolysis, not incineration.

iii. In both examples, vendors are very careful to design these units to prevent combustion (not to avoid regulation but to avoid damage to parts) and say so in the accompanying operations manuals/descriptions. Both vendors describe a controlled oxidizing cycle at the end of the pyrolysis cycle to prevent flaming should the oven be opened, due to malfunction or operator mistake and there be any solid residual material still present on the metal parts.

iv. There may be some units that melt plastic residue off parts being cleaned which collect the molten polymer in trays for later disposal. In these cases, solid material is not being combusted/incinerated/burned. However, during the melting process, some vapors can be released that are combusted in a separate chamber. Dow does not believe these units would be in the scope of the proposed CISWI rule since no solid waste is being incinerated and believes EPA should concur.

v. It is also unclear if these units would include self-cleaning ovens that are located in lunch rooms or other eating facilities at industrial and commercial establishments. In fact, some of these ovens are larger than the ovens used to clean plastics, latex, or other materials off of parts. Such ovens would contain racks that over time become contaminated with food residue and would need periodic cleaning. These parts would be cleaned by decomposing the residue during the self-cleaning cycle of the oven, very similar to the pyrolysis operation in the Dow units already described. Dow has no idea how this proposal would impact the food preparation industry. However, EPA should be concerned about that industry. Again, Dow does not believe that EPA wants to know or needs to know about the location or operation of self-cleaning ovens in lunchrooms and cafeterias at industrial establishments, and requests that EPA clarify that these devices are not in the scope of CISWI. To regulate them would lead to absurd results.

c. Possible clash with Section 129 exclusions – Even if EPA disagrees with the pyrolysis argument, Section 129 includes a number of exclusions from the definition of "solid waste incineration unit." One of those exclusions is for a materials recovery facility:

"materials recovery facilities (including primary and secondary smelters) which combust waste for the primary purpose of recovering metals."

The ovens that Dow uses for cleaning parts are indeed used primarily for the purpose of recovering metals. Dow does not believe that this exclusion is only for smelters, but rather includes smelters and could include other devices that also recover metals. Dow's ovens would be another type of application in which metal recovery is occurring. Subparts CCCC and DDDD both include similar language as an exemption, although the wording is slightly different from the statute. It is likely that most part reclamation units are doing much the same, as are the rack reclamation units and drum reclamation units.

d. Request that the current exemption be retained in the final rule – Dow believes these units should not be in the scope of this proposal since they practice pyrolysis of solids, are purposely designed and operated to avoid combustion, and are already appropriately addressed under various state mechanisms due to the nature of the small potential for emissions. In addition, Dow believes these units do function as material recovery facilities and would qualify for the Section 129 exclusion, since they do primarily recover metals. Dow believes that these units were appropriately excluded in the original CISWI rule and that they should continue to be excluded.

3. The potential to contain or generate Section 129 substances of concern is low. In many applications, the material being removed is food grade material or other materials directly used by consumers, such as polyethylene or polypropylene or latex or similar organic matrices (not an exclusive list). As such, these materials would not be expected to contain or generate most of the Section 129 substances of concern (sulfur, chloride, lead, cadmium, and mercury). Because of the lower pyrolysis temperatures and the low potential for chloride content, the potential to generate dioxins and dibenzofurans is likewise low. Even if EPA believes they must regulate these units, there should be ample opportunity for EPA to limit any emission standards to those constituents that might be expected instead of the full Section 129 list.

4. Pre-loading parts before start-up – Particularly with respect to a part reclamation unit and quite possibly to a rack reclamation unit, these units must be pre-loaded with the parts to be cleaned at ambient or near-ambient conditions. Properly situating parts in the oven is generally very labor intensive and cannot be accomplished mechanically, especially after the oven has reached operating conditions. EPA's assumption that CISWI units would not be fed until reaching full operating conditions would be in error for many units in this sub-category at the very least. As a result, these units (should they continue to be regulated as proposed) would need relief during start-up. To apply emission limits for these units during start-up is very problematic.

5. Lack of sampling ability – Many part and rack reclamation units are not equipped with stacks because of the small size of the units. The small units may only have a vent of 2-3 inches in diameter, which cannot accommodate the methods requirements for sampling. In addition, these units (both small and large) are batch operated and many run on short cycles. For example, the cycle can consist of 2 hours of heat-up, followed by 2-3 hours of pyrolysis, and finally by 2-3 hours of cool down. The sampling methods for a number of the regulated pollutants require a sample time of three or more hours which can easily exceed the pyrolysis time of the units. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units. As an example, Dow is enclosing an excerpt from a performance test plan under a different regulation to illustrate the difficulty facing these units in both minimum sample size and minimum sampling duration [See submittal for table of emissions sampling specifications provided by commenter.]

The proposed Table 8 for the NSPS (Subpart CCCC) requires a minimum sample volume of 4 dscm for dioxin/furan which could easily require a sampling duration of 6 hours or well above the cycle time for many of these units. The proposed Table 9 for the emission guideline (Subpart DDDD) requires a sample volume of 1 dscm for dioxin/furan, but Dow believes that is a lower volume than the method requires and is still a cycle-time issue for even the existing units. Similar issues exist for the requirements for testing for PM, HCl, and metals. Moeover, there is still the issue of the vent size or stack size to accommodate the sampling trains. These sampling issues were previously highlighted in the industry response to EPA in the ERG report of April 14, 2010. A proper response to these issues has been overlooked in the proposed rule.

6. EPA admission of eliminating most of the units - In the Preamble to the proposal (75 FR 31956), with reference to the beyond-the-floor discussion, it is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed. EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted."

a. Dow does not believe that Congress purposely intended for rules triggered by Section 129 to eliminate a particular industry or the use of a needed device. It is inconceivable that EPA propose regulations that would eliminate devices that serve a useful purpose, which is to reuse resources.

b. As proposed, there will actually be a disincentive to reuse parts especially small parts, which appears to be in conflict with resource recovery objectives. If the added expense of cleaning can be justified, facilities will need to ship these small metal parts to larger commercial units which might have stacks for accommodating stack sampling equipment (as well as other features that small ovens cannot employ), should the larger ovens even continue to exist which is somewhat doubtful. Even if some larger units could continue to exist, Dow would be forced to keep more spare parts on hand (a prohibitively large expense for many specialized machined parts) while this less efficient cleaning methodology is being employed. Dow believes that the transportation emissions during transport of the small metal parts and other metal equipment might dwarf the emissions from these small units or the expected reduction in emissions could they even be retrofitted. Dow is also concerned about the future existence of the larger commercial ovens since we ship larger equipment to them for cleaning (such as heat exchangers or other large items), and these items have substantial value that could be severely compromised.

c. In many cases, industry began to use ovens because the previous option of chemical cleaning of these parts involved chlorinated solvents, caustic solutions, or other means which were much more environmentally unfriendly methods, resulted in greater potential for exposure to employees, and generated much waste. Abrasive cleaning is not a viable option for machined parts since abrasion can damage the parts beyond repair. In essence with this action, EPA admits that they will be removing the possibility of this superior cleaning method. EPA's expectation that industry will transition to other methods ignores the fact that the other cleaning methods are inferior.

d. Dow believes regulating these devices would be useless and would be conflict with resource recovery objectives. Dow believes EPA has discretion to avoid regulating devices when such regulation would lead to such useless and unworkable results and would burden permitting agencies unnecessarily.

7. Unsupported by the Section 129 language – Dow believes that the Section 129 language expresses the intent of Congress to require EPA to develop regulations to control emissions from "solid waste incineration units." The issue is not necessarily whether or not a cleaning oven or part or rack reclamation unit removes a solid waste, but whether or not they employ incineration to accomplish that removal, or whether or not discard is occurring since the primary purpose is to recycle. Incineration is simply a more specialized form of combustion. As mentioned earlier in this comment, pyrolysis of solids in a cleaning oven or part or rack reclamation unit is neither incineration nor combustion. If EPA disagrees, then these units do have the primary purpose to

recover metals and should qualify as materials recovery facilities (excluded from the Section 129 definition of "solid waste incineration units"). If any discard is occurring, it would only occur after the cleaning cycle (if any residue might remain and could not be reused) and not during the cleaning cycle.

Summary of requested changes - In summary for cleaning ovens in general or part and rack reclamation units in particular, Dow urges EPA to do the following:

* First and foremost, EPA should retain the exemption for these units or at least clarify that cleaning ovens or part or rack reclamation units employing pyrolysis or melting to remove residue are not included in the scope of regulated units since they are not incinerating/combusting/burning solid waste. If needed, Dow suggests that the definition of "commercial and industrial solid waste incineration unit" or the definition of "burn-off oven" or the definition of "part reclamation unit" or "rack reclamation unit" be clarified to exclude ovens which melt or pyrolyze residues from the items they are cleaning. If EPA believes they cannot change the regulatory definition of "solid waste incineration unit" since they are only using the text of Section 129 for that definition, they could easily clarify in one of the other definitions ("burn-off oven" or "part reclamation unit" or "rack reclamation unit") that units that practice pyrolysis or melting are not "solid waste incineration units," or modify the definition of "discard" in Subparts CCCC and DDDD to accommodate this vital need. The fact that the combustion of gases may occur in a separate chamber should not diminish this possible remedy, since at that point in the cleaning process, the uncontained gases are not solid waste.

* If EPA does not agree with the above, Dow believes that a Section 129 rule is not appropriate for these units, which function to recover metals, since materials recovery facilities are excluded. Dow believes that these units do indeed perform this function. In fact, Dow believes it is the same for rack reclamation units and drum reclamation units. Dow believes this factor could be another reason to retain the existing exemptions in Subparts CCCC and DDDD.

* Dow believes that a Section 129 rule is not appropriate for these units, especially considering how states have dealt with them for many years. Many states have recognized the minimal potential for emissions from these units and already have effective programs in place.

* If EPA disagrees, then cleaning ovens or part or rack reclamation units need some degree of relief from the suite of CISWI conditions, including meeting emission limits at all times (i.e., during startup in cases where parts must be pre-loaded, performance testing, CPMS requirements, recordkeeping and reporting requirements). Since most of the 2008 survey responses indicated Section 129 metals or chlorine are not present or should not be present, there should be no reason for EPA to regulate those constituents. Since these units are batch-operated with fairly short cycle times, there need to be accommodations for that situation as well. However, Dow believes that if this is the action EPA takes, the results would still be unworkable for most of these units.

* Some clarification is needed that self-cleaning ovens involved in food preparation at industrial and commercial establishments are not in scope. Dow does not believe EPA needs to regulate ovens in cafeterias and lunchrooms.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 8

Comment: Exemptions need to be reinstated for rack, part, and drum reclamation units and lab analysis units.

The proposed CISWI rule includes standards for burn-off ovens, which were previously considered to be rack, part, and drum reclamation units. Burn-off ovens are used to remove materials from metal parts that are then reused in process applications. In the docket memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category," EPA states there are 36 existing burn-off ovens. Hence, the MACT floors are determined from a maximum of 5 sources. DuPont believes EPA has vastly underestimated the number and diversity of design and application of burn-off ovens at area and major sources. DuPont has eight very different design units at just one plant site- using natural gas for some and electricity for others as a heat source, and with either open chamber or fluidized bed designs. EPA should contact suppliers of these ovens to get a better estimate of the number and design of such units sold in the U.S. We suspect EPA is unaware of the actual number of these units because sources did not realize EPA was including burn-off ovens as solid waste incinerators. Burn-off ovens are specifically exempted from the definition of solid waste incinerators in current Subparts CCCC and DDDD under the exemption for rack, part, and drum reclamation units. Also, many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. They may or may not be equipped with afterburners. Therefore, respondents to EPA's ICR survey likely overlooked these units.

The heat input capacity of burn-off ovens is typically considerably less than 1 million Btu/hr, with a small vent if so equipped. In the Boiler MACT rule, EPA noted the difficulty in emission testing units less than 10mmBtu/hr heat input, and did not impose emission limits on those small sources. Similar problems apply even more to burn-off ovens, so the same logic applies that it is simply not feasible to establish representative emission limits or to conduct realistic representative emissions testing on many burn-off ovens.

Due to their function, these ovens should have minimal emissions. Typically, they are used to remove products from parts. These products would include paints, plastics, and polymer. Further, many of these ovens have limited use. Use of these ovens is dependent on production rate, product mix or changes, and other issues. Burn-off ovens are used as needed to clean parts and are thus operated only as needed. Many of these might operate once per day or less. Cycle times typically are in the range of 2-4 hours or so for the entire cycle. Thus trying to conduct emissions testing on these batch cycle ovens is problematic simply due to a lack of steady state operation.

EPA appears to believe most facilities will cease to use burn-off ovens if the proposed limits are promulgated, and instead use abrasive blasting. Many applications cannot have abrasive material or high pressure water contact with the highly machined components being cleaned, so that abrasive or water blasting is not possible. Burn-off ovens are not only expedient and cost effective, but also the only recourse other than complete part replacement, which would be

prohibitively expensive. If such unachievable limits are imposed, it will lead to shutdown of some types of manufacturing in the U.S. that rely on these activities.

EPA should carefully consider the necessity of subjecting these trivial sources to costly CISWI standards. DuPont recommends that EPA leave the current exemption for rack, part, and drum reclamation units in place when promulgating the final rule.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 13

Comment: Multiple issues exist regarding EPA's treatment of burn-off ovens and EPA should reconsider regulation as solid waste incinerators for this subcategory.

EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards for burn-off ovens.

In the docket memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category", EPA states there are 36 existing burn-off ovens. Hence, the MACT floors are determined from a maximum of 5 sources. Eastman believes EPA has vastly underestimated the number of burn-off ovens at area and major sources in the U.S. Eastman alone has four such units. EPA should contact suppliers of these ovens to get a better estimate of the number of such units sold in the U.S. We suspect EPA is unaware of the actual number of these units because sources did not realize EPA was including burn-off ovens as solid waste incinerators. Burn-off Ovens are specifically exempted from the definition of solid waste incinerators in the current NSPS Subparts CCCC and DDDD. Also, many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. Therefore, respondents to EPA's surveys would likely have overlooked these units. Further, if EPA were unaware of these units, they would not have even sent CAA Section 114 surveys to facilities (including area sources) where these units exist. Therefore, Eastman believes EPA must conduct a more thorough and targeted survey of these units before proposing emission standards.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 14

Comment: Eastman questions that burn-off ovens fit the category of solid waste incinerators and we believe EPA should create a source category under the CAA Section 112 program if it believes these units warrant regulation for emission of hazardous air pollutants.

First of all, the purpose of these units is to clean parts for reuse, not incinerate solid waste. Secondly, most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose materials such as plastic or polymer. These ovens are specifically designed to avoid flaming conditions which would damage the parts being cleaned. EPA should contact suppliers of these ovens to verify this information. Figure 7 is a document from the supplier of one of Eastman's burn-off ovens used to clean extruder screws [see submittal for figure provided by commenter.] To quote from that document: "Please note that the furnace is not an incinerator. It has no open flames; it has a controlled 800 degrees Fahrenheit interior oven temperature for removing surface coatings of cured paint at a controlled rate of smoke emissions from the parts. The patented water spray injection system positively controls the rate of decomposition by reading the secondary chamber temperature and controlling that temperature by water mist injection into the furnace."

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 14

Comment: Above we describe why EPA should not regulate burnoff ovens under § 129. Burnoff ovens present the additional complication that operating cycles do not allow valid D/F testing using Method 23 (40 CFR 60 Appendix A). Method 23 requires run times of not less than three hours per run, repeated over three runs. EPA and state/local testing policies, regulations, and procedures require owners and operators to conduct testing using consistent process loadings processed at the same rate over three test runs. Burnoff ovens operate in batch, where a load of parts is charged into the oven, cleaned, and

removed. Over the typical four-hour cycle, the event where the material is removed lasts less than one hour, where most of the rest of the cycle consists of heat-up and cool-down. An owner and operator cannot collect three hours of D/F sample in a one hour event. Because every burnoff oven batch is by definition different, and operators cannot assure constant (within 10%) loading rates from batch to batch, no operator can guarantee run to run consistency over three burnoff oven cycles. The ovens Arkema uses are not designed to allow users to extend the cycle time charge additional parts during the cleaning cycle. Extending the cycle time would not increase the length of time where the cleaning event occurs, but risks damaging the parts being cleaned and/or the oven due to excess thermal load. Therefore, demonstrating compliance with burnoff oven emissions limits, especially D/F limits, is problematic if not impossible. EPA should not promulgate emissions standards where the regulated community cannot reasonably demonstrate compliance using EPA test methods.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 15

Comment: Burn-off Ovens do not warrant regulation under CAA Section 129 or 112.

First of all, burn-off ovens are very small sources with rated capacities equal to or less than 1 mmBtu/hr and utilize natural gas or electricity as the heat source. Due to their function, these ovens should have minimal emissions. Typically, they are used to remove product from parts. These products would include paints, plastics, and polymer. These products are organic matrixes with only trace levels (if any at all) of any HAPs such as inorganic catalysts. The temperatures are not high enough to create dioxin/furan emissions. Further, many of these ovens have limited use. EPA should carefully consider the necessity of subjecting these trivial sources to costly MACT or CISWI standards. EPA is correct in its assumption that, when faced with the compliance costs (even if no air pollution control devices are needed), many of these ovens would simply shut-down and facilities would seek other alternatives. However, these alternatives are also costly and not necessarily better for the environment. Given the trivial emissions from these ovens, this outcome would be unfortunate and unjustified.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 15

Comment: EPA Should Not Force Burnoff Oven Operators Into the Title V

Program.

Clean Air Act § 129(e) requires owners and operators of CISWI regulated units to obtain or retain Title V operating permits. Most traditional CISWI units already operate under Title V permits, and CISWI incinerators and energy recovery units operating without Title V permits should likely obtain coverage. However, asking operators of burnoff ovens to enter the Title V program constitutes an undue burden on these often very small facilities.

EPA mischaracterized the universe of burnoff oven operators in the proposal and docket. Almost every plastics manufacturing, extrusion, and forming facility in the United States operates at least one burnoff oven. The vast majority of these facilities exclusively involve forming, extruding, or molding plastic parts. Potential emissions from plastics parts manufacturers are, by the nature of their operations, far below Title V permitting thresholds. Many more of these

facilities exclusively involve polymerization of plastic fibers, resins and/or emulsions. While some of these facilities operate with Title V permits today, many do not. Of the four Arkema plastics manufacturing facilities operating burnoff ovens today, only one operates under a Title V permit. One of the remaining three operates under a federally enforceable synthetic operating permit ("FESOP"), and the other two operate under state-only operating permits.

EPA has traditionally noted the burdens of unnecessarily imposing Title V permitting requirements on smaller sources. Requiring natural minor facilities to develop and submit Title V permits for a standard that EPA should not have imposed on those minor facilities imposes an undue cost and permitting burden on those facilities. EPA should evaluate and calculate the permitting cost burden that it would impose on burnoff oven facilities, and demonstrate if such a burden is appropriate to justify regulation on these units. The substantial Title V burden on facilities ill equipped to handle the responsibilities of major source permitting represents another absurd result where EPA should use it's Alabama Power authority to avoid absurd results.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 32

Comment: Pollution Control Products Co. Control Equipment Information and Efficiency

Controlled Pyrolysis Furnaces are designed to remove surface coatings of cured hydrocarbon materials such as paint, grease, varnish, etc. from metal parts with controlled heat. The metal parts are then taken from the furnace and either reused or rebuilt.

Please note that the furnace is not an incinerator. It has no open flames; it has a controlled 800 degrees Fahrenheit interior oven temperature for removing surface coatings of cured paint at a controlled rate of smoke emission from the parts. It then consumes the smoke in a secondary chamber with no visible emissions or odors.

The secondary chamber is an integral part of the furnace, built into the unit and wired so that the furnace cannot operate without it being in operation. Most EPA forms treat the secondary chamber as a separate unit (afterburner) which can be turned on and off at will and asks such questions as Inlet Pollutant Concentration or Overall Unit Efficiency. The overall efficiency has been measured indirectly by placing known weights of cured hydrocarbon coatings (paint, varnish, etc.) into the furnace and then measuring the emissions leaving the secondary chamber and the time needed to decompose the load. The summary of test data shown an average particulate emission of 0.0119 grains/DSCF corrected to 12% CO_2.

The patented water spray injection system positively controls the rate of decomposition by reading the secondary chamber temperature and controlling that temperature by water mist injection into the furnace. This spray will cool down the parts which slows down their rate of emission. Since less smoke emission going into the secondary chamber means less temperature rise when ignited in the chamber, the chamber temperature will fall below set point which will

turn the water spray off. Should the parts start to generate enough smoke to raise the chamber temperature to set point again, the water injection will again be activated. In this way, the emission rate of smoke to the chamber is controlled at 7 to 10 pounds/hour with the chamber temperature at 1500 degrees Fahrenheit.

A rough calculation on efficiency is obtained by saying the furnace will process 7 pounds of smoke per hours which is equivalent to 49,000 grains/hour. As the 100 SCFM passes thru the furnace this would mean 8.1/grains/SCF going into the secondary chamber. Coming out is 0.0119 grains/SCF: 0.0119/8.17 = 0.001456 = 0.15% loss which is less than 1%. 100% less 0.15% = 99.85% efficiency.

Referring to the "Air Pollutions Engineering Manual" by the U.S. Environmental Protection Agency, p.p. 175-176 and 181: it discusses direct flame afterburner efficiency and on page 181, shows direct flame afterburner efficiency as a function of temperature. These references indicate CO elimination at temperatures around 1300 degrees Fahrenheit and higher. The furnace secondary chamber maintains 1450 to 1500 degrees Fahrenheit at all times, which would indicate a 99 + % efficiency. These high temperatures above 1300 degrees Fahrenheit and associated high efficiencies imply very low CO emissions. Therefore, because of the low stack flow rates, high efficiencies, and high temperatures (1450 degrees to 1500 degrees Fahrenheit) of the units, emission rates are negligible.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 1

Comment: The Reusable Industrial Packaging Association (RIPA) is the North American trade association for companies that recondition and manufacture reusable industrial packagings, such as steel drums. RIPA's member companies collect, clean and restore used industrial packagings and return them to service as shipping containers. The reconditioning of used steel drums includes the cleaning and removal of paints, coatings and other adherents, followed by reshaping, reforming and certification through testing. RIPA's membership covers the vast majority of reconditioning in the U.S. and is comprised of approximately 85 U.S reconditioning companies operating in 100 locations. RIPA members operate 32 of the estimated 36 drum reclamation furnaces in the United States.

Steel drum reconditioners operate under strict environmental, health and safety regulations at the federal, state and local levels. Reconditioning provides a safe,

professionally-managed outlet for millions of emptied but not clean containers that otherwise would be disposed in landfills or scrapped. Additionally, reuse of steel drums significantly reduces solid wastes, energy consumption and greenhouse gas emissions that otherwise would occur in manufacturing new steel drums.

Nearly all "removable-head" steel drums (approximately 16.5 million/year) are reconditioned by passing through a "drum reclamation furnace". Under U.S. DOT's Hazardous Materials Regulations, a condition of packaging reuse for hazmat service is that reconditioning includes: "Cleaning to base material of construction, with all former contents, internal and external corrosion, and any external coatings and labels removed." 49 CFR 173.28(c)(1)(i). Pyrolizing in a drum reclamation furnace, followed by shot blasting, achieves the DOT standard. No alternative mechanical process exists for cleaning these drums.

Drum reclamation furnaces have been named explicitly by EPA as operations subject to the agency's proposed New Source Performance Standards and Emission Guidelines for Commercial and Industrial Solid Waste Incinerators published June 4, 2010 ("CISWI"). However, we note that under the prior CISWI rule issued in 2000, this subcategory was exempted from regulation as a solid waste incineration unit.

Section 129 of the federal Clean Air Act (CAA), 42 U.S.C. § 7429, requires EPA to establish emission standards for various types of "solid waste incineration units." One type of unit EPA is authorized to regulate under CAA § 129 are those that incinerate "commercial or industrial waste." EPA has long referred to these types of units as "CISWI" units.

In its first final rule establishing CISWI standards (65 Fed. Reg. 75338, December 1, 2000), EPA explained the process it had undertaken to decide whether and to what extent various types of combustion units might be categorized and regulated under CAA § 129. As EPA explained, it created the "Industrial Combustion Coordinated Rulemaking" (ICCR) advisory committee under the Federal Advisory Committee Act in 1996. Id. at 75339. One work group of the ICCR, the Incinerator Work Group, developed various

recommendations for categories and sub-categories of CISWI units for potential regulation. Id.

That Work Group produced a "Regulatory Options Paper" dated November 1998. This paper is posted on EPA's Website at http://www.epa.gov/ttn/atw/129/ciwi/rop.pdf, and is attached [see submittal for attachment provided by commenter.] As discussed in more detail below, the Regulatory Options Paper recognized and explained certain fundamental distinctions between and among drum reclamation units, as contrasted with parts and rack reclamation units. EPA adopted the distinctions recognized in that paper in its initial December 2000 CISWI regulations, and those distinctions continue to be reflected in the CISWI regulations as of today.

These fundamental distinctions that EPA has long recognized form the crux of the basis for RIPA's comments on the current CISWI proposal. For EPA has with absolutely no explanation – and with absolutely no supporting data – proposed to classify drum reclamation units along with part and rack reclamation units in a single category called "Burn-off Ovens" for purposes of establishing new and existing source CISWI standards under CAA § 129.

We will show that EPA's proposal, as it would affect drum reclamation units, would violate fundamental precepts of the CAA and the federal Administrative Procedure Act (APA) and could not withstand judicial review. We accordingly urge EPA to delete any reference to drum reclamation units in any final rule promulgated as a follow-up to the instant proposal. Assuming EPA has authority to regulate drum reclamation units under CAA § 129 (which we reserve the right to contest), we urge EPA to defer any such regulation unless and until EPA develops a record based on adequate data from drum reclamation units to support such a regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mark Denzler
Commenter Affiliation: Illinois Manufacturer's Association (IMA)
Document Control Number: EPA-HQ-OAR-2003-0119-2381.1
Comment Excerpt Number: 1

Comment: Burn-Off Oven Category Should Be Eliminated or Re-Evaluated

EPA is proposing to classify burn-off ovens as being incinerators and therefore subject to the rule. We believe that EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards for bum-off ovens. The docket for this rulemaking contains a memorandum titled, "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category" which states that there are 36 existing burn-off ovens in the U.S. subject to the rule. This means that the MACT floor is determined from a maximum of 5 sources, which may have been insufficient to represent the variety of bum-off units and materials involved. The IMA believes that there are a number of burn-off ovens at area and major sources in Illinois that may not have been considered by EPA in its analysis. We believe facilities did not realize EPA was classifying burn-off ovens as solid waste incinerators and may have overlooked these units when responding to EPA's surveys, if EPA sent the facility a survey in the first place. This likely miscommunication on the part of both the facility and EPA may have happened because burn-off ovens are specifically exempted from

the definition of solid waste incinerators in the current New Source Performance Standards (NSPS) Subparts CCCC and DDDD and because many of these units do not actually incinerate or

combust the materials adhered to the parts being cleaned. Instead these units melt or use pyrolysis to decompose the materials. For these reasons, we submit that EPA's does not have an adequate basis to support its conclusion that, "Although the composition of the materials

combusted is highly variable and is a key factor in the profile of emissions, we determined it was not appropriate to further subcategorize incinerators because the sources in this category are sufficiently similar such that the incinerators can achieve the same level of performance for the

nine regulated pollutants." The IMA believes that EPA must conduct a more thorough and targeted survey of these units before proposing emission standards.

The IMA also questions EPA's contention that burn-off ovens fit the category of solid waste

incinerators. We believe EPA should create a source category under the CAA Section 112 program if it believes these units warrant regulation for emission of hazardous air pollutants. These units are designed and used to clean parts for reuse, not incinerate solid waste. Furthermore, most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose materials such as plastic or polymer. These ovens are specifically designed to avoid temperatures and conditions would damage the parts being cleaned. An investigation into these ovens would reveal that many

of these have no open flames and limit the temperature to 800 degrees Fahrenheit to remove surface coatings at a controlled rate.

EPA's states in its proposal that it believes most facilities will cease to use burn-off ovens if the proposed limits are promulgated, and will instead use abrasive blasting. This reflects EPA's lack of information regarding these processes. Many applications cannot have material contact with the components being cleaned, which would preclude abrasive blasting. For many companies, burn-off ovens are not only efficient and cost effective, they represent the only solution other than complete part replacement, which is prohibitively expensive. If the proposed stringent limits are imposed by EPA, it will lead either to a shutdown of those manufacturing functions in Illinois and

the U.S. that rely on these activities or it will cause a dramatic increase in costs without a commensurate environmental benefit.

We also believe that it is incorrect for EPA to regulate burn-off ovens under Clean Air Act Section 129 or 112. Burn-off ovens are very small emission sources with rated capacities equal to or less than 1 mmBtu/hr and most use natural gas or electricity as the heat source, have limited use, and typically have low emissions. EPA has stated in its proposed rule that, when faced with the compliance costs (even if no air pollution control devices are needed), many of these ovens would simply shutdown and facilities would seek other alternatives. Given the costs of compliance and the relatively small emission benefit, this outcome is not justified and should be reconsidered.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Ralph Simmons
Commenter Affiliation: Motor Technology and Servo, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2121
Comment Excerpt Number: 1

Comment: Please be advised of my company's objections to the new proposed EPA regulations concerning the use of Burn Out Ovens in the motor repair industry. We are new company and have purchased a burn out oven to remove the old varnish from the windings of a faulty motor prior to rewinding. We have not installed our oven yet, and are in the process of obtaining a permit. The new proposed

regulation would effectively eliminate the expansion of our company by making it economically impossible to have such an oven.

There are very few ways to remove the old defective winding from an electric motor. 30-40 years ago - the chemical method was

banned by the govt (old tri-chloro cold strip tanks). This method was replaced by the burn out oven which heats the windings to approx 700 deg F which breaks down the varnish and turns it to ashes. The copper windings can then be easily removed. If this method is banned, the industry will have not other method to remove the old windings and thousands of electric motors critical to industry all over this country will be useless. Many of these motors cannot be replaced thus

causing thousands of machines vital to the national economy to remain idle. The cost to permit these ovens would effectively eliminate thousands of motor repair shops, and create even more unemployment.

These ovens are rarely used more than a few times a week and cannot add significantly to poor air quality.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Edward E. Quick
Commenter Affiliation: Celanese International Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2189.1
Comment Excerpt Number: 1

Comment: Celanese operates burn-off ovens at a number of our facilities, particularly those facilities that produce polymers. Many of the polymeric materials we produce are produced in batches and extruded through metal dies. After each batch operation, the extrusion dies are removed, and residual polymeric material is cleaned in a burn-off oven located on-site. Clean dies are essential for each batch of polymer. The ability to provide a clean die for each extrusion process is an unalterable requirement for operation. Due to the design and cost of the extrusion dies, they must be re-used, and a disposable die application is not commercially available or cost effective. Therefore, a practicable and convenient means of cleaning is necessary to maintain cost effective operation of our facilities.

Extrusion dies containing polymeric residue are part of the manufacturing process unit (MPU), quite costly, have intrinsic value, and must be cleaned prior to reuse. Dies with residual polymer that go through a die cleaning process are not discarded and are therefore not solid waste. The residual material on the dies is not considered a waste until it is removed from the dies after the cleaning process. The cleaning process used in burn-off ovens is oxygen-deficient pyrolysis, not burning or combustion. Therefore, Celanese recommends that pyrolysis ovens used for polymer operations not be regulated under CISWI.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: David Darling
Commenter Affiliation: American Coatings Association (ACA)
Document Control Number: EPA-HQ-OAR-2003-0119-2119.1
Comment Excerpt Number: 1

Comment: Surface coating operations utilize part hooks in which products are hung during the coating process. Coatings build-up on these hooks and the hooks eventually need to be cleaned. This is critical in the case of powder coatings, since the conductivity of the hooks needs to be maintained for effective electrostatic coatings application. ACA suggests that EPA needs to

evaluate the life cycle impacts (water, solid waste, energy and secondary air impacts) of not using bum-off ovens for cleaning these hooks since if these ovens were not used, these hooks might be discarded; cleaned with solvents; or cleaned via sandblasting. Emissions that result from the use of burn-off ovens are negligible as compared to these options.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert E. Burton
Commenter Affiliation: Bare Metal, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2403
Comment Excerpt Number: 1

Comment: Bare Metal, Inc. is a small independent business which opened in early 1982 in New Albany, Indiana. We pride ourselves in doing our work efficiently and safely to meet the needs of our customers. In doing this, we have always worked closely with the Indiana Department of Environmental Management (IDEM) in order to do our work in compliance with existing environmental regulations. We are a paint removal service company. We have many large industrial customers for whom we perform this service.

In our early stages we relied heavily upon chemical stripping to remove paint from many metal surfaces. Our main customers have been manufacturers who produce metal painted items and paint companies who perform the painting for manufacturers. As we grew it became obvious that the by-product of hazardous waste created by chemical stripping was going to be a terrible drag on our company and a detriment to the environment. After a little time we transitioned to mechanical means such as various forms of media blasting and pyloric methods utilizing bake-off ovens.

These later two methods comprise our abilities to strip paint today. We have seen nor heard of any cleaner and efficient processes to accomplish this much needed task. There are many forms of abrasives that we use on various substrate metals. However in some instances, media blast alone will not suffice to perform the work in a timely manner. In many cases we use bake-off ovens to break clown the excess paint on hangers, hooks, or tooling in order to speed the blast process. Once the paint is transformed into the ashen state, it can easily be removed with blast media or high pressure water. Our processes have been monitored and approved by IDEM. These processes eliminate the creation of hazardous chemical laden paint sludge that must be processed and disposed of using incineration.

Our ovens are not incinerators. They do not burn the paint but in essence bake it to the point that all the volatiles are removed and what remains is ash. The after-burners on the ovens run at 1400 to 1500 degrees and destroy these volatile pollutants before entering the atmosphere. The stack exhausts are clean and free of solids and pollutants. Our process ovens are best described as a form of controlled

clean and free of solids and pollutants. Our process ovens are best described as a form of controlled pyrolysis. They are a form of endothermic reaction rather than exothermic. Heat is supplied to the parts in a limited oxygen deprived chamber in order for pyrolysis to occur. Incineration of these items would create heat in itself.

Over 90%-99% of what we process in our ovens is placed back into production and thus is not producing a waste by-product. Not being able to reuse their racks, hangers, or tooling for painting of manufactured metal products would place an insurmountable burden on industry as a whole. Our waste is less than 1% of the weight of the items that we clean in our ovens. It is isolated and disposed of according to current environmental standards for solid waste.

This new proposal, if instigated, will certainly have a detrimental effect on companies that manufacture heat-cleaning ovens. If any of these companies totally rely on heat-cleaning ovens for their product sales, it will surely totally destroy their business. About 50% of our company's total sales relies on work that transverses through our ovens. Not being allowed to use them would definitely be a burden for our business. Hopefully through concentrating on our other processes and work we could continue to be in business. The effect on our work force would be a 50% reduction in our employee number.

This brings me to the most dramatic and detrimental effect of this ruling. The companies that we do work for rely on our cleaning of their tooling, hangers, and racks in order to produce their particular products. Ford Motor Company, General Motors, Chrysler Motors, and General Electric, are among the customers that we have served over the years. Many dozens of smaller manufacturers are among our regular customers. The effect of not cleaning their tooling, hangers, and hooks would shut these companies down and in reality eliminate workers and jobs numbering in the thousands. Our economy, already struggling, would be devastatingly impacted.

I implore EPA to reconsider implementing this proposal. The economic effects on our country would be beyond any effects that have been considered. The environmental gain of implementing this would be minimal.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Richard G. Stoll, Foley & Lardner, LLP
Commenter Affiliation: Foley & Lardner, LLP
Document Control Number: EPA-HQ-OAR-2003-0119-2353.1
Comment Excerpt Number: 1

Comment: I think it is important to call your attention to the proposal's serious and fundamental legal defects as applied to drum reclamation units. In short, the proposal improperly places drum reclamation units in a sub-category called "burn-off ovens." EPA's proposed rule never offers a rationale for doing this, and EPA neither collected nor used data from drum reclamation units in developing its proposed rule.

EPA's 1998 "Regulatory Options Paper" for CISWI rule development properly placed drum reclamation units in a separate sub-category from burn-off ovens (also called "part" and "rack" reclamation units);

EPA never explains why it has now proposed to place drum reclamation units in the burn-off oven sub-category;

Each reference or description EPA offers in the proposed rule preamble about burn-off ovens accurately describes part and rack reclamation units, but not drum reclamation units;

Based upon EPA's own criteria for sub-categorization (continuous vs. batch, size, emissions, etc.) the differences between drum reclamation units and burn-off ovens are obvious and stark.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Richard G. Stoll, Foley & Lardner, LLP
Commenter Affiliation: Foley & Lardner, LLP
Document Control Number: EPA-HQ-OAR-2003-0119-2353.1
Comment Excerpt Number: 2

Comment: Northeast Maryland Waste Disposal Authority v. EPA, 358 F.3d 936 (D.C. Cir. 2004), the D.C. Circuit was "stunned" to find that EPA had offered "not one word" to explain the manner in which it had sub-categorized certain types of sources in CAA § 129 regulations.

I respectfully suggest that the D.C. Circuit would be equally stunned if EPA included drum reclamation units in its upcoming final CISWI rule. As stated in the attached comments, should EPA choose to regulate drum reclamation units under CAA § 129, the only responsible and legally supportable course would be for EPA to develop a new proposed rule for drum reclamation units based upon data from drum reclamation units.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: David Darling
Commenter Affiliation: American Coatings Association (ACA)
Document Control Number: EPA-HQ-OAR-2003-0119-2119.1
Comment Excerpt Number: 3

Comment: ACA is concerned that the proposed standards are very burdensome given the fact that these are very small units, too small such that traditional testing and control is not technically feasible or very expensive given their size. EPA recognized this fact is its own analysis as it related the following in the preamble of the proposed rule (page 31951):

"Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices."

ACA recommends given the importance, size and negligible emissions that result from these ovens, EPA not finalize the proposed standards for these ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 3

Comment: EPA's Record Shows Drum Reclamation Furnaces are Fundamentally Different

Perhaps EPA may have recently concluded that drum reclamation units are sufficiently similar to part and rack reclamation units to justify including them in the same subcategory, even though drum reclamation units were established in a different subcategory in its 1998 Regulatory Options Paper. EPA never states that it has reached this conclusion, but such an assumption could be implicit in EPA's proposed rule.

If this is EPA's assumption, it is wholly illogical and unfounded as we will show throughout these comments. EPA's June 2010 proposed rule preamble is a good place to start. For example, when EPA summarizes the five types of CISWI subcategories that will be regulated under the current proposal, EPA describes "burn-off ovens" as follows:

Burn-off ovens that are used to clean residual solid waste

materials off of various metal parts which are then reused.

75 Fed. Reg. at 31944, emphasis added.

Then EPA includes another summary of the types of units it is proposing to regulate:

Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch-operated, combustion units that are used to clean residual

materials off of various metal parts, which are then reused.

75 Fed. Reg. at 31951, emphasis added.

We will soon turn to other elements of this latter preamble excerpt, but for now we focus on the fact that EPA says in both preamble passages that burn-off ovens are used to clean residual materials off of metal parts. As shown in the descriptions contained in EPA's regulatory definitions and in EPA's Regulatory Options Paper, part and rack reclamation units clean material off of "parts." A drum, however, is not a "part." Drum reclamation units simply do not clean materials off metal parts, and EPA's descriptions of its new sub-category simply are inapplicable to drum reclamation units.

In one other preamble passage, EPA attempts to link the term burn-off oven to drums:

In this proposed rule, CISWI units include incinerators designed to discard waste materials; energy recovery units (e.g., units that would be boilers if they did not burn solid waste) designed for heat recovery that combust solid waste materials; kilns and other industrial units that combust solid waste materials in the manufacture of a product; and burn-off ovens that combust residual materials off racks, parts, drums or hooks so that those items can be re-used in various production processes. 75 Fed. Reg. at 31941, emphasis added.

Here again, EPA's statements display a fundamental misunderstanding of the distinctions between drum reclamation units and part/rack reclamation units. They also reflect a failure to distinguish between the functions of a "part" and a "drum."

The italicized passage quoted above states that the items reclaimed from these processes are "re-used in various production processes." Items reclaimed in part and rack units, like electric motor armatures, transformer winding cores, and racks for spray painting operations, most certainly are re-used in "production processes." Reclaimed drums, by contrast, are used as containers for the movement and storage of products and other materials. Just as drums simply are not "parts," they simply are not "re-used in production processes."

It is particularly telling to compare the descriptions of drum reclamation units vis-à-vis part and rack reclamation units in EPA's Regulatory Options Paper. In the portion of the paper comparing and contrasting the various types of combustion devices, EPA's paper says the following of parts and rack units: "They are often called burnoff ovens or pyrolysis units rather than termed 'incinerators.'" The parallel description for the drum reclamation category says nothing about "burnoff ovens." It states, rather, that such a unit is a "semi-continuous tunnel furnace."

In sum, EPA has recognized since at least 1998 that part and rack reclamation units (as contrasted from drum reclamation units) may be classified as burn-off ovens and that drum reclamation units should be placed in a separate sub-category from parts and rack units for regulatory purposes. Yet, while EPA's June 2010 preamble descriptions of the proposed new burn-off oven category accurately describe part and rack reclamation units, they mischaracterize drum reclamation units. Thus, not only has EPA provided no rationale for including drum reclamation units in the same sub-category as part and rack units, all available signs point to fundamental misunderstandings on EPA's part at the present time in regard to the relevant characteristics of drum reclamation units.

Drum Reclamation Units Are Fundamentally Different in Key Respects

If EPA were to re-examine the sub-categorization issue respecting drum reclamation units, we show now that EPA could not properly include such units in the same subcategory with part and rack reclamation units. Under CAA § 129(a)(2), standards for new sources must be "achievable" and based on a level of control determined in reference to the best controlled "similar" unit. When one type of unit (such as a part or rack reclamation unit) is smaller and different in many respects so as naturally to produce lower emissions than another type of unit (such as a drum reclamation unit), such types of units cannot be deemed "similar." The levels of emissions achieved by the best-controlled unit in the former category could easily not be "achievable" by units in the latter category.

In its final policy statement on source category listings in 1992, EPA explained the relevant factors for determining how various types of combustion units should be properly categorized and subcategorized:

In response to the many comments concerning appropriate disaggregation of source categories, the Agency acknowledges potential advantages and disadvantages of defining categories either very broadly or very narrowly. Ultimately, in accordance with section 112(d), the Agency will need to identify the "best controlled similar sources" when establishing emission standards for new sources in a category and "the best performing 12 percent"

of sources when establishing emission standards for existing sources in a category. Hence, the Agency recognizes that further disaggregation of many listed categories of sources may be necessary prior to promulgation of emission standards. The Agency has the discretion to distinguish among classes, types, and sizes of sources within a category in establishing standards.

In general, the Agency has decided, at this time, in most cases, to list broad categories of major and area sources rather than very narrowly defined categories. The main reason for this decision is that, even considering the many comments received, the Agency has too little information to anticipate specific groupings of similar sources that are appropriate for defining MACT floors for the purpose of establishing standards. Criteria that may need to be considered in defining categories of similar sources include similarities in: Process operations (including differences between batch and continuous operations), emissions characteristics, control device applicability and costs, safety, and opportunities for pollution prevention. The Agency anticipates that all of the above criteria, and perhaps others, can be accounted for appropriately by the Agency only after gathering significant information for each listed category of sources during the course of establishing emission standards.

57 Fed. Reg. 31576, July 16, 1992.

We note that this policy was issued under CAA § 112, but it applies equally to CAA § 129 categorization and sub-categorization. Exactly the same statutory language is employed in both sections that EPA must follow in establishing standards for new and existing sources.

We will now show how and why drum reclamation units cannot be deemed "similar" to part and rack reclamation units for purposes of CAA sub-categorization. We note at the outset that the first two criteria EPA mentioned in its final categorization policy above – differences between batch and continuous operations and emission characteristics –

establish an excellent starting point for analysis.

We also note that EPA has violated its long-standing policy expressed above requiring that sub-categorization decisions be made "only after gathering significant information for each listed category of sources." Perhaps EPA's erroneous assumption that drum reclamation units can be blindly lumped with part and rack units drove its decision in the proposed rulemaking to collect absolutely no emissions data from drum reclamation units.

EPA describes burn-off ovens in the preamble, page 31951, in this manner:

Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of the

stacks that serve these units precludes the use of some EPA test methods for measuring emissions

In contrast, drum reclamation furnaces are continuously operated combustion units that are typically in excess of 10 MMBtu/hr. and 1000 cubic feet capacity. Operating temperatures range from 1200o – 1500o F. Parts reclamation units are significantly smaller in dimension (some less than 30 cubic feet), are typically batch operated (as EPA states above), often operate fewer days per week, and operate at significantly lower temperatures, i.e., 700o – 900o F. We note that the

continuous vs. batch contrast is the first factor EPA lists in its final criteria for sub-categorizing as quoted above.

The significant differences in design and operations create different mechanisms of pollutant formation, leading in turn to significant differences in baseline emissions levels.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 4

Comment: In Tables 4 through 6 of the preamble, the number of sources in the subcategory "burn-off ovens" is listed as 36. Based on the subcategory description, this number of sources is intended to include both parts reclamation units and drum reclamation furnaces. This number grossly underestimates the actual population of affected sources in the U.S.

As shown in [see submittal for attachment on regulatory options for industrial commercial waste incineration, November 1998,] the number of drum reclamation furnaces in 1998 was estimated as 44. Currently, RIPA estimates there to be 36 drum reclamation furnaces in operation.

The ROP provided in [see submittal for attachment on regulatory options for industrial commercial waste incineration, November 1998,] estimated in 1998 that there were 332 parts reclamation units in operation in 1998. However, based on information obtained from other industry associations, RIPA understands that the current number of parts reclamation units may be in excess of 15,000 [Footnote: Sources: EASA - Electrical Apparatus Service Association; PPC – Pollution Product Control Co.]

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 4

Comment: Burn-off ovens should not be regulated

Burn-off ovens (part and drum reclamation units) were previously exempt from the CISWI rule (75 FR 31948), and should remain exempt. As stated by EPA in the preamble (75 FR 31951):

"These units typically are very small (<1 MMBtu/hr), batch operated, combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in

some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices."

Exempting units that EPA admits combust small amounts of waste, with stack configurations that preclude installing controls and measuring emissions makes sense, and is consistent with other rulemaking.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Edward E. Quick
Commenter Affiliation: Celanese International Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2189.1
Comment Excerpt Number: 5

Comment: Pyrolysis ovens referred to as burn-off ovens used for polymer operations are sources that should not be regulated under CISWI

Celanese burn-off ovens do not incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis (in an oxygen-deficient atmosphere) to

decompose the materials. Therefore, Celanese believes that burn-off ovens would be inappropriately regulated under CISWI as proposed, where applicability is defined as:

Commercial and industrial solid waste incineration (CISWI) unit means any distinct operating unit of any commercial or industrial facility that combusts any solid waste as that term is defined in 40 CFR Part 241.

Moreover, combustion, as defined in Webster's Revised Unabridged Dictionary

The state of burning.

(Chem.) The combination of a combustible with a supporter of combustion, producing heat, and sometimes both light and heat.

Combustion results in common cases from the mutual chemical action and reaction of the combustible and the oxygen of the atmosphere, whereby a new compound is formed.

Supporter of combustion (Chem.), a gas, as oxygen, the combination of which with a combustible, as coal, constitutes combustion.

By design, Celanese burn-off ovens operate in an oxygen-deficient atmosphere to decompose the polymeric material. Combustion or generation of flame during this process is undesirable, as such these processes will cause damage to the parts being cleaned and the oven itself. Therefore, these ovens are equipped with flame suppression devices to prevent combustion. Clearly, the processes occurring in these burn-off ovens is pyrolysis, or the decomposition of a material or compound due to heat in the absence of oxygen or any other reagents , not combustion.

Dies with residual polymer are parts of the manufacturing process unit (MPU) that go

through a die cleaning process and not discarded are not solid waste. Rather, waste water and residues generated from the die cleaning process at the point when pyrolized material is removed from the pyrolysis oven are solid waste.

The manufacturing Process Unit exemption in 40 CFR 261.4(c) states:

Hazardous waste, which are exempted from certain regulations. A hazardous waste which is generated in a product or material storage tank, a product or raw material transport

vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or

an associated non-waste-treatment-manufacturing unit, is not subject to regulation under parts 262 through 265, 268, 270, 271, and 124 of the chapter or to the notification requirements of section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

EPA has clarified the above MPU exemption with guidance and case law.

First: Betty Weise, Program supervisor, RCRA Compliance Section Ten has stated, the point of generation is when the sludge is removed from the bundle. Note: Bundles are considered to be part of the MPU. See Faxback 11903.

Second: EPA Document 530-SW-88-0009-C states bundles may be washed, brushed, or sandblasted while the tubes inside can be wiped brushed, or rodded out. The sludge resulting from this cleaning operation forms the listed waste. Again bundles are considered part of the MPU and the waste is generated after cleaning.

Third: In 1995 the Director Office of Solid Waste EPA Washington D.C. states that it was

not the agency's intent to regulate wastes in these units unless the waste exits the unit or

remains in the unit for more than 90 days (See faxback 11903)Note that the units in question are heat exchangers. Also see 60 Fed. Reg 57747 (Nov. 20, 1995). In the preamble, the EPA states: Many of the waste proposed for listing in today's rule are normally generated on removal from the process unit during maintenance periods. These wastes may also become subject to hazardous waste regulation during periods of process shut down. If the proposed listings are finalized, waste associated with idle units would become subject to RCRA regulation 90 days after the process ceases operation....it was not the Agency's intent to regulate waste in these units unless the waste exits the unit or remains in the unit for more than 90 days after the unit is no longer in operation.

Fourth: EPA Region Six, Omstede Machine Works, Inc. docket no RCRA-VI-437-H (1985), stated that K050 was generated as a hazardous waste when heat exchanger bundles were cleaned. Note: Omstede cleaned bundles offsite at its LaPorte Texas facility. Case in point exchangers' bundles are part of a MPU, the cleaning process generates the waste and bundles / exchangers were cleaned offsite.

Fifth: EPA's guidance on the listed K050 waste: Heat exchanger bundle cleaning sludge

from the petroleum refining industry, is defined by the EPA in the 52 Fed. Reg. 11742 (April 8, 1988) as follows: Heat exchanger bundles (tubes) from petroleum refining

operations are periodically cleaned to remove deposits of scale and sludge. The Solids resulting from this cleaning operation are listed as K050. It is clear from the preamble that the EPA considers "heat exchanger bundle cleaning sludge" to be generated as a result of the cleaning process. Accordingly, the residual material in the heat exchanger would not be considered a listed or characteristic hazardous waste subject to regulation under RCRA. Therefore, the heat exchanger would not be considered a hazardous waste management unit that would need to be manifested under RCRA. Again all Hazardous waste generated from process equipment is generated after cleaning.

Extrusion dies containing polymeric residue are part of the MPU, quite costly, have intrinsic value, and must be cleaned prior to reuse. Dies with residual polymer that go through a die cleaning process are not discarded and are therefore not solid waste. The residual material on the dies is not considered a waste until it is removed from the dies after the cleaning process. The cleaning process used in burn-off ovens is oxygen-deficient pyrolysis, not burning or combustion. Therefore, Celanese recommends that pyrolysis ovens used for polymer operations not be regulated under CISWI.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 7

Comment: These small Parts Cleaners (and especially those using fluidized bed technology) should be exempted from coverage, if they are so small their potential for harmful pollutants is not significant.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: K. Michael Conaway
Commenter Affiliation: Congress of the United States, House of Representatives
Document Control Number: EPA-HQ-OAR-2003-0119-2116.1
Comment Excerpt Number: 1

Comment: In a letter to me, Mr. Peek, the President of Industrial Electric Co., identified several costs of the proposed rule as he has read and understood it. His letter paints a dismal picture of some of the unintended consequences of this action will have for the electric motor repair industry and how that will ripple into the wider economy. [See DCN:EPA-HQ-OAR-2003-0119-2116.2 for letter provided by Buster Peek stating opposition of the rule as it pertains to burn off ovens.]

In these difficult economic times, it is more imperative than ever that we balance our stewardship of the environment with our need for economic growth. All government agencies must make certain that their rules do not have unintended consequences that will burden productive enterprises beyond what is reasonable.

Please make certain that this rule does not put him or his colleagues out of work. The recycling and remanufacturing work he and his industry do is an unnoticed, but vital cog in our economic engine. To saddle this industry with the same demands put on large-scale industrial incinerators seems beyond the intent of the proposed rule; any clarification you or your staff could offer in this matter would be helpful.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Late James R. Thornton
Commenter Affiliation: Northrop Grumman
Document Control Number: EPA-HQ-OAR-2003-0119-2245.1
Comment Excerpt Number: 1

Comment: Comment 1: NGSB requests that the proposed definition of "burn-off oven" be revised as follows (new wording shown underlined):

Burn-off oven means any rack reclamation unit, part reclamation unit, or drum reclamation unit which operates at a temperature of greater than 500 degrees F.

Explanation: The proposed CISWI regulation defines "burn-off oven" to mean any rack reclamation unit, part reclamation unit, or drum reclamation unit. Existing Subpart DDDD regulations do not define the term "burn-off oven"; however, existing Subpart DDDD regulation at 40 CFR 60.2875 defines the term "part

reclamation unit" to mean a unit "that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused", and similarly defines the terms "rack reclamation unit" and "drum reclamation unit" as units where burning occurs. The proposed CISWI regulation intentionally brings

burn-off ovens within the scope of "Commercial and Industrial Solid Waste Incineration Units" for the first time.

The term "burn" is not defined within existing Subpart DDDD or in the proposed CISWI regulation, but it is clear from EPA's discussion in the preamble to the

proposed CISWI regulation that "burn" is presumed or intended to mean incineration or combustion. Turning toward the English dictionary for a plain definition of "burn" in the absence of any other meaning indicated by EPA, the

term "burn" is defined to mean primarily "to undergo rapid combustion or consume fuel in such a way as to give off heat, gases, and, usually, light" and "to undergo combustion, either fast or slow". Therefore, NGSB believes that it is reasonable to conclude that, to qualify as a "burn-off oven" under the proposed CISWI regulation, any parts, rack or drum reclamation unit must, as a

prerequisite, operate at a temperature sufficient to cause "burning" of coatings or residues within the plain meaning of "burn". The proposed CISWI regulation

does not specify a temperature at or above which "burning" is defined or considered to take place and below which it is not. If actual burning does not take place in a device, emissions of air pollutants would not occur or would likely be negligible at most, and it would be reasonable to conclude that neither NGSB utilizes burn-off ovens to remove cured or dried paint from various metal

parts. One of NGSB's international suppliers of paints and coatings has

EPA nor Congress intended to regulate such devices as CISWI reclamation units. The determination that a device constitutes a "burn-off oven" by virtue of its being a parts reclamation unit, a rack reclamation unit or a drum reclamation unit must turn on the occurrence of burning.

NGSB utilizes burn-off ovens to remove cured or dried paint from various metal parts. One of NGSB's international suppliers of paints and coatings has indicated to NGSB that heating of epoxy (curing type) and alkyd (drying type) coatings to 200-250C (392-482F) will result in softening and blistering, and that heating to 400-450C (752-842F) will cause decomposition and charring. This information corroborates NGSB's direct experience that heating numerous types of paint coatings to the range of 400 to 500 degrees Fahrenheit will not cause burning of the coatings.

NGSB believes that Congress did not intend to regulate as "solid waste incinerators" ovens or other devices that do not reach a burning or combustion temperature, whether in practice or by oven design limitation. Such units are not capable of incinerating, combusting or burning materials at their low operating temperature. Section 129 of the CAA is clearly intended to apply to units where actual burning takes place. Indeed, in Section II.A of the Preamble to the proposed CISWI regulation EPA states (75 FR 31844)

Section 129(a)(1)(A) of the CAA requires EPA to establish performance standards, including emission limitations, for "solid waste incineration units" generally and, in particular, for "solid waste incineration units combusting commercial or industrial waste" (CAA Section 129(a)(1)(D)). Section 129 of the CAA defines "solid waste incineration unit" as "a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public" (Section 129(g)(1)).

The revision of the definition of "burn-off oven" as proposed above would clarify EPA's intent to regulate burn-off ovens where actual burning takes place and where HAP emissions are potentially generated, and would ensure that EPA's

regulation of burn-off ovens is within the scope of authority granted it by Congress under Section 129 of the CAA.

Comment 2: In the alternative to granting the request made in Comment 1 above to specifically revise the definition of "burn-off oven", NGSB requests that EPA

clarify that units that are used for reclamation purposes, but which do not combust residual materials, do not meet the definition of "burn-off oven" because they do not "burn" coatings or residues.

Explanation: NGSB currently owns a Bayco Model BB 288 Burnout Oven (the "Bayco oven") which was originally purchased in 1979 to burn cured lacquer coatings from within electrical motor windings to facilitate motor armature rewinding.

The Bayco oven was originally designed to operate at a primary combustion chamber temperature of 700 degrees Fahrenheit, and a secondary combustion chamber temperature of 1400 degrees Fahrenheit. Each chamber is rated at a maximum burner heat input capacity of 0.97 million BTU/hour. NGSB permanently discontinued electrical motor rewinding work around the year 2002 and for the past eight years has not utilized its Bayco oven for burning purposes.

NGSB has since adapted its Bayco oven to operate at a lower temperature of

400 to 500 degrees F to merely soften or weaken cured paint coatings on various small metal parts as a first step before abrasive removal of the weakened coatings by manual sand blasting. The Bayco oven temperature is intentionally limited to the range of 400 to 500 degrees F to avoid burning the coatings (see the temperature range discussion under Comment 1 above) and warping or deforming the metal parts, which would permanently damage and/or

discolor the parts. Attempted abrasive removal of the coatings from these small metal parts without first weakening the coatings with moderate heat has been found to result in damage to the underlying metal parts and is thus not feasible or practical. After softening the coatings with moderate heat and then

removing the weakened coatings by abrasive blasting, the metal parts are recoated with new coating materials and are then returned to service.

As described above, combustion or burning of the coatings utilized in this operation does not take place at or below 500 degrees F, since the coatings are only weakened or softened at this temperature. No visible emissions are observed during operation of the Bayco oven under this mode of operation (as documented on visible emission observation logs). Hazardous air pollutant

(HAP) emissions from the Bayco oven are believed to be nonexistent or negligible at most, since no burning takes place. Therefore, NGSB believes that its Bayco Model BB 288 Burnout Oven, as well as any type of heated unit used for parts reclamation purposes, that does not combust residual materials, is not a "burn-off oven" as defined in the proposed CISWI regulation, because burning of the coatings does not occur at the limited operating temperatures.

Comment 3: Burn-off ovens that are used as an essential component of a "closed loop" painting process for the routine cleaning of hooks and racks used for hanging parts during painting, so that the hooks and racks may be reused in the same painting process and for the same purpose, and that do not accept waste materials from outside of the painting process ("captive units"), are not solid waste incinerators, because they are not processing solid waste, and should not be covered by regulation under CAA Section 129. We request the proposed regulation state that units within such processes do not fall within the scope of the regulation. In the alternative, we request an exemption from the proposed CISWI regulation should be provided for such captive units.

Explanation: NGSB conducts painting of metal parts in both manual and automated painting systems. The parts to be painted must be hung from a rack or conveyor by metal hooks of various shapes and sizes (called "J" hooks and "S" hooks). The hooks and racks necessarily accumulate paint during painting of the parts. After the paint has cured or dried, the parts are removed and the hooks and racks are reused for painting additional parts. The hooks and racks

are typically reused many times. Buildup of cured or dried paint eventually reaches an excessive level and the hooks and racks will no longer function properly (e.g., in electrostatic painting systems the hooks and racks no longer

conduct electricity properly, and in traditional painting systems the buildup on the hooks and racks prevents hanging parts properly). Disposal of the used hooks and racks in lieu of cleaning and reusing them is not practical or

economical; certain racks are custom designed, have a purchase price of around $50,000, and must be cleaned every few weeks, and several hundred "J" and "S" hooks would need to be discarded and replaced every few weeks, as well, at a cost of several thousand dollars every few weeks.

Therefore, paint-laden hooks and racks are placed in a manually operated, propane-fired, batch-type Steelman Model 4.56.54 BA-C Heat Cleaning Oven. This heat cleaning oven contains a primary chamber for heating the hooks and

racks and a secondary chamber for destruction of gas-phase combustion products. After loading a batch of used hooks and/or racks into the oven, the oven is sealed, the used hooks and racks are heated to a temperature sufficient to reduce the paint buildup to ash, the oven is cooled, the reclaimed hooks and racks are removed and returned to service, and the waste ash is removed. The

ash residue which results from this process is a nonhazardous solid waste which is properly managed for disposal. The NGSB Steelman Model 4.56.54 BA-C Heat Cleaning Oven appears to qualify as a burn-off oven under EPA's

proposed CISWI regulation, because it appears to meet the definition of a "parts reclamation unit".

This NGSB painting process and burn-off oven comprise a "closed loop" process; inputs to the process consist of paint and metal parts, and outputs

consist of painted parts and ash. The aforementioned steps comprise the entire parts painting process at NGSB; removal of any single step or component of this painting process would prevent the process from operating, and parts could not be painted beyond a very limited number or time period. The NGSB painting process can be depicted graphically [see submittal for figure of painting process provided by commenter.]

This painting process is operated as a "captive shop" within NGSB; at no time

does the NGSB burn-off oven burn solid waste, hazardous waste or other waste materials from outside of NGSB.

EPA has traditionally held that a manufacturing process comprises those

components or steps that are essential to the process and without which the process cannot function and produce the intended product, and that materials "circulating" within a manufacturing process are not themselves waste. Furthermore, in the preamble to its June 4, 2010, proposed rule, Identification of Non-Hazardous Secondary Materials That Are Solid Waste, EPA states (75 FR 31850)

the ordinary plain-English meaning of the term, "discard" controls when determining whether a material is a solid waste. See American Mining Congress v. EPA, 824 F.2d 1177 (DC Cir. 1987)

("AMC I"). The ordinary plain-English meaning of the term discarded means "disposed of," "thrown away," or "abandoned." The DC Circuit in AMC I specifically rejected a more expansive meaning for discard that would encompass any materials "no longer useful in their original capacity" even if they were not destined for disposal.

NGSB believes that the painted hooks and racks used in its "captive" or "closed loop" painting process are not discarded when reclaimed and reused, and thus are not solid waste and, therefore, that the burn-off oven utilized for reclaiming

such hooks and racks is not a solid waste incinerator subject to regulation under Section 129 of the CAA. Solid waste first "appears" when the ash residue is removed from the closed loop painting process by opening the burn-off oven and removing the ash residue from the process; it is only the ash residue that is intended to be discarded. We request the final rule state that such operations do not fall within the scope of the regulation, or that such units are exempt from the regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mass Comment Campaign sponsored by Northwest Electric, Inc.
Commenter Affiliation: Northwest Electric, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2452
Comment Excerpt Number: 1

Comment: We strongly oppose the subject proposed rule as pertains to burn-off ovens. We believe it will do immense and long-lasting harm to all industries in our country, in addition to eliminating thousands of jobs. We use a burn-off oven in providing electric motor repair and rewinding service and oppose the regulation because:

* We do not use our burn-off oven as an incinerator, so it should not be included in the same category as such; we use it in a vital reclaiming and recycling process. We operate our oven using a calibrated temperature control device with temperatures maintained at 700 degrees F or below. This allows us to heat a motor's varnished windings in a uniform, safe and controlled manner so they can be readily removed. For us, the term "burn-off" oven is a misnomer.

* We use our oven on a very limited basis each month (perhaps 18-20 hours, and often not that much). It is critical to providing environmentally responsible service. We are very concerned that there may be other firms that would resort to environmentally uncontrolled combined mechanical and heat methods or environmentally undesirable chemical methods of winding removal. This would reduce the efficiency of repaired motors and generators, conflicting with our company goals and those of the Department of Energy and Electrical Apparatus Service Association (EASA) – and the EPA (as exemplified by the Energy Star program) The safety aspects of such methods are also a serious concern.

* The proposed emissions standards were developed by analyzing stack test results from only 10 burn-off ovens, whereas oven manufacturers estimate there are 10,000 units or more in use in the U.S. The sample is far too small.

* Based on the numbers in the regulatory impact analysis prepared for EPA, we understand that the average cost of compliance would be more than $140,000 with annualized costs of more than $80,000. My company cannot afford this; in addition to layoffs (if not closing) here, we believe it would result in the loss of thousands of jobs in the U.S. related to electric motor repair and rewinding.

* The harmful economic impact (direct and indirect) of the proposed regulation would be enormous. The country could not function without electric motors, and companies like ours keep them operating. This regulation will disrupt and negatively impact virtually every industry we serve as well as utilities and major infrastructure; our military; and municipal, state and federal governments. We believe it will force even more manufacturing out of the country at a time when we can least afford it.

* Many times, and for practical reasons, there simply are no "spares" or replacements readily available for critical equipment. Common examples would be a large refrigeration compressor motor for a hospital or trauma center, or an essential forced draft fan motor for a power plant, or a pump motor for a wastewater treatment plant.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 1

Comment: CNH America LLC (CNH) manufacturers agricultural and construction equipment and operates 11 burnoff ovens to remove accumulated dried paint from paint system components such as hooks, grates and chains so that they can be reused. These ovens are located at facilities in the following states: Iowa, Kansas, Minnesota, Nebraska, North Dakota and Pennsylvania. Our ovens have the following characteristics:

* The oven where hooks, grates, chains are loaded is equipped with burners rated between 100,000 and 1,000,000 Btu/hr and is designed to pyrolyze the coating on the paint system components. The oven chamber operates at temperatures of approximately 900°F.

* Excess air, smoke and pyrolysis gases are drawn into the afterburner which is equipped with burners rated between 100,000 and 2,000,000 Btu/hr. The afterburner operates at temperatures of approximately 1400 - 1800°F.

* Charge rate of approximately 20 - 80 lbs/hr

* Burn natural gas

* Water sprays to regulate temperature

* Maximum interior dimensions of the oven: 10' X 10' X 11' in order to hold grates that range from 4' X 8' to 9.7' X 9.5'

In the 2000 rule, the US EPA exempted 15 different types of units including burnoff ovens. CNH did not comment on the 2000 rule because burnoff ovens were exempt. As a result of litigation, EPA has now removed some of these exemptions in the proposed rule. Burnoff ovens are no longer exempt and we believe the rationale for including burnoff ovens in the proposed rule was the result of two significant inaccuracies.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dennis Cones
Commenter Affiliation: Jackson Oven Supply, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1519.1
Comment Excerpt Number: 1

Comment: I don't believe burn-off ovens should be categorized with incinerators. A burn-off oven is a lot like the oven you have in your kitchen in the self-clean mode. You lock the door by pulling on the lever and then selecting the self-clean mode, the oven ramps up to a high temperature and when finished all that remains in the oven is a light ash residue. Same as a burn-off oven accept the burn-off oven has a water misting system that creates an oxygen-starved atmosphere for the slow baking of organic material. A burn-off oven is not an incinerator.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: K. Michael Conaway
Commenter Affiliation: Congress of the United States, House of Representatives
Document Control Number: EPA-HQ-OAR-2003-0119-2116.2
Comment Excerpt Number: 1

Comment: As a small business that performs electric motor and generator repair and rewinding as one of its core services, we strongly oppose the subject rule as it pertains to burn-off ovens. We believe it will do immense and long-lasting harm to all industries in our country, in addition to eliminating thousands of jobs in our industry alone, and for no real environmental gain. In fact, we believe the move would achieve just the opposite of EPA's goals.

For your reference, our company employs 14 people. The association to which we belong — Electrical Apparatus Service Association (EASA) — has more than 1,425 members in the U.S. with nearly 24,000 employees. More than 50% of EASA's members employ 10 people or less. These are all small, independent firms like us. We object to the proposed regulation for many reasons including those shown below:

EPA grossly underestimated the number of burn-off ovens in use at 36 while burn-off oven manufacturers estimate there are more than 15,000 units in use in the -U.S. We believe they did not realize there is a vital industry using this equipment in an environmentally friendly manner.

Further, therefore, the proposed standards were developed by analyzing test results from a sample that was far too small.

We use a burn-off oven in the motor rewinding process with a calibrated control device maintaining part temperatures at 700 degrees F or below. We use our oven on a limited basis (perhaps 15 hours per month and often not that much because we process in batches) to heat the motors' electrical windings in a uniform, safe and controlled manner so they can be readily removed for rewinding. The term "burn-off' oven is a misnomer; it should be called a "cleaning" oven which is used in this critical reclaiming and recycling process; it is not an incinerator as EPA would define it.

Our burn-off oven is critical to providing environmentally responsible motor rewind service. We arc very concerned that these regulations will force us out of business and prompt others to resort to winding removal methods that are environmentally uncontrolled (combined mechanical and heat) or environmentally undesirable (chemical). This would reduce the energy efficiency of repaired motors and generators, conflicting with our company's goals, our Association's goals and those of the Department of Energy and even the EPA (as exemplified by the Energy Star program). The safety aspects of such methods are also a serious concern.

Based on the numbers in the regulatory impact analysis prepared for EPA, we understand that the average cost of compliance would be more than $140,000 with annualized costs of more than $80,000. At this point we can't be sure of these figures as they came from EPA's contractors, but our understanding is that just the necessary annual stack tests alone would be $50,000 or more. Quite frankly, we could not survive these requirements, nor could most of our fellow electric motor service companies; it would result in the loss of thousands of jobs in the U.S. related to electric motor repair and rewinding.

The harmful indirect economic impact of the proposed regulation would be enormous. The country could not function without electric motors; they are everywhere, and we keep them operating. This regulation will disrupt and negatively impact every industry we serve as well as utilities and major infrastructure; our military; and municipal, state and federal governments. We believe it will force even more manufacturing out of the country at a time when we can least afford it.

In addition to repair, we sell new electric motors for several motor manufacturers, and we serve as a warranty center for their products. Our motor manufacturers know that many times, and for practical reasons, there simply are no "spares" or replacements readily available for critical equipment (and even if there were, depending on the situation, it often makes much more sense to repair than to replace). Common examples would be a large refrigeration compressor motor for a hospital or trauma center, or an essential forced draft fan motor for a power plant, or a pump motor for a wastewater treatment plant. Thus, the repair work that our members perform is critical not only to the operation of industry in general, but also to the functioning of our nation's infrastructure.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Matthew L. Swan
Commenter Affiliation: American Quality Stripping, Inc.

Document Control Number: EPA-HQ-OAR-2003-0119-2113
Comment Excerpt Number: 1

Comment: Number of Units in Operation:

Our plant operates three burn-off ovens at this location, I am aware of at least six operating on the West side of Cleveland as well as more than a dozen in operation in the Cincinnati Ohio area and two more in Gahanna Ohio. With twenty three burn-off ovens operating within a three hour radius of my location for the data presented in the proposed CISWI rule to be accurate this would mean that central Ohio would have to be the numerical center of this type of industry, something I find exceedingly unlikely. Additionally being familiar with several of the 36 units tested many of these are older units outside of their designed lifespan using older technology no

longer used in the industry. This combined with the small survey sample of such a large burn-off oven population implies a large degree of error within the presented statistics. I urge you to consider this information when reviewing the validity of the data used to formulate the proposed rule.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Danny Bell
Commenter Affiliation: Steelman Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1520
Comment Excerpt Number: 1

Comment: Cleaning Ovens, also known as Burn-Off Ovens, are not incinerators. Steelman Industries, Inc. has been manufacturing burn-off ovens for over 19 years. During this time we have produced more than 700 units. When combined with other manufacturers of burn-off ovens the total number of burn-off ovens is over 10,000. This number is well over the estimate of thirty-six ovens as stated in your report.

Our ovens are used in several major industries: Electric Motor repair facilities, automotive facilities, paint finishing facilities, transformer facilities, fiber facilities and many more. Of these ovens not a single one is designed as an incinerator nor are they being used as an incinerator with the intent to reduce solid waste before disposing in a landfill. They are designed for the reclamation of metal substrates by removing and destroying any organic material.

The rule is clearly written and detailed specifically to Solid Waste Incineration or units (incinerators or furnaces) which are designed to process solid waste materials. It is not until page 31944 of the Federal Register that the word “Burn-off Ovens” is mentioned as a source of incineration.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Terry Crawford
Commenter Affiliation: Unarco Industries, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2114
Comment Excerpt Number: 1

Comment: The proposed regulation looks to include the small "cleaning systems" which, as a part of the cleaning process, post-combust the small amounts of off-gases they produce. On page 31951 of the proposed rule, the EPA confirms that one talks about typically small ovens (<1 MMBTUH), batch operated, to clean various metal parts, which are then reusable. These fluidized bed units remove organic-based material such as paint, powder coat, and plastic by a combination of thermal and mechanical cleaning. A bed of quartz sand is fluidized by a flow of high volume, low air pressure air, and maintained at a temperature of 800-900 degrees F. A small amount of natural gas is mixed with the air. Metal parts are submerged in the fluidized bed, organic compounds are gasified and rise to the top of the bed, where they are combusted by a continuous pilot flame. The zone immediately above the bed may be thought of as an afterburner. Combustion products are drawn through the zone by an exhaust fan and pass through a cyclone, where clean sand is removed from the stream and recycled into the process. The remaining stream is transported to a fabric filter system, then exhausted to the outside air.

I have an independent laboratory analysis (TCLIP) of the spent sand for heavy metals and every sample that I have had performed showed that no metals existed in the analysis. Further I have conducted air sampling in the work area to assure compliance with the particulate part of the standard, and we operate in compliance with all local, state, and EPA rules. We are in compliance with 40 CFR Part 63 Subpart 6X.

EPA (Docket ID Nos. OAR-2002-0041 and OAR-2002-0035; AD=FRL-7406-4) in its summary: This notice removes five area source categories of hazardous air pollutants (HAP) (i.e., asphalt hot-mix production, fabricated metal products, paint and allied products, paper coated and laminated, packaging and transportation equipment manufacturing) from the list developed under section 112©(6) of the Clean Air Act (CAA). Our NAICS is 333924, SIC is 3496, which puts us in the miscellaneous fabricated metal products group.

Approximately 28% of our business is recycling used shopping carts for the retail merchandising business. The reason we are able to have this business is the metal cleaning method we use, a fluidized bed burn off oven and a mild abrasive blast machine, this equipment allows us to be competitive and not use hazardous chemical strippers. Jobs would be lost and hazardous chemicals would create waste and have far greater environmental issues. The impact of calling a fluidized bed burn off oven an incinerator, which in my opinion is not in the same category as an incinerator, is going to have industry wide consequences.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Newell
Commenter Affiliation: M & N Electric Industrial Electric Motor Repair & Sales
Document Control Number: EPA-HQ-OAR-2003-0119-2448
Comment Excerpt Number: 1

Comment: We are writing to express our strong opposition to the subject proposed rule as pertains to bum-off ovens. We use a burn-off oven in providing electric motor repair and rewinding service. We object to the regulation because:

* Burn-off ovens used in rewinding motors and generators are not used as incinerators, so they should not be included in the same category as such; they are used in an essential reclaiming and recycling process. We operate our oven using a calibrated temperature control device with part temperatures maintained at 700 degrees F or below. This allows us to heat a motor's varnished windings in a uniform, safe and controlled manner so they can be readily removed. For us, the term "bum-off' oven is a misnomer; it is actually a cleaning oven.

* We use our burn-off oven on a very limited basis each month (perhaps 18-20 hours, and often not that much). But it is critical to providing safe, environmentally responsible service. We are very concerned that other firms would resort to winding removal methods that are environmentally uncontrolled (combined mechanical and heat) or environmentally undesirable (chemical). This would reduce the energy efficiency of repaired motors and generators. The safety aspects of such methods also represent a serious concern.

* The proposed emissions standards were developed by analyzing test results from fewer than 40 burn-off ovens, whereas we believe there are 15,000 units or more in use in the U.S. The sample is far too small, and it appears EPA (or its contractors) did not take our vital industry into account.

* Based on the numbers in the regulatory impact analysis prepared for EPA, we understand that the average cost of compliance would be more than $140,000 with annualized costs of more than $80,000. Even if those figures are overstated and cut in half, my company (and many like us) could not afford it; in addition to layoffs (if not closing) here, we believe it would result in the loss of thousands of jobs in the U.S. related to electric motor repair and rewinding.

* The harmful indirect economic impact of the proposed regulation would be enormous. The country could not function without electric motors, and companies like ours keep them operating. This regulation will disrupt and negatively impact virtually every industry we serve as well as utilities and major infrastructure; our military; and municipal, state and federal governments. We believe it will force even more manufacturing out of the country at a time when we can least afford it.

* Frequently, there simply are no "spare" motors or new replacements readily available for critical equipment. Common examples would be a large refrigeration compressor motor for a hospital or trauma center, or an essential forced draft fan motor for a power plant, or a pump motor for a wastewater treatment plant.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Charles Lim
Commenter Affiliation: Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright)
Document Control Number: EPA-HQ-OAR-2003-0119-2405
Comment Excerpt Number: 1

Comment: We appreciate the opportunity to provide comment to the Proposed Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources, Commercial and Industrial Solid Waste incineration Units, 40 CFR 60 Subpart DDDD published in the Federal Register on June 4, 2010 [75 FR 31937].

The Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright) facility located in Cheswick, Pennsylvania offers mechanical/electrical maintenance services to various clients. At this facility, Curtiss-Wright operates one burn-off oven in two modes of operation: burn-off and drying. At present, this burn-off oven is exempt from the requirements of the Emission Guidelines for Commercial and Industrial Solid Waste Incineration (CISWI) units.

Approximately four to six times per year, the oven is used to burn off the windings on reactor coolant pump motor stators. The stators are large — up to eight feet in diameter and five feet in height. The copper windings are covered by tape and an electrical insulating varnish. The burn-off oven burns off the varnish allowing further maintenance and reconditioning of the stator. The emissions are controlled with an afterburner and HEPA filters and then monitored for radioactive materials. Parameters associated with the sampling air flow are also monitored and recorded. ‘

This burn-off oven is used infrequently during the year for burn-off operation. The oven is small; only rated at 1.2 MMBtu/hr. Curtiss-Wright currently operates under a Minor Source Permit issued in Allegheny County, Pennsylvania.

As currently written, the proposed rule does not allow for de minimis or batch operations like ours. The source is only operated several times per year in the burn-off mode. Meeting the rule requirements will be unreasonable and possibly unachievable. In particular, operating hours may not be sufficient to conduct initial testing in a year.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Renee Lesjak Bashel
Commenter Affiliation: Small Business Ombudsman and Small Business Environmental Assistance Programs (SBO/SBEAP)
Document Control Number: EPA-HQ-OAR-2003-0119-2254.1
Comment Excerpt Number: 2

Comment: Recommendation: Reconsider the withdrawal of the exemption of burn-off ovens from the definition as a solid waste incinerator. These units can be critical to low cost operations at small businesses, where alternate methods are more costly and don’t necessarily result in lower emissions.

Per the definition in the federal register under “B. Rational for Proposed subcategories”: “Burn-off ovens: These units typically are very small (<1 MMBtu/hr), batch-operated,

combustion units that are used to clean residual materials off of various metal parts, which are then reused. The amount of waste combusted in these units is generally small (pounds per year in

some cases) and the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices."

Per the section "D. Rationale for Beyond-the-Floor Alternatives"

"...As part of our impacts analysis (discussed in section V. below), we evaluated whether existing facilities would choose to cease burning solid waste in incineration units after promulgation of the final CISWI standards. We have determined that most facilities with units in the incinerators, small remote incinerators or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted. We considered this fact in evaluating the beyond-the-floor options for these three subcategories and specifically in our consideration of the costs associated with the beyond the-floor options, which we found unreasonable...

Also in this section – "subsection: Emissions Reduction Analysis Results - Analysis Results for Incinerator, Small Remote Incinerator and Burn-Off Ovens Subcategories" where it states:

"As was done in the cost analysis for the MACT floor emission limits, we also considered whether units would cease to combust waste and choose an alternative waste disposal method rather than add controls to comply with the beyond-the-floor limits. Based on the high costs of controls relative to the costs of alternative waste disposal methods, we concluded that all

units within the incinerators, burn-off ovens and small remote incinerators subcategories would shut down rather than comply with the beyond-the-floor limits. Facilities with incinerator units and small remote incinerator units would use alternative landfill disposal and facilities with burn-off ovens would use abrasive blasting. In comparison, for the MACT floor impacts analysis, we determined there were 17 total units within these three subcategories that would remain open and comply with the MACT floor emission limits. The emission reductions above account for the secondary impacts of landfill gas flare emissions that would result from the

incremental waste that is diverted to landfills from existing CISWI units. Once these secondary impacts of the landfill gas flaring are accounted for, the emissions reduction is approximately zero for the incinerator, small remote incinerator and burn-off oven subcategories, mainly due to the increase in emissions from flaring the landfill gases generated by the additional diverted waste, compared to the modest additional stack emissions reductions from shutting these units down...."

In the document "Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units" (a backup document to the proposed rule) on page 144 and 145 under "C. Alternative Disposal Costs" it notes:

"...For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of $118,250 per year to utilize an abrasive blasting service...."

As noted in the above excerpts:

1. There is minimaL poLLution being produced from burn-off ovens. Any air poLLution reduction due to this reguLation wiLL be offset by additionaL off-gassing at a LandfiLL, so there wiLL be zero air poLLution reductions if this reguLation goes into effect as written.

2. Burn-off ovens wiLL basicaLLy be eLiminated to be repLaced by aLternative methods. One method mentioned was the use of sandbLasting which was quoted as costing $118,250 per year versus the burn-off oven cost of $53.75 per year. (Note: this is an annuaLized cost not an actuaL cost estimate)

One of the SBEAPs recentLy worked with three (3) smaLL companies that have burn-off ovens. One of these companies wiLL not be abLe to switch to abrasive bLasting, because part of the waste being burned off is inside the part. The company may be abLe to soak the parts in soLvent, which wiLL increase hazardous air poLLutants and voLatiLe organic compounds, or the company wiLL no Longer be abLe to continue with this production Line. The other two companies can use abrasive bLasting. However, the increased cost of abrasive bLasting wiLL probabLy eLiminate a production Line in one company and negativeLy impact costs in the other company. These costLy impacts to smaLL businesses are without a positive impact to the environment.

If burn-off ovens are considered incinerators, the emissions impacts shouLd be taken into account (zero reductions). There is no emission savings, but it does have a negative fiscaL impact on small businesses. Consideration shouLd be given to aLternatives to emission Limits for burn-off ovens, such as Limiting the operationaL hours or estabLishing an annuaL emissions threshoLd, beLow which units wouLd not have to meet the emission's Limit. In most cases, these units are onLy operated intermittentLy (e.g., once or twice a week, a few times a month) and therefore hours of operation wouLd be very Low and shouLd be easiLy tracked.

As mentioned previousLy, nearLy aLL burn-off ovens are very smaLL units, beLow 1 MMBTU/hr. Units of this size are exempt from permits in most states. One manufacturer of burn-off ovens shows that sixteen states exempt units Like theirs from permit requirements (http://www.pcpconLine.com/epa.htmL); a few of these ruLes may have changed sLightLy since the List was created but in most cases states stiLL consider these units exempt or insignificant. Newer designs appear to offer better combustion processes, thereby minimizing emissions. So whiLe emissions are aLready Low given the smaLL size of these units, repLacement of oLder units with new designs wouLd resuLt in reductions without any additionaL controL devices or testing required.

Another reaL consequence of eLiminating the use of burn-off ovens in faciLities that need to cLean parts wiLL be that the demand for products manufactured by up to 100 manufacturing companies within the United States wiLL be impacted. For at Least a few of those manufacturers, burn-off ovens are their main or onLy products. Jobs wiLL be Lost if these manufacturers no Longer produce burn-off ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404

Comment Excerpt Number: 2

Comment: Burnoff Ovens Do Not Meet The Definition Of A Solid Waste Incinerator In The Clean Air Act And

Therefore, Should Not Be Included In The Proposed Rule

Section 129 of the Clean Air Act requires EPA to set numerical standards for solid waste incineration units. Congress defines a "solid waste incineration unit" as "a distinct operating unit of any facility which combusts any solid waste material...". Burnoff ovens do not combust the material in the oven. They are designed to remove material from metal parts so they can be reused. These ovens operate in a low-oxygen atmosphere to convert the organic material to combustible "smoke" and then burn that smoke in an afterburner. For most applications, higher temperatures would not be tolerated as they would damage the parts being cleaned.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dennis Cones
Commenter Affiliation: Jackson Oven Supply, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1519.1
Comment Excerpt Number: 2

Comment: The proposed change was based on a number of units that is not representative of the actual number of ovens in operation today. There is probably an average of one burn-off oven in every city in the United States. My company is located in Jackson, MI. Jackson has a population of approximately 25,000. There are five (5) burn-off ovens in Jackson.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Matthew L. Swan
Commenter Affiliation: American Quality Stripping, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2113
Comment Excerpt Number: 2

Comment: Classification:

To group burn-off ovens in the same category as incinerators is simply unimaginable, the method of operation and material objectives are very dissimilar. Incinerators are designed to reduce large amounts of waste material in short periods of time which will create high levels of pollutants and necessitates advanced scrubbing technology. Burn-off ovens are designed to remove small

amounts of material over longer periods of time and to utilize any airborne contaminants resulting from the process as fuel ultimately producing extremely low levels of pollutants. This clearly places burn-off ovens within the realm of recycle, not waste disposal. Incinerators

actually burn waste material much like a trash fire while burn-off ovens slowly break down material much like a charcoal grill operates, very different methods of operation with very different end results. The ultimate NOx produced on a mass basis is in the order of .01 pounds per hour which is virtually the same as the EPA tier 1 standard for a light truck driving 60 mph (0.092 pounds per hour). Eliminating burn-off ovens would dramatically increase industrial metal waste and add a significant burden to current landfill operations as well as increased drain of natural resources.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Late James R. Thornton
Commenter Affiliation: Northrop Grumman
Document Control Number: EPA-HQ-OAR-2003-0119-2245.1
Comment Excerpt Number: 3

Comment: At a minimum, EPA should provide a specific exemption for non-conventional parts reclamation technologies, such as fluidized hot sand bed cleaners, from the emission limits and standards otherwise applicable to burn-off ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Charles Lim
Commenter Affiliation: Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright)
Document Control Number: EPA-HQ-OAR-2003-0119-2405
Comment Excerpt Number: 5

Comment: EPA should not generally apply established large incinerator regulations, including pollutants, emissions controls, incinerator operator certification requirements, monitoring, recordkeeping, reporting, and testing requirements, to each and every source that may combust "solid waste" materials as part of their normal operations. EPA needs to carve out allowances for minor source operators that operate infrequently with minimal emissions.

Curtiss-Wright requests that EPA retain the CISWI exemption status for the burn-off oven used at our facility.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 5

Comment: We believe that the number of burn-off ovens has been significantly underestimated. Until the agency identifies the full population of sources impacted by the Proposed Rule, it will be impossible to promulgate appropriate standards based on representative sources.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Late James R. Thornton
Commenter Affiliation: Northrop Grumman
Document Control Number: EPA-HQ-OAR-2003-0119-2245.1
Comment Excerpt Number: 5

Comment: NGSB recommends that burn-off ovens be removed entirely from the Commercial and Industrial Solid Waste Incineration Units subcategory at this time.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 10

Comment: NESCAUM requests that EPA provide a clearer definition of facilities that would be subject to the CISWI rule. We have identified three facility types for which it is unclear whether or not they would be subject to the rule.

* Units that "roast" soil for remediation purposes.

* Asphalt plants utilizing recycled asphalt.

* Burn-off ovens – The proposed definition covers three potential types of these ovens, but does not provide clear definitions for certain process types. We have identified two distinct types of "burn-off" ovens. The first type takes metal parts (e.g., wire, automotive parts) and burns off insulation, paint, and coatings with the goal of recovering the metal. Under the proposed regulation, these units would be classified as incinerators because they are collecting waste materials and combusting the material to collect the metal "residuals" for profit. The second type is for coating operations that apply a coating (typically paint) to various products on an automated line. The material for coating is suspended from a hook or rack, which inevitably is coated with over-spray. Once finished products are removed from the line, the hook or rack is put in a "burn-off" oven to remove the over-sprayed material. Does EPA intend to include this second type of unit in the "burn-off" oven category as an incinerator? If so, what does EPA propose as an alternative to this operation?

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 20

Comment: Manufacturers are concerned about application of the proposed incinerator MACT standards to small "burn-off ovens," particularly burn-off ovens that are used to clean paint and plastics from metal parts and dies. Proposed §60.2875

It is not appropriate to categorize burn-off ovens as incinerators, as most burn-off ovens are not actually combusting material. Instead they use lower temperature processes such as melting or pyrolysis and are specifically designed to avoid flaming conditions, which would damage the parts being cleaned. Alternatively, the exclusion for a materials recovery facility also should cover burn-off ovens. See CAA §129(g)(1)) ("materials recovery facilities (including primary and secondary smelters) which combust waste for the primary purpose of recovering metals"). EPA's own description of burn-off ovens as units "used to clean residual materials off of various metal parts, which are then reused" recognizes that the primary purpose of these units is the recovery of metals. 75 Fed. Reg. 31,951.

Burn-off ovens are typically equipped with afterburners designed to oxidize fully the organics in oven exhaust. Small burn-off ovens are generally not equipped with air pollution controls to address HCl or dioxin/furan formation or metals.

The proposed emission limitations for burn-off ovens include dioxin/furans, HCl, cadmium, and mercury. (Table 9 to Subpart DDDD of Part 60) Testing alone for these pollutants would be very costly, and retrofitting small-burn off ovens with pollution controls would be prohibitively expensive.

The final rule should provide an exemption for all burn-off ovens, or at least those that process "clean" non-chlorinated plastics such as un-painted polyethylene. In the alternative, the final rule should apply more reasonable work practice standards for small burn-off ovens.

For example, a work practice standard specifying clean feed materials and annual burner tune-ups would be more reasonable and appropriate. Some states require air permits that contain standard permit conditions for burn-off ovens mandating the operation of an afterburner at more than 1,400 degrees Fahrenheit. The state permits require that records of afterburner operating temperatures be maintained whenever the units are in operation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1

Comment Excerpt Number: 28

Comment: EPA Should Retain the Exemption for Burn-Off Ovens under the CISWI Rule

ACC is concerned with EPA's treatment of burn-off ovens in the proposed rule. EPA appears not to have a complete understanding of the units, as the Agency has significantly underestimated the number of these units in operation. Further, it is incorrect to treat burn-off ovens as incinerators. EPA should reconsider regulation of units in this subcategory as solid waste incinerators or conduct further study on the characteristics of these units prior to proposing emission standards for them.

EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards for burn-off ovens.

In the floor memo, EPA states there are 36 existing burn-off ovens. [Footnote: EPA-HQ-OAR-2003-0119-0059, Page 4.] Therefore, the MACT floors are determined from a maximum of 5 sources representing the top 12% performing units. Based on feedback received from our members and discussion with vendors of part reclamation units, ACC believes EPA has vastly underestimated the number of burn-off ovens at commercial and industrial facilities in the U.S. EPA should contact suppliers of these ovens to obtain a better estimate of the number of such units sold in the U.S. Burn-off ovens are specifically exempted from the definition of solid waste incinerators in the current CISWI and NSPS rules. Many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. We believe it is likely that respondents to EPA's surveys may have unintentionally overlooked these units, as they are not

"incinerators." Further, EPA likely did not send CAA Section 114 surveys to some facilities (e.g., area sources) where these units exist. If EPA's intent is to regulate these units, ACC believes that EPA must conduct a more thorough and targeted survey of these units before proposing emission standards.

Burn-off ovens are not solid waste incinerators.

ACC believes that it is incorrect and inappropriate to consider burn-off ovens to be solid waste incinerators. First, the purpose of these units is to clean parts for reuse, not to incinerate solid

waste. Second, most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose various materials such as plastic or polymer. These ovens are specifically designed to avoid flaming conditions, which would damage the parts being cleaned. Some vendors describe a controlled oxidizing cycle at the end of the pyrolysis cycle to prevent flaming should the oven be opened due to malfunction or operator mistake and there be any solid residual material still present on the metal parts.

Most, if not all, of these units are generally designed to prevent the combustion of the residual material on the parts that they clean. In general, these units are pre-loaded with the parts to clean. Then, the temperature is increased. As the temperature increases, the initial cleaning is accomplished by melting, in which the molten material can be collected in a pan or separate chamber. At some point in the temperature profile, the conditions are such that the physical change (melting) is replaced by a chemical change (pyrolysis) to any remaining material.

Pyrolysis is not defined in section 129 or in the proposed regulation, but is defined in common dictionaries [Footnote: See for example http://en.wikipedia.org/wiki/Pyrolysis.] Pyrolysis is the chemical decomposition of condensed substances by heating that occurs spontaneously at high enough temperatures or a chemical change or degradation of material brought about by the action of heat. By comparison, combustion or burning is the sequence of exothermic chemical reactions between a fuel and an oxidant accompanied by the production of heat and conversion of chemical species. In combustion, the release of heat can result in the production of light in the form of either glowing or a flame. In fact, the prevention of combustion is particularly desired in a part reclamation unit so as not to damage the metals parts being cleaned. Melting is only a physical change brought on by heat. In all cases, the primary function of the units is to generate a clean part, not to incinerate solid waste. However, during the melting process, some vapors can be released that are combusted in an afterburner. We do not believe these units should be included in the proposed CISWI rule since no solid waste is being incinerated. Attached is a document from the supplier of an ACC member‘s burn-off ovens used to clean extruder screws which states “Please note that the furnace is not an incinerator. It has no open flames; it has a controlled 800 degrees Fahrenheit interior oven temperature for removing surface coatings of cured paint at a controlled rate of smoke emissions from the parts. The patented water spray injection system positively controls the rate of decomposition by reading the secondary chamber temperature and controlling that temperature by water mist injection into the furnace.” If EPA were to conduct a more thorough study of burn-off ovens we believe the Agency would conclude that these units are not incinerators of solid waste. ACC members use ovens to clean parts from extruders. Ovens are widely used in the polymers and resins industry to clean the precisely machined screws, die plates, breaker plates and other metal parts of extruders. These parts must be cleaned after production of one product to prevent contamination of the next product. Removal of the residual polymer from these parts in low temperature ovens is a technically and environmentally acceptable procedure for cleaning these parts.

There are few, if any, acceptable replacements for burn-off ovens. For some polymers, chemical cleaning of these parts can be achieved using halogenated solvents. However, environmental

regulation and concerns over worker exposure have greatly reduced the practice of chemical cleaning. Moreover, for some polymers there is either no chemical solvent that will result in adequate cleaning or the solvent is unacceptably toxic for such a use. Abrasive cleaning, even with water, has been unsuccessful. At pressures adequate to remove residual product polymer from small, intricately and precisely machined parts, the abrasive distorts the part and it must be discarded. If the added expense of cleaning can be justified, facilities may ship these parts to larger commercial units which might have stacks for accommodating stack sampling equipment (as well as other features that small ovens cannot employ) and will be forced to keep more spare parts on hand (a prohibitively large expense for many specialized machined parts) while this less efficient cleaning methodology is being employed. EPA‘s expectation that industry will transition to other methods (e.g., abrasive blasting) ignores the fact that the other cleaning methods are inferior. Given the trivial emissions from these ovens, [Footnote: EPA-HQ-OAR-2003-0119-0057 Table 1.] a transition away from the use of burn-off ovens would be unfortunate and unjustified.

Burn-off ovens do not warrant regulation under CAA section 129 or 112.

Burn-off ovens are very small sources with rated capacities equal to or less than 1 mmBtu/hr and utilize electricity or natural gas as the heat source. Burn-off ovens are also of various designs,

such as open chamber and fluidized bed designs. Due to their function, these ovens should have minimal emissions. Typically, they are used to remove product from parts. These products would include paints, plastics, and polymer. These products are organic matrices with only trace levels (if any at all) of HAPs such as inorganic catalysts.

Further, many of these ovens have limited use. Use of these ovens is dependent on production rate, product mix or changes, and other issues. Burn-off ovens are used as needed to clean parts and are thus operated only as needed. Many might only operate once per day or less. Cycle times typically are in the range of 2-4 hours for the entire cycle. Thus, trying to test emissions on these batch cycle ovens is problematic due to a lack of steady state operation. EPA should carefully consider the necessity of subjecting these trivial sources to costly MACT or CISWI standards. EPA is correct in its assumption that, when faced with the compliance costs of meeting strict HAP emission standards, many of these ovens would simply shut-down, resulting in facilities seeking other alternatives such as utilizing different cleaning methods or sending parts offsite for cleaning.[Footnote: EPA-HQ-OAR-2003-0119-0054 pages 8-9.]

ACC does not believe that Congress intended for standards promulgated under section 129 or section 112 to eliminate a particular industry or the use of a needed device. EPA should not purposely regulate a useful device from existence when little, if any, environmental benefit is to be gained. Further, for some metal parts there are no viable alternatives for metal reclamation and where they do exist, the available alternatives are costly and not necessarily better for the environment. For example, solvent cleaning would result in more VOC/HAP emissions, and sand blasting would result in PM emissions and eventually solid waste when the sand is discarded.

Thus, ACC believes the CISWI rulemaking will actually be a disincentive to reuse parts, especially small parts, which directly conflicts with resource recovery objectives. It is also unclear if the burn-off oven subcategory would include self-cleaning ovens that are located in lunch rooms or other eating facilities at industrial and commercial establishments. In fact, some of these ovens are larger than the burn-off ovens. Such ovens would contain racks that over time become contaminated with food residue and would need periodic cleaning. These parts would be cleaned by decomposing the residue during the self-cleaning cycle of the oven, or very similar to the pyrolysis operation in the burn-off ovens.

The potential for burn-off ovens to emit section 129 substances of concern is low. [Footnote: EPA-HQ-OAR-2003-0119-0057 Table 1.] In many applications, the material being removed is food grade material or other materials directly used by consumers, such as polyethylene or polypropylene or latex or similar organic matrices (not an exclusive list). As such, these materials would not be expected to contain or generate most of the section 129 pollutants (sulfur, chloride, lead, cadmium, and mercury). Because of the lower pyrolysis temperatures and the low potential for chloride content, the potential to generate dioxins and dibenzofurans is likewise low.

Potential conflict with section 129 exclusions

Section 129 includes a number of exclusions from the definition of “solid waste incineration unit.” One of those exclusions is for a materials recovery facility (see §129(g)(1)):

“materials recovery facilities (including primary and secondary smelters) which combust waste for the primary purpose of recovering metals”

ACC believes that the exclusion above should be read to include burn-off ovens. The burn-off ovens used by ACC members for cleaning parts are indeed used primarily for the purpose of recovering metals. EPA's own description of burn-off ovens as units "used to clean residual materials off of various metal parts, which are then reused" recognized that the primary purpose of these units is the recovery of metal parts. [Footnote: 75 FR 31951.]Subparts CCCC and DDDD both include similar language as an exemption, although the wording is slightly different from the statute. Thus, EPA should change the final rule to recognize that burn-off ovens are used as a materials recovery operation and are eligible for the section 129 exclusion. Alternatively, burn-off ovens could be included in the existing rule exemption for rack, part, and drum reclamation units.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 31

Comment: EPA Needs to Retain the Exemption for Rack, Part, and Drum Reclamation

Units

The existing CISWI Subpart CCCC and DDDD rules include an exemption for rack, part, and drum reclamation units, which EPA has reclassified as burn-out ovens. Burn-out ovens are used to remove materials from racks, parts, and drums so that they can be easily reused. These are critical services that in many cases cannot be replaced with other alternatives. EPA has an obvious lack of understanding of these devices and their prevalence throughout industry.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 32

Comment: EPA's Understanding of the Number of Burn-Off Ovens, and their

Purpose Seems Lacking

EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards for burn-off ovens. In the docket memorandum "MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category", EPA states there are 36 existing burn-off ovens. Hence, the MACT floors are determined from a maximum of 5 sources. CIBO believes EPA has vastly

underestimated the number of burn-off ovens at area and major sources in the U.S. Eastman alone has four such units. EPA should contact suppliers of these ovens to get a better estimate of the number of such units sold in the U.S. We suspect EPA is unaware of the actual number of these units because sources did not realize EPA was including burn-off ovens as solid waste incinerators. Burn-off ovens are specifically exempted from the definition of solid waste incinerators in the current NSPS Subparts CCCC and DDDD. Also, many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. Therefore, respondents to EPA's surveys would likely have overlooked these units. Further, if EPA were unaware of these units, they would not have even sent CAA Section 114 surveys to facilities (including area sources) where these units exist. Therefore, CIBO believes EPA must conduct a more thorough and targeted examination of these units before considering whether to propose emission standards.

CIBO also believes that it is apparent from the proposed rule that EPA does not understand the purpose and limitations for use of burn-off ovens. Burn-off ovens are the not only expedient and cost effective, but also the only recourse other than complete part replacement, which is prohibitively expensive. If such unachievable limits are imposed, it will lead to shutdown of manufacturing that relies on these activities and relocation to another global location if that is justified. As a result, jobs will be lost in the US.

Burn-Off Ovens are not Solid Waste Incinerators

Burn-off ovens do not fit the category of solid waste incinerators and EPA should create a source category under the §112 program if it believes these units warrant regulation for emission of hazardous air pollutants, which CIBO believes is not justified.

First of all, the purpose of these units is to clean parts for reuse, not incinerate solid waste. Secondly, most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose materials such as plastic or polymer. These ovens are specifically designed to avoid flaming conditions which would damage the parts being cleaned. EPA should contact suppliers of these ovens to verify this information. The burn-off oven supplier to one CIBO member indicated, "[p]lease note that the furnace is not an incinerator. It has no open flames; it has a controlled 800 degrees Fahrenheit interior oven temperature for removing surface coatings of cured paint at a controlled rate of smoke emissions from the parts. The patented water spray injection system positively controls the rate of decomposition by reading the secondary chamber temperature and controlling that temperature by water mist injection into the furnace."

Third, burn-off ovens are very small sources with rated capacities equal to or less than 1 mmBtu/hr and utilize natural gas or electricity as the heat source. Burn-off ovens are also of various diverse designs, for example, open chamber and fluidized bed designs. Due to their function, these ovens have minimal emissions. Typically, they are used to remove product from parts. These products would include paints, plastics, and polymer. These products are organic matrixes with only trace levels (if any at all) of any HAPs such as inorganic catalysts. Fourth, the temperatures reached in burn-off units are not high enough to create dioxin/furan emissions. Finally, many of these ovens have limited use. Use of these ovens is dependent on production rate, product mix or changes, and other issues. Burn-off ovens are used as needed to clean parts and are thus operated only as needed. Many of these might operate once per day or less. Cycle times typically are in the range of 2-4 hours for the entire cycle. Thus trying to conduct

emissions testing on these batch cycle ovens is problematic simply due to a lack of steady state operation.

EPA should carefully consider the necessity of subjecting these trivial sources to costly MACT or CISWI standards including the need for emissions testing, which basically cannot be done.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 42

Comment: Burn-off ovens

CRWI believes that EPA has made a number of serious errors in proposing to remove the exclusion for burn-off ovens.

Purpose and operations of burn-off ovens

Burn-off ovens typically consist of two chambers. The first is a controlled temperature oven that is used to melt or pyrolyze the coating on the metal parts. The gas stream from the, oven is then passed through a secondary chamber (afterburner) where an open flame is used to destroy any organic vapors driven off by the oven.

It is common practice in industry (such as plastics or latex manufacturers, plastics or latex processors, polymer production facilities, as well as others) to use on-site ovens (electric or gas-fired) to clean solidified material off of small metal parts (extrusion dies, screen packs, extrusion screws, filters, gears, etc.) during maintenance so these parts can be reassembled properly after the maintenance is completed. Most of these units do not use incineration or combustion processes. Rather, they use lower temperature processes such as melting or pyrolysis to melt/decompose materials such as plastic or polymer. Some of these ovens are specifically designed to avoid flaming conditions which would damage the parts being cleaned. In general, these units are loaded with the parts to clean. The oven is turned on and the temperature starts to rise to the optimum cleaning temperature. As the temperature rises, the initial cleaning is accomplished by melting the material, in which the molten material can be collected in a pan or separate chamber. At some point, the conditions are such that the physical change (melting) is replaced by a chemical change (pyrolysis) to

any remaining material. A number of these units have water spray controls to prevent flames and to keep the materials on the parts from burning and increasing the temperature on the part. However, some of the smaller, electric powered ovens do not have water spray controls. In many cases, the on-site units may be no larger than a residential or commercial self-cleaning oven and will have a fossil fuel BTU ratings of 1 MM BTU/HR or less.

A description of several types of burn-off ovens operated by CRWI members follow:

i. Dow has at least two pyrolysis units that are equipped with water sprays and means of detecting conditions that could lead to flame generation, so that the water sprays can prevent a flame and protect the integrity of the part being cleaned. If combustion is employed at all, it would generally only occur in a separate chamber designed to receive vapors from the oven. Conceivably these vapors would not be contained gases under the definition of solid waste. In essence in these units, there would be the pyrolysis of solids followed by the combustion of vented gases. Combustion of solids is purposely avoided by design. In all cases, the primary function of the units is to generate a clean part.

ii. Dow has at least one very small pyrolysis device that is electrically heated, and is also equipped with a small pan for collecting melted residue. The emissions from this oven are currently exempt from state regulation since the emissions amount is so insignificant. In addition, the vent size from the oven is, only 2-3 inches in diameter and could not accommodate any sampling equipment. Finally, the vendor for the unit said their devices should not be subject to this proposal since they employ pyrolysis, not incineration.

iii. In both examples, vendors are very careful to design these units to prevent combustion (not to avoid regulation but to avoid damage to parts) and say so in the accompanying operations manuals/descriptions. Both vendors describe a controlled oxidizing cycle at the end of the pyrolysis cycle to prevent flaming should the oven be opened due to malfunction or operator mistake and there be any solid residual material still present on the metal parts.

iv. There may be some units that melt plastic residue off parts being cleaned which collect the, molten polymer in trays for later disposal. In these cases, solid material is not being combusted/incinerated/burned. However, during the melting process, some vapors can be released that are combusted in a separate chamber. CRWI does not believe these units would be in the scope of the proposed CISWI rule since no solid waste is being incinerated and believes EPA should concur.

It is also unclear if these units would include self-cleaning ovens that are loca,ted in lunch rooms or other eating facilities at industrial and commercial establishments. In fact, some self-cleaning ovens are larger than some of the burn-off ovens used to clean plastics, latex, or other materials off of parts. CRWI requests that EPA clarify that these devices are not in the scope of CISWI.

These units should not be regulated under Section 129.

Section 129 of the Clean Air Act requires EPA to set numerical standards for ‘solid waste incineration units. Congress defines a "solid waste incineration unit" as "a distinct operating unit of any facility which combusts any solid waste material..." Congress did not define combust, or pyrolysis so one is left to common definitions of combustion. Combustion or burning is the sequence of exothermic chemical reactions between a fuel and an oxidant accompanied by the production of heat and conversion of chemical species. In combustion, the release of heat can result in the production of light in the form of either glowing or a flame. Pyrolysis is the chemical decomposition of condensed substances by heating that occurs spontaneously at high enough temperatures or a chemical change or degradation of material brought about by the action of heat. Melting is only a physical change brought on by heat. In fact, the prevention of combustion is particularly desired in a burn-off oven so as not to damage the metals parts being cleaned. CRWI believes these units should not be in the scope of this proposal since they practice pyrolysis of solids, are purposely designed and operated to avoid combustion, and are already appropriately addressed under various state mechanisms due to the nature of the small

potential for emissions. We believe that these units were appropriately excluded in the original CISWI rule and that they should continue to be excluded.

CRWI wonders if these units are not more appropriately considered as materials recovery units. Section 129 specifically excludes material recovery units. While these units do not use combustion to recover metals as specified in the statute, they certainly recover metal parts. CRWI suggests that EPA consider all burn-off ovens that recover metal parts to be materials recovery units and exempt them from these regulations.

CRWI believes that EPA significantly underestimated the number of these units

Should EPA decide to regulate these units under the CISWI rule, we believe that the Agency has significantly underestimated the number of these units. In the docket memorandum "MACT Floor Analysis for the Commercial and Industrial

Solid Waste Incinerators Source Category", EPA states there are 36 existing .burn-off ovens: Two units frbm one CRWI member (INVISTA) are included in the data base. However, other CRWI members do not have any units listed in the data base. Since the rule was proposed, one member has determined they have at least five units that could be potentially regulated and another has found 4 units that potentially could be regulated. We suspect EPA is unaware of the actual number of these units because these sources:did not realize EPA was including burn-off ovens in the requests for data Burn-off Ovens are specifically exempted from the definition of solid waste incinerators in the current NSPS Subparts CCCC and bDDD. Also, many of these units do not actually incinerate or combust the materials adhered to the parts being cleaned. Rather, they melt or use pyrolysis to decompose the materials. Thus, it is not clear which units would be covered and which units would be regulated by other provisions (if any). It is highly likely that our members are not the only respondents who may have overlooked these units. It is our understanding that one vendor submitted comments that estimated there have been more than 4500 burn-off ovens sold in the United States.

Based on this, CRWI believes that EPA's data base for these units is inadequate and vastly underestimated the number of burn-off ovens at area and major sources in the U.S. Therefore, CRWI believes EPA must conduct a more thorough and targeted survey of these units before proposing emission standards.

CRWI believes that two of the units are improperly classified as burn-off ovens. They should be re-classified as incinerators.'

It is CRWI's understanding that units "KSCNHWichita" and "NDCNHAmerica" are improperly categorized as burn-off ovens when they should be classified as

incinerators. It is our understanding that CNH will submit comments showing that these units are being operated as incinerators, not as burn-off ovens.

EPA's current database for burn-off ovens has data from two facilities for five pollutants (cadmium, hydrogen chloride, lead, mercury, and total dioxin/furan), data from 9 units for one pollutant (sulfur dioxide), and data from 10 units for 3 pollutants (carbon monoxide, nitrogen oxide, and particulate matter). The two units in question have data for all nine pollutants. When these two units are taken out of the burn-off oven category and put into the incinerator category, it leaves eight units in the data base with data for sulfur dioxide, carbon monoxide, nitrogen oxides and particulate matter. It is our understanding that when some of the units in the data base

were asked to develop data on all nine pollutants, they informed EPA that they did not emit several of the pollutants in question. EPA

responded that they should only'test for the pollutants present. Thus when the units are put in the proper categories, EPA will not have data for cadmium, hydrogen chloride, lead, mercury,,and total dioxin/furan emissions fOr the burn-off oven category. Given the lack of data and the large number of units that will be potentially impacted (as shown earlier), CRWI suggests re-instating the exclusion for this source category. If the Agency feels the need to set numerical standards for this source(category (and we are not sure EPA methods can be used to develop emissions data for this source category — see comments below), CRWI suggests that EPA temporarily withdraw the proposed standards and restart the, rulemaking process for this category.

Many burn-off ovens do not have stacks or their stacks are too small to use EPA standard methods.

Many burn-off ovens are not equipped with-stacks because of the small size of the units. The small units may only have a vent of 2-3 inches in diameter, which cannot accommodate the methods requirements for sampling (Method 1 requires a minimum stack diameter of 12, inches — Part 60, Appendix A). In addition, these units (both small and large) are batch operated and many run on short cycles. For example, the cycle can consist of 2 hours of heat-up, followed by 2-3 hours of pyrolysis, and finally by 2-3 hours of cool down. The sampling methods for a number of the regulated pollutants require a sample time of three or more hours which can easily exceed the pyrolysis time of the units. In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units. For example, CRWI is enclosing an excerpt from a performance test plan under a different regulation to illustrate the difficulty facing part reclamation units in both minimum sample size and minimum sampling duration [See submittal for table of emissions sampling specifications provided by commenter.]

The proposed Table 8 for the NSPS (Subpart CCCC) requires a minimum sample volume of 4 dscm for dioxin/furan which could easily require a sampling duration of 6 hours for a single test — well above the cycle time for many of these units. The proposed Table 9 for the emission guideline (Subpart DDDD) requires a minimum sample volume of 1 dscm for dioxin/furan, but CRWI believes a sampling volume of three cubic meters or more may be. necessary to obtain the quantification levels needed to show compliance with the proposed standards. Similar issues exist for the requirements for testing for PM, HCI, and metals. In addition, most EPA approved methods require a minimum stack diameter of 12 inches (Method 1, Part 60, Appendix A). Also, a number of these methods require a minimum stack gas flow rate to be able to sample isokinetically. These stacks (vents) are not likely to have the minimum flow rates necessary to

properly sample these units.

Thus, it may be impossible for these units to use approved testing methods to conduct their initial tests or to show future compliance.

Alternatives will cause more environmental harm

As proposed, this rule will actually be a disincentive to reuse parts, especially small parts. This appears to be in conflict with resource recovery objectives and may show that these standards do not adequately consider cost and environmental impact necessary to promulgate standards under § 111. If the added expense of cleaning can be justified, facilities will need to ship these small metal parts to larger commercial units and will be forced to keep more spare parts on hand (a

prohibitively large expense for many specialiied machined parts). Of course, such shipment assumes even the larger ovens can comply, which is not certain since EPA fully expects most of these ovens to shut down. CRWI believes that the transportation emissions during transport of the small metal parts would ‘dwarf the emissions from these small units or the expected reduction in emissions could they even be retrofitted.

In many cases, industry began to use burn-off ovens because the preyious option of chemical cleaning of these parts involved chlorinated solvents, caustic

solutions or other means were much more environmentally unfriendly, resulting in greater potential for exposure to employees and generating a great deal more waste. Abrasive cleaning is not a viable option for machined parts since

abrasion can damage the parts rendering them useless for further process use. In essence with this action, EPA will be removing a superior cleaning method. EPA’s expectation that industry will transition to other methods ignores the fact that the other cleaning methods are environmentally and physically inferior.

Congress did not intend to shut down the industry.

It is particularly troubling that EPA fully expects most of these units to cease operation if the rule is promulgated as proposed (75 FR 31956). EPA states, "We have determined that most facilities with units in the incinerators, small remote incinerators, or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-thefloor levels are adopted." CRWI does not believe that Congress intended for rules triggered by Section 129 to eliminate a particular industry or the use of a needed device. It is inconceivable that EPA would purposely regulate a useful device from existence with the full awareness that their action would do exactly that. Whether or not these units exist does not diminish their apparent useful purpose, to reuse resources. CRWI believes regulating these devices would be in opposition to resource recovery objectives and cost considerations that need to be considered for § 111 performance standards. We believe EPA has the ability to consider the impact of its standard and avoid regulating devices when such regulation would lead to absurd results and would burden permitting agencies unnecessarily.

In addition, CRWI believes that EPA has not adequately considered the costs facilities will incur if burn-off ovens are shutdown. In the docket document "Compliance Cost Analyses for CISWI Units", EPA presents its cost-effectiveness estimates. On page 9 of the document, EPA states:

"The nationwide average cost effectiveness for all units to choose the lowest cost option between complying and using an alternative disposal method was estimated as follows: $57,700/ton for burn-off ovens, $6,000/ton for waste-burning kilns, $7,700/ton for energy recovery units, 2,500/ton for incinerators, and -$26,600/ton for small, remote units."

Even EPA’s estimates illustrate the high costs ($57,700/ton) of subjecting these trivial units to the CISWI regulation relative to the other subcategories. However, CRWI believes this estimate is far underestimated. Again, from page 9 of the CISWI cost analyses document, EPA states:

"For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of $118,250 per year to utilize an abrasive blasting service."

EPA's estimate indicates that they simply do not understand the nature of these parts and'what environments they can be subjected to without damage. Sandblasting is not a viable alternative for machined surfaces and intricately designed parts and equipment. In addition, EPA has failed to recognize that the purpose of having on-site burn-off ovens is so that facilities can quickly clean parts and re-use them. If a facility has to send parts to an off-site facility for cleaning (assuming the off-site oven facility will continue to exist), the facility will have to stock additional parts so that it will not lose production time waiting on the parts to be returned from the cleaning facility. These expensive parts such as dies, extruder screws, heat exchangers, etc. would add substantially to EPA's cost estimates.

A number of states have already developed methods, to regulate this source category.

Some, if not most, states already realize that the potential for emissions from these units is inconsequential because of the small amount of material that they remove and the small amount of emissions that these units could conceivably produce. The vendor for one of the units that Dow operates advertises in their literature that many states have long recognized that regulating the emissions from these units is a somewhat useless activity. The vendor lists the states of Alabama, Connecticut, Georgia, Hawaii, Iowa, Kansas, Maine, Minnesota, Montana, Nevada, North Carolina, Oklahoma, South Dakota, Tennessee, Texas, and. Wisconsin as having various mechanisms for addressing this miniscule concern (exemptions based on amount of emissions, exemptions based BTU release rate, exemptions based on solids capacity, permits by rule with only minimal requirements, etc). To include these units as CISWI regulated units would force these states, and likely others not listed, to regulate something that they have long known to be a useless activity.

The potential to emit the listed pollutants is low

In many applications, the material being removed is food grade material or other materials directly used by consumers (e.g., polyethylene, polypropylene, latex etc.). As such, these materials would not be expected to contain or generate most of the Section 129 substances of concern (sulfur, chloride, lead, cadmium, and mercury). Because of the lower pyrolysis temperatures and the low potential for chloride content, the potential to generate dioxins and dibenzofurans is likewise low. Even if EPA believes they must regulate these units, there should

be ample opportunity for EPA to limit any emission standards to those constituents that might be expected instead of the full Section 129 list.

By proposing to eliminate the exemption for burn-off ovens (especially part and rack reclamation units) in Section §60.2020 of Subpart CCCC and Section §60.2555 of. Subpart DDDD, EPA may have inadvertently created a multitude of issues regarding these units, including increasing the applicability of these standards by a huge number. CRWI believes that in many cases this action by EPA will lead to useless results. In addition, we believe that the regulation of these units employing Melting or pyrolysis is unsupported by the language,of Section 129.

In summary for burn-off ovens, CRWI urges EPA to do the following:

Retain the exemption for these units or at least clarify that burn-off ovens employing pyrolysis or melting to remove residue are not included in the scope of regulated units since they are not incinerating/combusting/ burning solid waste.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 63

Comment: EPA has underestimated the number of CISWI units impacted by this proposal and therefore, has underestimated the cost impact of this rule. For example, EPA has estimated there are 36 burn-off ovens, but we believe that number significantly underestimates the actual number. Four of our members alone have 25 units that are not included in the EPA database. In addition, such units are very common in the polymers industry and that industry is not well represented in the EPA database.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 2

Comment: Burn-off oven subcategory: The DEC requests further clarification of the burn-off oven subcategory. The preamble states the following regarding burn-off ovens:

The amount of waste combusted in these units is generally small (pounds per year in some cases) and the configuration of stacks that serve these units precludes the use of some EPA test methods or measuring emissions and could affect the ability to install certain control devices. (75 FR 31951 -Emphasis added)

The DEC requests that a minimum size applicability threshold be established for this subcategory. The small amount of waste combusted by many units in this subcategory results in insignificant emissions that maybe difficult to quantify, collect and control.

The DEC also requests further clarification of how EPA anticipates these units will be monitored and tested given the above stated difficulty. Specifically, what alternative test methods and control strategies should be applied to these units?

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Brian Backler
Commenter Affiliation: Wisconsin Metal Cleaning Corp.
Document Control Number: EPA-HQ-OAR-2003-0119-2470
Comment Excerpt Number: 2

Comment: From what I have read of the EPA's report, the estimate of the number of burn-off ovens in use is largely inaccurate. I have been involved in the powder coating and burn-off business for over 20 years, and have personal knowledge of at least 50 ovens in Wisconsin alone. Many powder-coating companies have one or two ovens that they use to burn off their own product, and I believe these may have been overlooked in the research that was done to determine the number of ovens being used.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Brian Backler
Commenter Affiliation: Wisconsin Metal Cleaning Corp.
Document Control Number: EPA-HQ-OAR-2003-0119-2470
Comment Excerpt Number: 3

Comment: To classify burn-off ovens as "incinerators" is not accurate, as they do not incinerate metal parts, but rather remove material from the parts so that they can be re-used. Perhaps a more precise classification would be "re-claimers."

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

7.6 Subcategories: Small remote incinerators

Commenter Name: Nancy Oliver
Commenter Affiliation: Safety Waste Incineration
Document Control Number: EPA-HQ-OAR-2003-0119-2095.1
Comment Excerpt Number: 1

Comment: The proposed definition of small, remote incinerators will result in unintended exclusion of some sources.

The proposed rule describes small, remote incinerators as batch-operated units that combust less than one ton per day and are farther than 50 miles driving distance to the closest MSW landfill. To the extent that these are located in Alaska, a major difference in these types of units is the inability to operate a wet scrubber in the northern climates and the lack of availability of wastewater handling and treatment utilities. EPA believes this would impact their ability to meet emission limits for pollutants controlled by wet scrubbers. In addition, because of the remote location, these units do not have lower-cost alternative waste disposal options (i.e., landfills) nearby and emissions associated with transporting the solid waste could be significant.

The proposed rules goes on and further defines small, remote incinerators as "an incinerator that combusts solid waste (as that term is defined by the Administrator pursuant to Subtitle D of

RCRA) and has the capacity to combust 1 ton per day or less solid waste and is more than 50 miles driving distance to the nearest municipal solid waste landfill."

The proposed definition will inadvertently exclude those incinerators that are within the spirit of the definition, but are located within 50 miles of a municipal solid waste landfill that only accepts the wastes if they have been incinerated.

We operate one such unit in rural Alaska. We lack the availability of wastewater handling and treatment utilities and do not have lower-cost alternative waste disposal options (i.e., landfills). Even though we are located within 50 miles of a municipal solid waste landfill, the nearest landfill that will accept the non-RCRA oily waste that we now must incinerate is located thousands of miles away in the Lower 48.

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 4

Comment: Under the proposed rule, ConocoPhillips' incinerators would not qualify as "small, remote incinerators" but instead would have to meet "incinerator" subcategory emission limits or shut down.

The proposed CISWI standards eliminate the >30% MSW exemption currently relied on by ConocoPhillips and a number of other Alaskan incinerator operators. Yet, the preamble continues to recognize the unique challenges of waste disposal and incinerator operation in remote Alaska. These unique characteristics apparently played a large role in EPA's creation of the "small, remote incinerator" subcategory. The preamble to the proposed rule provides this rationale for creation of the subcategory:

Small, remote, incinerators: These are batch-operated units that combust less than one ton of waste per day and are farther than 50 miles driving distance to the closest MSW landfill. To the extent that these units are located in Alaska, a major difference in these types of units is the inability to operate a wet scrubber in the northern climates and the lack of availability of wastewater handling and treatment utilities. We believe this would impact their ability to meet emission limits for pollutants controlled by wet scrubbers. In addition, because of the remote location, these units do not have lower-cost alternative waste disposal options (i.e., landfills) nearby and emissions associated with transporting the solid waste could be significant [Footnote:75 Fed. Reg. at 31951 (emphasis added).]

EPA's reasoning underlying the creation of the "small, remote incinerator" subcategory is sound. EPA recognizes the technical challenges of operating pollution control technology in Alaska, the lack of accessible alternatives, and – to some extent – the environmental consequences of forcing incinerator shutdown.

Unfortunately, the parameters that define "small, remote incinerators" lead to results that are at odds with this recognition. Section 60.2265 of the proposed regulations defines a "small, remote

incinerator" as "an incinerator that ... has the capacity to combust 1 ton per day or less solid waste and is more than 50 miles driving distance to the nearest municipal solid waste landfill." [Footnote: ConocoPhillips believes that the use of the word "capacity" in this definition may be an error. The language in the preamble focuses on the amount actually combusted by incinerators in this subcategory, not the capacity of the incinerators. Further, the incinerators that EPA used to establish the MACT floor for this subcategory all had capacities greater than 1 ton per day. See Tables B-40 through B-48 in the April 26, 2010 memorandum from Jason Huckaby, Amber Allen, and Kristen James of the Eastern Research Group to Charlene Spells, Toni Jones, and Ketan Patel of the USEPA. A focus on capacity instead of actual combustion excludes a large number of incinerators from qualifying for this subcategory.]. None of ConocoPhillips's Alaska incinerators meets this definition, and neither do the vast majority of remote Alaskan incineration units. This is both because the capacity of all of ConocoPhillips's incinerators exceeds 1 ton per day [Footnote: Lacking any definition of capacity within the rule, we base this statement on simple multiplication of the possible pound per hour charge capacity by the number of hours in a day. However, the batch nature of operating these small incinerators renders the capacity much lower.], the actual amounts of waste burned are slightly higher, and because the Kuparuk incinerator is within 50 miles of a landfill (even though it is still located in a remote and isolated area). Thus, despite the fact that ConocoPhillips's incinerators face the exact Alaskan challenges described in the proposed rule's preamble, ConocoPhillips cannot avail itself of EPA's proposed solution to the problem.

Under the proposed rule, then, ConocoPhillips will be faced with the choice of installing emissions controls or shutting down the incinerators and utilizing other means of solid waste disposal. Neither option is feasible.

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 5

Comment: It may not be technically feasible for ConocoPhillips to meet the "incinerator" subcategory emission limits.

As EPA recognizes in the proposed rule's preamble, the challenges associated with operating pollution control technology in Alaska may make compliance with the "incinerator" subcategory emission limits infeasible. Wet scrubbers may not be operable in Alaska's harsh climatic conditions, and there may be insufficient treatment or disposal facilities to handle wastewater. In addition, wet scrubbers, if they could be made to work, create additional environmental problems. Specifically, wet scrubbers can lead to ice fog and associated visibility impacts, a significant environmental issue governed by Alaska regulations. [Footnote: 18 AAC 50.080 (retaining the discretion to require reductions of water emissions precisely to combat ice fog). Ice fog is also addressed by local ordinances and Environmental Impact Statements.] Further, the capital costs associated with retrofitting all four of our North Slope incinerators are estimated at

about $10,000,000, excluding additional costs that would be necessary to adapt the technology for Arctic conditions and the requisite wastewater treatment facilities. We doubt this option is viable given the associated technical difficulties. As such, it is likely that ConocoPhillips would be forced to shut down its incinerators under the proposed rule.

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 6

Comment: Waste accumulation due to unavoidable transportation delays could attract animals, in potential violation of state law and policy and the federal Endangered Species Act.

One unintended and very significant consequence of this proposed rule, particularly in a remote geographic location such as Alaska, is the attraction of wildlife to operational facilities. The wildlife problem stems from waste storage issues. As mentioned above, our Alpine facility is not connected to a permanent road system so it has logistical and seasonal constraints for transporting solid waste offsite. All transport to and from this facility is either by aircraft or by ice road during the winter months (January – April). Due to Alpine's proximate location to the coast (about 5 miles) and the associated increased fog conditions during the summer, combined with the harsh winter climate, it is unlikely that food waste can be transported offsite on a daily basis. For harsh weather periods of days to weeks, waste will have to be stored onsite when flights are grounded. Even though Kuparuk is connected by road, surface white-out conditions can still close the roads to vehicle transport for days at a time, again leading to the accumulation of waste.

In these circumstances, stored waste may attract wildlife (e.g., polar bears, grizzly bears, fox, etc.) to our operations, which could in turn result in potentially dangerous interactions with personnel. Longer term onsite storage is not a safe option for either the wildlife or humans. Our operational areas, and areas where we can accumulate solid waste, are very small such that the ability to store multiple days of solid waste could be problematic. Further, bear-proof dumpsters alone are inadequate to handle the capacity of waste that could collect during an adverse weather event. The use of incinerators to manage food waste has proven to be a valuable tool for preventing human/wildlife interactions.

Human/wildlife interactions due to insufficiently managed food waste became a highly visible issue in Alaska in the late 1980s and early 1990s, when grizzly bears and foxes (arctic and red) had access to food waste and ultimately became "conditioned" to obtaining food from dumpsters, instead of hunting for traditional prey. In response to the growing population of grizzly bears in the oilfields, the Alaska Department of Fish and Game (ADF&G) initiated a mark/recapture project in 1991 to understand the numbers of bears occupying the North Slope oil fields. Beginning in 1999, management practices of food waste were vastly improved, with incineration of food waste a key part of the solution. The result was a marked decrease in the number of food-conditioned animals.

Removing the incinerators from use would undo this progress and threaten to turn back the clock on animal protection and human safety.

Alaska regulation and policy is designed and worded specifically to prevent the accumulation of wastes. The requirement for responsible storage and management of solid waste (with incineration being key) in the North Slope oilfields has multiple regulatory sources. For example, Alaska Department of Environmental Conservation regulations state that "A person may not store accumulated solid waste in a manner that causes ... the attraction or access of domestic animals, wildlife, or disease vectors ...." [Footnote: 18 AAC 60.010] Further, Alaska Department of Fish and Game policy states,

The preferred alternative for disposal of garbage that may attract bears is incineration at a facility that meets ADEC standards for combustible residue (i.e., less than 5 percent unburned combustibles)

....

Large field camps (more than 15 people) should dispose of garbage by daily incineration in a fuel-fired incinerator that meets ADEC standards. [Footnote: Bear-Human Food Waste Management Policy, Division of Wildlife Management, Alaska Department of Fish and Game.]

As a good management measure and to ensure compliance with the above, ConocoPhillips policy prohibits feeding wildlife or providing a means of obtaining anthropogenic food. Personnel are subject to disciplinary action, up to and including termination, if the policy is violated. In accordance with ConocoPhillips's wildlife interaction and avoidance plan, all ConocoPhillips facilities and camps are obligated to prevent impact to local wildlife populations, for example, by avoiding the attraction of predatory animals (e.g., foxes, gulls, ravens, and bears) to the project.

The potential effect on animals exposes the proposed rule to a very significant deficiency. Under Section 7(a)(2) of the ESA, EPA is required to consult with the US Fish & Wildlife Service (USFWS) to ensure that any action it authorizes or carries out is not likely to jeopardize a listed species (in this case, the polar bear). This rulemaking would result in additional storage of putrescible wastes, a known polar bear attractant, which is currently prohibited by our USFWS-approved wildlife interaction plans. The likely result would be increased bear-human interactions, including deterrence activities, and possibly including lethal take in defense of life. This foreseeable outcome of the rulemaking clearly requires consultation.

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 7

Comment: The cost of transporting waste materials was not adequately considered.

The obvious impact of shutting down these incinerators is the resulting need to transport the solid waste to a landfill. ConocoPhillips's Kuparuk facilities are 30-50 miles from the nearest

landfill, in Deadhorse - by road. The Alpine facilities are only accessible by ice road for three months of the year. Excluding this window of terrestrial accessibility, waste materials would have to be flown to the nearest landfill. EPA makes somewhat contradictory statements regarding these alternatives. On the one hand, the preamble recognizes that "lower-cost alternative waste disposal options" are not available in Alaska. [Footnote: 75 Fed. Reg. at 31951] On the other hand, the Regulatory Impact Analysis indicates that small, remote units would actually save money by diverting waste to a landfill. [Footnote: Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, Draft Report, prepared for Tom Walton of EPA-OAQPS by RTI International, April 2010; RTI Project No. 0209897.004.074 (indicating that cost per ton of pollutant removed would be -$26,600per ton for small, remote incinerators).] The latter could not be further from the truth. ConocoPhillips' costs associated with diverting waste to a landfill include:

1. Costs to air-freight Alpine waste estimated at upwards of $4,000,000 per year

Dedicated flights from Alpine to the nearest landfill in Deadhorse would be necessary. These flights would cost approximately $14,500 per trip. To avoid waste accumulation, trips would be required as frequently as possible. As a result, annual transportation costs for wastes would amount to over $4,000,000. [Footnote: In terms of cost effectiveness, this amounts to $310,000 per ton of pollutant removed, far greater than the $26,600 savings asserted in the Regulatory Impact Analysis.] This compares with current costs of less than $100,000 per year for running the existing incinerator systems.

2. Costs to transport Kuparuk waste estimated at $1,500,000 per year

ConocoPhillips has estimated it will cost at least $1,500,000 per year to dispose of the Kuparuk waste by transporting it there via trucks. [Footnote: In terms of cost effectiveness, the impact is over $110,000 per ton of pollutant removed, again a stark contrast to the savings indicated in the Regulatory Impact Analysis.] Again, this compares with current costs of less than $100,000 per year for running the existing incinerator system.

Thus, in contrast to suggestions in the Regulatory Impact Analysis, it would cost millions of dollars for ConocoPhillips to comply with the proposed rules.

Additionally, there are substantial environmental costs associated with transporting the waste. For example, the CO emissions from air transportation would exceed current incinerator CO emissions by an order of magnitude. These environmental impacts are not discussed in the preamble to the rule.

In sum, if the rule is finalized as proposed, ConocoPhillips is faced with a choice between two very expensive and potentially impossible alternatives – in order to reduce what EPA considers an insignificant amount of pollutants in nearly every case. [Footnote: 40 CFR 71.5(c)(11)(ii)(A)] This does not appear to be an adequate consideration of costs and other impacts, including impacts to personnel and wildlife, to achieve emission reductions as required by §129(a)(2) [Footnote: §129(a)(2) reads: "Standards applicable to solid waste incineration units promulgated under section 111 and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts

and energy requirements, determines is achievable for new or existing units in each category. [emphasis added]]

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 8

Comment: The preamble to the proposed rule indicates that EPA understands the unique problems facing Alaskan incineration units in terms of feasibility, alternatives, and costs. However, the solution EPA proposed – the creation of the "small, remote incinerator" subcategory – does not adequately address these problems. The best solution to avoid the increased costs, safety and environmental impacts, in our view is to then exempt small, remote incinerators, as we propose to define this category below, in Alaska from the rule, giving due consideration to the costs of compliance detailed above. In the event EPA does not provide this exemption, as an alternative we propose that EPA remove Alaskan incinerators from this rulemaking and treat them distinctly in a separate rulemaking. This will allow adequate time to explore and develop alternatives such as creating additional subcategories to address the problems detailed above that EPA has not yet considered. Any option that would not force the shutdown of the incinerators must be considered and pursued to avoid the foreseeable conflict between complying with both emission limits and wildlife regulations.

Alternatively, if the above cannot be made to work (and we hope it can), EPA should alter the definition of "small, remote incinerators" so that Alaskan incinerators at least have the opportunity to meet the emissions limits of that subcategory instead of the "incinerator" subcategory. We propose to modify the definition of "small, remote incinerator" to include a definition specific to Alaska. The definition in proposed sections 60.2260 and 60.2870 should be modified to state,

Small, remote incinerator means an incinerator that combusts solid waste (as that term is defined by the Administrator pursuant to Subtitle D of RCRA) and has the capacity to combust 1 ton per day or less solid waste and is more than 50 miles driving distance to the nearest municipal solid waste landfill. If the incinerator is located in Alaska, it qualifies as a small, remote incinerator if it is located north of the Brooks Range or is not accessible by the Federal Aid Highway System, and it burns less than 2 tons of solid waste per day, calculated as a daily average over each calendar year.

Finally, we point out that, if the definition of "small, remote incinerators" is modified as suggested above, the wildlife issues identified above may not be solved for other Alaska facilities.

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 3

Comment: "Small Remote Incinerator"- This new definition includes the specification "...and are farther than 50

miles driving distance to the closest MSW landfill." In reviewing the preamble and the backgrounddocuments (EPA –HQ-OAR-2003-0119-0041, Attachment B) in the docket, it is our understanding the "...50 miles driving distance..." was based on an examination by EPA of the locations for the known population of units that would be regulated under the small remote incinerator category compared to the location of municipal solid waste landfills.

This analysis is deficient. First, not all the units are accessible by vehicle driving from another location so the definition is ambiguous in terms of the applicability to these facilities. Second, the population of affected units may or may not be within 50 miles of a municipal solid waste (MSW) landfill simply because EPA was not aware of the entire population of units falling onto this category. Third, road access can be seasonal in Alaska, so while a MSW landfill may be accessible a portion of the season (e.g. winter with ice roads) for the majority of the year, the units may not be road vehicle accessible from the facility.

To alleviate these issues we propose the following revised language for the definition of Small Remote Incinerator:

"...means an incinerator that combusts solid waste, (as defined in RCRA, Subtitle D) has the capacity to combust one ton per day or less solid waste, and is inaccessible by vehicle to a MSW or inaccessible by vehicle via the National Highway System (as defined by the Federal Highway Administration) to a MSW."

Under 40 Code of Federal Regulations (CFR) 60 Subpart EEEE, Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2005 (the OSWI Rule), EPA provided exemptions for certain incinerators and air curtain incinerators in isolated areas of Alaska. These exemptions were included in the OSWI rule because "alternative disposal options are not available or are economically infeasible." (see Federal Register Vol. 70, No. 241, p. 74878 and 74879.)

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 13

Comment: AOGA believes the units included in the small remote incinerator category present unique environmental, human health and safety and wildlife issues with adoption of the proposed CISWI rule. We have attempted to identify and explain these in the above discussion.

Because of the significant negative impacts from the proposed CISWI regulations on our member operations and competitiveness, compared to other United States (without Alaska operations) and

international oil & gas companies, we propose consideration of an exemption for small remote incinerators (as currently defined) from the CISWI rule which are not accessible by the Federal Highway System.

We believe this simple exemption, while not eliminating the total negative impacts (some small remote incinerator units will still be affected and likely choose to shut down rather than attempt to meet the rule limits) to AOGA members, is a prudent measure to achieve the overall objectives of Section 129 while also weighing the benefits and negative environmental impacts (aircraft emissions, marine vessel emissions, wetlands destruction, ESA/polar bear attraction, etc) and increased human safety and wildlife risks from adoption of the standard.

As an alternative to this exemption, we propose revising the definition of small remote incinerator to only include those units inaccessible by the Federal Highway System and adjusting the numerical limits for the remaining units in the small remote incinerator subcategory in consideration of the aforementioned environmental, human health and safety, wildlife safety and ESA issues (as prescribed by Section 129(A)(2)).

Response: See preamble Section V. for the response on rationale for subcategories- small remote incinerators.

7.7 Subcategories: Agricultural waste burning units

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 5

Comment: No impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 8

Comment: We believe that no impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units. Until the agency identifies the full population of sources impacted by the Proposed Rule, it will be impossible to promulgate appropriate standards based on representative sources.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

7.8 Subcategories: Cyclonic burn barrels

Commenter Name: Anonymous
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-1123
Comment Excerpt Number: 1

Comment: I think that a de minimis level should apply to small systems such as ash burners (cyclonic drum-mounted burners) for oil rag burning for heat recovery. Small businesses prefer this to expensive landfilling, and heat recovery goes to the heart of RCRA (resource conservation and recovery). These small recovery units would be too expensive to operate under the new emissions monitoring requirements.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 6

Comment: No impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Trina L. Vielhauer
Commenter Affiliation: Division of Air Resource Management, FL DEP
Document Control Number: EPA-HQ-OAR-2003-0119-1526.1

Comment Excerpt Number: 3

Comment: We request that EPA affirmatively acknowledge that air curtain incinerators burning land clearing debris and cyclonic burn barrels used by law enforcement officials to dispose of contraband or prescription pharmaceuticals are not covered by CISWI.

Response: See preamble Section IV. for a summary of significant changes since proposal. Further, see preamble section for response on air curtain incinerators.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 64

Comment: The Rule Should Define Cyclonic burn barrels and chemical

recovery units

EPA has removed the exemptions for cyclonic burn barrels and chemical recovery units. We request that EPA provide a definition for cyclonic burn barrel and chemical recovery unit in the final rule so facilities can understand what units are now regulated under CISWI. We assume that our chemical recovery furnaces in the pulp and paper industry would not be covered by this rule if burning only black liquor and non-waste auxiliary fuels.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs) .

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 1

Comment: "Incinerator"- This definition is proposed to be added to the rule and includes cyclonic burn barrels. A definition for cyclonic burn barrels has not been included (note- the existing CISWI rule defines a cyclonic barrel burner and, as far as we can see, the proposed rule language does not identify any change to this term or definition).

Most importantly, in reviewing the data identified for establishing the Maximum Achievable Control Technology (MACT) floor, no evidence is presented that actual emissions testing data for a cyclonic burn barrel(s) (or cyclonic barrel burner) was collected. The design and operation of this type of device is significantly different than the types of incinerator devices and the capacity of the units included in the MACT floor determinations. We believe unless the United States Environmental Protection Agency (EPA) has empirical emissions testing data to support the position that emissions from cyclonic burn barrels are equivalent to the types of devices

included in establishing the MACT floor, it is inappropriate to include a cyclonic burn barrel(s) in the definition of incinerator.

In addition, from a practical perspective we believe, at this time, it is technically infeasible to demonstrate compliance with the proposed emissions limits on a typical cyclonic burn barrel as prescribed by the proposed rule. Cyclonic burn barrels are very small (typically 55 gallons) and the duration of a normal burn cycle is relatively brief (normally less than one hour). For example, a Dioxin/Furan sample typically requires several hours to collect the mass needed to achieve detection limits. This length of sampling is simply infeasible on a typical cyclonic burn barrel operation since it does not have the capacity to burn enough waste during a longer burn cycle.

Response: See preamble Section IV. for a summary of significant changes since proposal.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 9

Comment: We believe that no impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units. Until the agency identifies the full population of sources impacted by the Proposed Rule, it will be impossible to promulgate appropriate standards based on representative sources.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 43

Comment: The Rule Should Define Cyclonic Burn Barrels and Chemical Recovery Units

EPA has proposed to remove the exemptions for cyclonic burn barrels and chemical recovery units. We request that EPA provide a definition for cyclonic burn barrel and chemical recovery unit in the final rule so facilities can understand what units are now regulated under CISWI.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs).

7.9 Subcategories: Air curtain incinerators

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 2

Comment: As stated in the CAA Section 129(g)(1)(C) "...air curtain incinerators comply with opacity limitations to be established by the Administrator by rule" and therefore the EPA does not need to establish separate HAP limits as per Section 129(a)(4). Available performance test data [Footnote: "Evaluation of Emissions from the Open Burning of Land-Clearing Debris"; Project Summary; EPA/600/SR-96/128, January 1997] indicates that some ACI units can have the potential to emit a significant amount of HAP emissions, and can have the potential to exceed major source thresholds of 10 tons per year (TPY) for a single HAP and 25 TPY for total HAPs. South Carolina requests that the EPA provide clarification on whether or not CAA Section 112(g) would apply in those instances and if an ACI unit could potentially be subject to both CAA Section 129 requirements and Section 112(d) requirements.

Response: See preamble Section V. for the response on air curtain incinerators.

Commenter Name: Trina L. Vielhauer
Commenter Affiliation: Division of Air Resource Management, FL DEP
Document Control Number: EPA-HQ-OAR-2003-0119-1526.1
Comment Excerpt Number: 4

Comment: We request that EPA affirmatively acknowledge that air curtain incinerators burning land clearing debris and cyclonic burn barrels used by law enforcement officials to dispose of contraband or prescription pharmaceuticals are not covered by CISWI.

Response: See preamble Section IV. for a summary of significant changes since proposal. Further, see preamble Section V. for response on air curtain incinerators.

7.10 Other - Rationale for Subcategories

Commenter Name: Eric E. Boyd
Commenter Affiliation: Rhodia Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1122.1
Comment Excerpt Number: 3

Comment: SARUs do not fall neatly into any of the five subcategories of units regulated under the proposed CISWI rule.

The Agency has proposed to subcategorize CISWI units based on technical and other fundamental differences in the processes (combustor design, draft type, and availability of utilities). 75 Fed. Reg. 31,938, 31,951. The five subcategories of CISWI units are as follows:

* Incinerators: units intended to dispose of solid waste materials by combustion

* Energy-recovery units: units that combust solid waste materials as a percentage of their fuel mixture and are designed to recover thermal energy in the form of steam or hot water

* Waste-burning kilns: waste-burning units with a rotating cylinder into which raw materials are fed

* Burn-off ovens: very small, batch operated combustion units that are used to clean residual materials off of various metal parts for reuse

* Small, remote incinerators: batch-operated units that combust less than one ton of waste per day and are farther than 50 miles driving distance to the closest landfill

Id. SARUs do not fit neatly into any of these categories. SARUs are not "incinerators" because they do not combust solid waste for the purpose of disposal. SARUs combust materials, like spent sulfuric acid and other sulfur-bearing materials, in order to recover valuable sulfur in the sulfuric acid regeneration process, or to derive fuel value. SARUs similarly do not meet the definition of "energy recovery units," in that they are not designed to recover thermal energy in the form of steam or hot water.

Response: See preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Chemical Recovery (SARUs).

8.0 NEW DATA/CORRECTIONS TO EXISTING DATA

8.1 New Data Submissions

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 8

Comment: Michigan would recommend that the EPA investigate including D/F data from a tested scrap wire/transformer burn-off oven referenced in the EPA document: "Locating and Estimating Air Emissions from Sources of Dioxins and Furans," EPA-454/R-97-003, pp. 4-129 thru 4-130 and Table 4-28 (see http://vvww.epa.dov/ttn/chief/le/dioxin.pdf). This unit was apparently equipped with a high temperature (1800-2000° F) afterburner control system. This unit would appear to be representative of worst case materials processed with regard to potential for generation of DIF and HCI based on processing wire coated with PVC plastic insulation and possible PCB transformer oil residue on the transformers.

Response: See the “CISWI Test Data Database – Post Proposal Data Corrections” memorandum in the docket.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 10

Comment: As part of our recent permitting activities, Michigan became aware of certain efficient D/F, acid gas, and PM control measures used at sources in other states. One set of control measures for these contaminants applied by a source in Texas included a medium temperature afterburner (1560°F) and a ceramic element filter with lime injection. This fluidized bed rubber denuding system was installed in 2005 at the Red River Army Depot, Texarkana, Texas. This source

should be added to the inventory of sources used for the rulemaking along with other sources using similar control technologies.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 24

Comment: PCA attempted to identify additional stack tests on the waste-burning kilns that EPA identified as best performers. [See submittal for Table A-6 provided by commenter] that summaries the additional data, which have been added to the corrected database and used to develop alternative floors (described in the next section). For example, the table shows that the characterization of lead and PM emissions for National Kiln 1 (a floor unit for each of these pollutants) changes when new test data are added. EPA used only the 2007 tests, which we believe were secured from the local air agency. A significant error in the assessment of lead emissions is made by using only the 2007 tests, because the added data from the 2008 and 2009 testing show higher emissions and much greater variability in emissions. A significant error in the assessment is also made for PM emissions, because the added data from later testing show large variability in emissions.

The same result is found in each case where we have obtained additional stack test data for existing kilns. The new tests often show higher emissions than the stack tests contained in the docket and used by EPA to develop the proposed floors. In all cases – even when the emissions are lower – the new tests show greater emissions variability than is indicated by the data in the docket.

The docket data provide an inadequate representation of the emissions variability for best performing kilns. This remains true even when the additional test data we have collected is included in the database.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 3

Comment: ConocoPhillips employs five incinerators at the three locations to support these remote oilfield operations. One very small incinerator is located at the Beluga River field and two small incinerators each are employed at the Alpine and Kuparuk fields. These incinerators burn principally waste classified as municipal solid waste (MSW) along with some sewage sludge and very small amounts of waste associated with its medical clinics. Because the incinerators burn greater than 30% MSW, currently all five incinerators are exempt from the CISWI emission requirements published in December 2000 [Footnote:40 CFR 60.2550(a) and 60.2555(c), December 1, 2000] and subsequently implemented in Alaska via a federal plan in 2003 [Footnote: 68 FR 57518, October 3, 2003].

The incinerators are described by the table below [see submittal for data table provided by commenter showing incinerator capacities, average amounts burned, and average annual emissions]. The information in the table, compiled from the last five years' operation, is typical of the incinerators' operations.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 7

Comment: RIPA was able to obtain results of limited source testing conducted at a typical drum reclamation furnace; the results for particulate matter are shown below in comparison to the proposed CISWI limits for burn-off ovens. This comparison demonstrates that the particulate matter emission rate for a drum reclamation furnace is well above the range of values identified in EPA's MACT Floor calculations for burn-off ovens. This corroborates RIPA's assertion that the data collection activities and resulting MACT floor calculations for the burn-off oven subcategory cannot be used to represent actual performance levels of drum reclamation furnaces [see table showing emissions of particulate matter from source test results of drum reclamation furnaces compared to the proposed CISWI existing and new unit emission limits for the burn off oven subcategory provided by the commenter].

RIPA was able to obtain results of limited source testing conducted at a typical drum reclamation furnace; the results for lead and cadmium are shown [see submittal for table provided by commenter] in comparison to the proposed CISWI limits for burn-off ovens. This comparison demonstrates that the lead and cadmium emission rates for a drum reclamation furnace are well above the range of values identified in EPA's MACT floor calculations for burn-off ovens. This corroborates RIPA's assertion that the data collection activities and resulting MACT Floor calculations for the burn-off oven category can not be used to represent actual performance levels of drum reclamation furnaces.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mary Sullivan Douglas
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2220
Comment Excerpt Number: 1

Comment: On behalf of the National Association of Clean Air Agencies (NACAA), please add the information on the enclosed CD to the abovementioned docket. [See submitted CD for information provided by commenter.]

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

8.2 Data Corrections

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 5

Comment: PTPC's 1976 biomass boiler has been listed as a CISWI unit due to our use of urban wood and EPA is expecting it to perform according to the CISWI limits, yet our real-life performance data has been left behind.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 63

Comment: In the City of Long Beach at the Port of Long Beach you left out an incinerator facility, which I don't know the name of but it's there.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 6

Comment: The Stack Test Information Shown in Exhibit H Shows Some of the Units Have No Emission Control Device.

We believe that the unit at SCINVISTACamdenPlant identified as combustion unit I.D. "Unit 19-Lindberg" is not a burn-off oven at all. To our knowledge, Lindberg never manufactured any burn-off ovens or what we refer to as a cleaning furnace in name and in function. Further, some units tested do not have emission control devices installed. Although a unit without a control device would have low levels of some emissions (e.g., NOx, CO), we would expect the unit to have high VOC emissions if any significant amount of material was being processed in this unit during the test.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 9

Comment: EPA Document # EPA-HQ-OAR-2003-0119-0041 Shows that Stack Test Data for 26 of the 36 Units was Estimated, or Assumed.

Item II, on page 2 of the referenced document clearly states that "data gaps" were filled by using measured data from similar units operated by the corporate entity. There are serious flaws with this procedure. For example, the unit at facility I.D. FLAscend, Unit I.D. "CP-L," is one of our furnaces. It is also one of the largest units we have ever manufactured. This particular unit has two (2) exhaust stacks, whereas a standard unit has only one. The total stack gas flow rate for each stack on this unit is shown as 622 dscfm on the stack test. The total for both stacks together would then be 1244 dscfm. This rate is over 7 times the stack gas flow rate of a smaller more standard size unit. Table 3 shows the stack gas flow rates for all of the units operated by FLAscend to be 1234 dscfm, which is not correct. The flow rates for some of these other furnaces could be as low as 175 dscfm depending on the actual model of furnace.

For our furnaces, the specific Model and Serial number determine the size of burners used on the unit. Burner size in turn determines the approximate stack gas flow rate. Our records show that this customer does indeed have other units of ours in operation. Our records also show, however, that the stack gas flow rates for most of the other units should be in the range of 175 dscfm based on the burner size of these units. This rate is 7 times less than the "assumed" stack gas flow rate shown in Table 3 for the other 7 units owned by this entity. As noted on page 2, item II of the document, the emissions estimates were calculated using the stack gas flow rates. With incorrect stack gas flow rates, the emission estimates, emission reduction estimates, and all other data which rely on these flow rates are inaccurate. We are certain that this same problem exists with other units on this list. As another example, we point out the unit at Facility I.D. VAQuadrantEPP. We believe that this unit is also one of our furnaces (a Model SCTR-9). This furnace would have a stack gas flow rate of about 171 dscfm, not 1234 dscfm as shown in Table 3.

Exhibit H [DCN: EPA-HQ-2003-0119-1767.9] shows the PM emissions from OHWhirlpoolClyde to be 49.784 mg/dscm. The actual stack test emission result summary for this unit [see DCN: EPA-HQ-2003-0119-1768.3] shows a value of less than 17.81 mg/dscm.

Exhibit H [DCN: EPA-HQ-2003-0119-1767.9] indicates that the unit at FLAscend does not have a control device. This statement is not correct. This unit is one of our furnaces, and it is equipped with an afterburner.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Dirk J. Krouskop
Commenter Affiliation: MeadWestvaco (MWV)
Document Control Number: EPA-HQ-OAR-2003-0119-1962.1
Comment Excerpt Number: 2

Comment: EPA must recognize that at the heart of any regulatory action, accuracy of data is critical to ensuring that sound decisions are made. As is discussed in greater detail within the comments submitted by AF&PA, EPA has failed to sufficiently review the data that is available and ensure its accuracy [See DCN:EPA-HQ-OAR-2003-0119-1951.1 for comments submitted by AF&PA]. In its data gathering exercise, EPA requested data in two phases. Phase I essentially requested existing data from most units believed to be regulated. EPA reviewed this data and then selected certain units to perform additional testing (Phase II) that was ultimately used by EPA to determine the proposed CISWI standards. As noted in greater detail within our comments filed for the Boiler MACT proposed rulemaking, we are concerned regarding numerous errors that have been identified within EPA's database. It is incumbent upon EPA to perform a thorough review of all stack sampling and associated laboratory analysis reports for the

Phase I and II information collection requests (ICR) at a minimum for units currently

identified as CISWI units, since errors will affect the currently proposed limits. EPA needs to ensure that all Phase I results are compatible with the Phase II protocols, as well as with the

compliance test methods and reporting requirements to be promulgated in the final rule. The Phase II test reports should also be carefully examined and checked to insure the sampling was conducted properly and the emission rates and method detection levels were calculated according to the Phase II protocols.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Further, see preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 6

Comment: The baseline established for the CISWI categories includes data from a variety of tests conducted on the subject sources over a period of more than 20 years — from 1988 through 2009. Nowhere in the analysis of the data does EPA establish the quality of the data. It is not known if the data was collected as the result of a witnessed compliance test or a simple spot-check of system emissions, what fuels were being combusted at the time of the test, or what QA/QC procedures were employed during testing. A review of the data reveals some questionable data that has been included in setting the CISWI standard baseline.

Examples include:

- The carbon monoxide data from the testing of the unit identified as WAErneraldKalama U-2 on November 28, 2007. The three runs conducted on this date all show a result of 0 ppm with no indication of the method detection limit. These three data points were combined with the non-zero results obtained for the same unit in testing in 2009 to calculate an average carbon monoxide emission rate for this unit. This established it as the top performing facility in the energy recovery category, with emissions that are less than 6% of the second best performing unit in the category and only about 1% of the third best performing unit. Clearly values of "zero" should be questioned and the ranking of this facility reconsidered.

- The units identified as NYBlackRiverGen E00001, E00002 and E00003 all rank in the top five sources in establishing the energy recovery category baseline for particulate matter and mercury. Examination of the test results for these three units, however, reveals that the emissions rate for all three units are identical for each and every test run conducted on these units for these pollutants (as well as for tests to measure hydrogen chloride), clearly indicating that the results are not individual test results from individual units, but composite results for the three units combined. Consequently, the baselines for particulate matter and mercury should be reestablished replacing two of the NYBlackRiverGen entries in each of these categories with the units currently ranked #6 and #7.

It is assumed that a more detailed review of the test data will reveal additional questions regarding the methodology and results that have been used to calculate the CISWI baselines, calling the entire process into question. A more structured evaluation of the test results, instead of the statistical analysis of the submitted data, is required to ensure an appropriate MACT floor is established.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 7

Comment: In reviewing the data that was made available to the public and industry for comment (it should be noted that ALL data and calculations were not made available for review and comment) it was apparent to CEMEX that some data for our facilities, some of which happen to be in the floor, is incorrect and/or misrepresents our facilities as noted below:

1. The CEMEX Miami Soil Treatment Facility is a unique facility, so different from the nominal kiln being regulated, that it does not belong in the floor determination. The unit is permitted to treat soil contaminated with petroleum and coal tar and was processing petroleum contaminated soil at a rate of 40 tons/ hr during its emissions tests. It is equipped with a natural gas or oil-fired burner, a 99.9 percent efficient baghouse and a 99.5 percent efficient gas or oilfired afterburner. It does not fire coal or tires and the configuration and operation of the unit are unlike any kiln producing clinker. Specifically, this equipment does not operate at the temperatures achieved in a cement kiln, its operating temperature reaches only 1400 deg F whereas a cement kiln reaches temperatures upwards of 2700 deg F. EPA should exclude this unit from the floor determination since it is so dissimilar to a cement kiln.

2. In calculating carbon monoxide emissions data for our Brooksville K1 and K2, EPA made unknown assumptions for flow rates and assumed 02 concentrations to be zero. In recalculating these emission rates, the corrected data should be: [See submittal for tables showing corrected CO_2 concentrations provided by commenter]

3. In reviewing the Dioxin/Furans TEQ data reported by EPA for our Balcones Kiln #1 and Brooksville Kiln #1, EPA did not correct non-detections of congeners to set ND=detection level and EMPC=detection level. The corrected data should be:[See submittal for table showing corrected dioxin/furans TEQ values provided by commenter]

4. In reviewing the mercury data reported by EPA for our Miami Soil Thermal Treatment Facility, it was discovered that the emissions reported actually belong to the cement kiln and NOT the Soil Thermal Treatment Facility. It is also worth noting here that the Miami cement kiln does not have an Afterburner. It utilizes a fabric filter baghouse.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Also, see preamble Section V. for the response on rationale for subcategories-soil treatment units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 13

Comment: Separate from these systematic biases and gaps in the data base, we have identified a number of errors in EPA's use of the data submittals. Examples include mistaking the units of measure and making improper conversions to the standardized basis (Lafarge Whitehall K2 for DF TEQ), incorrectly identifying the reporting kiln in the database (labeling tests from Monarch Humboldt K4 and K5 for DF TMB as belonging to K5), entry of data for another pollutant (for metals), and various data entry errors. EPA has also excluded stack tests at higher emission values (IP Springfield for PM). We cannot explain a number of these errors. We requested, but were not provided, the calculations behind each floor concentration, showing both the equation

and the inputs to the equation for each emissions calculation. This information is necessary to properly assess these errors. Once again, EPA is acting in violation of § 307(d) of the CAA by not providing this information and developing this MACT standard in such a secretive manner.

All of the errors in the docket emissions tests for best performing kilns that we were able to identify are documented in the tables at the end of this section [see submittal for tables of corrections to the emissions test database submitted by the commenter.] Table A-1 presents a summary tabulation of the known errors as an indication of the extensive nature of these problems [See submittal for table provided by commenter.] Overall, two-thirds of the database is affected by one or more data errors. One-seventh of the database is affected by applying the default oxygen concentration of zero that results in understating emission concentrations by 33%. A significant fraction of the data for each pollutant is also affected by errors. For D/F TMB and TEQ, every test is affected by an incorrect treatment of non-detections that understates emissions. All tests for cadmium and lead are also affected by one or more errors. For mercury, all but one test is affected by errors. The net effect of the errors is to cause the database that EPA used to set the floors to understate actual emissions of the best performing kilns.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 16

Comment: Before a valid floor analysis can be conducted on either the TMB or TEQ basis, the following data review and correction tasks must be completed:

* All of EPA's TMB data must be corrected for improper inclusion of emissions data actually on a TEQ basis.

* All TMB and TEQ emissions data (for both best performing and other kilns) must be corrected to give the proper treatment of non-detections.

Until these errors are corrected, it is not possible to determine the appropriateness of subcategories for kilns based on design or materials used, to rank kilns correctly based on emissions, or to identify properly the best performing kilns.

Response: See preamble Section V. for the response on Limits for TMB and TEQ for dioxin/furans.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 21

Comment: Corrected Emissions Database for EPA's Identified Floor Units

PCA's review has identified and corrected as many of the errors as possible in the emissions data for best performing units in the limited time allowed for comment on the

Proposed CISWI Rule. Tables A-4.1 through A-4.10 [see submittal for tables provided by commenter] document the errors in the EPA database that have been identified and the corrected emissions values based on our review. The floor analysis in the next section includes corrected EPA data and data for additional facilities to more properly capture emissions variability.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 42

Comment: Data Quality Concerns

Emission test results for the nine pollutants being regulated under the proposed rule (PM, NOx, SO2, CO, Cd, Pb, Hg, HCl, and dioxin/furan) are the underlying basis for the proposed emission limits. In 2008, EPA distributed a survey targeted at major sources of hazardous air pollutants and facilities believed to have units that would be regulated under CISWI. This survey was intended to gather information on individual units to be

regulated under either the Boiler MACT or the CISWI rule. Respondents were asked to submit summaries of available emission test and fuel analysis results using spreadsheets. A database was created from the spreadsheet submissions and it was used to inform Phase 2 of the information collection. In 2009, a second ICR mandated extensive stack testing and fuel analyses at many facilities. Companies were given only four months to conduct this testing and submit the results to EPA.

Microsoft Access emissions databases were then created by EPA that contained information about the units that EPA proposes to regulate under the proposed definition of solid waste (ciswi_db_prop_app_041310.mdb) and the alternative approach (ciswi_db_alt_app_041310.mdb), The database for the proposed approach contains 9,898 records

with emission test results; 12,311 records with fuel analysis information; and 2,787 records with CEMS data. The database for the alternative approach contains a larger number of records for emission tests, fuel analysis, and CEMS data. Although this is a large amount of information, the emissions data in the database being used to set these standards that will impact hundreds of sources should be checked by EPA for accuracy. It is imperative for EPA to review the data to ensure sources followed EPA's instructions, performed the test methods correctly, and reduced the data correctly and that the units are properly subcategorized before promulgating emission limits.

EPA should also compare test results reported by 2008 survey respondents with test results from the 2009 mandatory test program to ensure the data were reduced using the same methodology, particularly with respect to the handling of non-detect data since most of EPA's test methods do not dictate how to report non-detect data.

EPA issued a set of instructions for the 2009 ICR testing program. These instructions covered:

* sampling methods to be used

* minimum sampling volumes for different pollutants

* how non-detect values should be handled and reported (although the instructions were silent on how method detection limits should be determined, and the methods themselves do not address detection limits)

* how boiler heat input rates should be calculated

* data reporting and submission procedures, e.g. required use of EPA's Electronic Reporting Tool (ERT)

The initial instructions distributed to the facilities selected by EPA for sampling contained a number of unclear or ambiguous requirements, which necessitated six subsequent Q&A and guidance documents and an EPA webinar to clarify what EPA really wanted. Because EPA set a four month time frame for the tests to be performed and results to be submitted to EPA, many companies had already contracted with stack sampling firms and had an agreed-upon scope of work before EPA had made final

clarifications to the instructions. Thus, not all of the 2009 testing was conducted in accordance with EPA's final instructions and guidance.

Emission tests not conducted as part of the 2009 Phase II ICR would not necessarily have satisfied all of the 2009 criteria established by EPA. In particular, the handling and reporting of non-detects were generally different, given that EPA stack testing methods other than Method 23 for dioxin/furan are silent on these points. This becomes an extremely important issue when looking at emission test results to identify units with the lowest emission rates.

EPA is using the units with the lowest test results to set the floors for each pollutant. Many of the lowest emission test results in the EPA database are identified as zero, non-detect, below detection level, or detection level limited. Many units are not using control devices to achieve these ultra low emissions levels, but are burning materials with inherently low pollutant contents. Therefore it is absolutely essential that method detection level information and data reporting procedures for tests conducted and not conducted according to the 2009 EPA protocols be critically examined for consistency. If there are inconsistencies, they need to be resolved so that the test results are compatible and can be used to identify the 'best performers'. Furthermore, if

stack testing will be used to determine compliance with emission limits in the future, the methods, data handling protocols, and data reporting procedures should be specified with sufficient detail. Such details are essential so that stack testing firms and facility operators know how to determine method detection levels and minimum reporting levels for each sampling method, and how data falling below these levels should be reported. Unless EPA clarifies these issues, the current confusion will continue and will create compliance uncertainty in the future [Footnote: In addition to undermining the rule, the flawed database violates EPA's obligation under the Information Quality Act to ensure and maximize the quality of information used in rulemaking. Section 515, Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554; H.R. 5658); see also 67 Fed. Reg. 8452 (Feb. 22, 2002); 67 Fed. Reg. 63657 (Oct. 15, 2002).]

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket and the preamble Section V. for the response on Treatment of Detection Levels.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 43

Comment: We also suspect that there are some units that have been miscategorized and are inappropriately influencing floors in the wrong subcategory, such as the units at KSCNHWichita and NDCNHAmerica, which are not burn off ovens, but are incinerators that are already subject to CISWI. EPA should review the data being used to set floors to determine if the data are correct and if the units are in the appropriate subcategory.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 45

Comment: It also appears EPA has improperly processed test data from Units U-2 and U-7. A May 2010 background document prepared for the Kalama plant's Title V permit renewal has the following information for these two boilers:

* U-2: capacity of 40,000 lb/hr steam; can burn natural gas, fuel oil, or "tar' (a substance having the consistency of fuel oil which has no sulfur or chlorine); flue gas routed to one of two baghouses when tar is being combusted. The most recent emission tests were done on 11/27/07 (natural gas) and 1/28/09 (tar). Initial tests were done on 3/22/95 (natural gas) and 3/22/95 (tar).

* U-7: 1975 B&W water tube boiler with rated capacity of 42,000 lb/hr steam; can burn natural gas, fuel oil, or "tar'; flue gas routed to a baghouse when tar is being combusted. Emission tests were done on 9/25/03 (tar), 11/3/05 (natural gas), and 5/5/09 (tar).

* Baghouses: neither equipped with COMS or any CEMS

A review of the MACT floor memo suggests the natural gas test results have been included with those obtained when the boilers were burning tar. For example the U-2 average CO value of 0.65 ppm is apparently the average of a 3-run 11/27/07 test on

natural gas (0 ppm) and a 3-run test on 1/28/09 (1.3 ppm) on tar. It does not make sense to include test results from natural gas combustion in calculations for the MACT floor for boilers burning solid waste. In the EPA database, Units U-2 and U-7 are listed as wall-fired boilers designed to burn gaseous and liquid fuels, but both boilers are mischaracterized as "solid non-coal" energy recovery units.

Boiler HB-512 at Deltech is a tangentially-fired natural gas boiler with a rated heat input capacity of 194 x106Btu/hr on natural gas. It is capable of combusting natural gas, landfill gas, and tar. Tar is fired as a liquid fuel; it has a higher heating value of about 18,200 Btu/lb. A report for CO and NOx stack tests conducted on June 14, 2005 indicates 88% of the heat input was from natural gas and 12% from tar. The EPA database has the CO results but not the NOx results for this test. Test results from this boiler are not representative of solid fuel boiler emissions and should not be used to set limits for solid fuel boilers.

The description of Boiler#5/Thermal Oxidizer at Pioneer Plastics in the Title V permit reads as follows:

"Pioneer operates a VOC Incinerator referred to at the facility as the Thermal

Oxidizer. The Thermal Oxidizer is used primarily to destroy volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from the manufacturing process. The Thermal Oxidizer is also referred to as "Boiler #5" because it has a separate heat recovery component which produces steam for the facility. The Thermal Oxidizer was manufactured by Hirt in 1982. The maximum heat input

capacity from No. 6 fuel oil fired in the Thermal Oxidizer is 39.5 MMBtu/hr."

While this unit does recover energy in its waste heat boiler, the above description suggests the unit is not a traditional boiler. Its emission characteristics would be different than a traditional boiler and it does not seem logical to include this unit in the energy recovery unit subcategory. In fact, this unit may not even belong in any CISWI subcategory since it is a control device intended to oxidize VOCs in off-gases from a manufacturing process and is already subject to another MACT standard.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 6

Comment: For example, from Eastman's review of the data, it appears the unit B20 at the NSPWAshland facility in Wisconsin was burning 100 percent wood during the test on August 11, 2009. If this is true, then this test data should be removed from the MACT floor analysis. Also, it appears this unit was burning no coal during the tests on June 9, 2004 and July 8, 2006, so this data should not be included in a MACT floor analysis for a coal subcategory. Similarly, the unit at HIPuunene Sugar Mill in the dataset indicates if may burn coal, but from observation of the emissions data, was likely not burning coal during its 2002 stack test. EPA should verify whether the data from this unit is applicable to coal units.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 8

Comment: EPA needs to collect coal data either directly from the sources (as Eastman is providing [See DCN: EPA-HQ-OAR-2003-0119-2115.1 and EPA-HQ-OAR-2003-0119-2115.2 for data and figures submitted by commenter) or from the suppliers that serve the top performers. If units do not have a large data set such as Eastman's, then EPA should collect chlorine data available from the coal suppliers.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 31

Comment: First of all, EPA (see page 34, Appendix) has the sulfur dioxide emissions at 21 ppm and that a 89 percent reduction is needed to meet the proposed standard of 4 ppm. We do not know where EPA obtained the 21 ppm value, but Eastman submitted SO2 CEMS data for this unit which shows SO2 concentrations at around 600 ppmv corrected to 7 percent O2.

Second, for NOx, EPA has the NOx emissions at 129 ppmv, while Eastman reported NOx GEMS data showing NOx around 300 ppmv, corrected to 7 percent O2.

Finally, it appears EPA has swapped our reported GO and NOx emissions, because it shows GO at 434 ppmv (the uncorrected range of values we reported for NOx) instead of 36 ppmv, corrected to 7 percent O2.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Also, see preamble Section V. for the response on use of CEMS data.

Commenter Name: Edward E. Quick
Commenter Affiliation: Celanese International Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2189.1
Comment Excerpt Number: 3

Comment: EPA has underestimated the number of burn-off ovens in use in the United States

It appears that EPA has vastly underestimated the number of burn-off ovens in operation and has improperly estimated the economic impact of its proposed emission standards. EPA has estimated 36 burn-off ovens in operation in the United State; however, Celanese alone operates 9 such units, and any operation that extrudes polymeric material is likely to use one or more ovens. We suggest that EPA conduct further research into the number of these units in the United States, their intended applications, the availability of alternatives to them, and the economic consequences.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 13

Comment: EPA should delete from its database all data derived from testing of common stacks or at minimum treat data as a single unit.

EPA's Energy Recovery Unit subcategory database includes three units labeled as "NYBlackRiverGen E00001", "NYBlackRiverGen E00002", and "NYBlackRiverGen E00003". The ERG Floor Memorandum provides emission test data for these three units for hydrogen chloride (Table B-22), mercury (Table B-24) and particulate matter (Table B-26). For each of the three pollutants the average emissions across all units are identical as summarized in the table below. Attachment 2 provides additional testing details showing that these units were sampled on the same date have the same sample number and have identical results for each run. [See Submittal for Attachment 2 provided by commenter showing additional testing details for the NYBlackRiverGen energy recovery units.] The only explanation for these seemingly impossible identical results is that these three units exhaust to a common stack, and it was the common stack that was tested and results assigned to all three units as though each contributed equally to the emissions. [See submittal for table provided by commenter showing identical results from the NYBlackRiverGen energy recovery units.]

The three NYBlackRiverGen units (with identical data) were then used to represent 3 of the 5 the best 12% performing units for calculating the PM and Hg MACT floors for energy recovery units and as such the MACT floors were significantly biased. For Hg 27

of the 33 runs used in the MACT floor calculation consisted of 3 sets of 9 identical test run results. EPA should either delete the data or at a minimum treat identical data from multiple units serving a common stack as a single unit for purposes of selecting the best 12% performing units and use data from the next two (2) best performing units to calculate the MACT floors. This difference between MACT floors calculated using all three NYBlackRiverGen units or treating as single unit and using next two (2) best performers is significant. The revised PM and Hg MACT floors treating the Black River data as a single unit is 12.7 mg/dscm and 0.0037 mg/dscm verses EPA's calculated MACT floors of 9.2 mg/dscm and 0.00096 respectively.

EPA should also glean other identical test data generated from common stack testing and either delete or treat as a single unit and as necessary recalculate MACT floors.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 19

Comment: EPA has treated one energy recovery source (NYBlackRiverGen) as three separate sources (Table B-24 of the MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category memo, April 26, 2010). Using three data points that are exactly the same will significantly reduces the amount of apparent variability and inappropriately lowering of the mercury and PM floor standards.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 2

Comment: * The database used by EPA includes a limited universe of alternative fuels and ingredients used in cement manufacturing, and even a smaller list of alternative fuels that could be consider "solid waste" under the companion proposed SWI rule.

* EPA failed to include any emissions data of units utilizing alternative raw materials or ingredients that are classified as "solid waste" in the proposed SWI rule.

* The 114 data request to cement kilns in preparation for this rulemaking did not request all of the data needed to realize the proper unit conversions resulting in arbitrary constants being used instead.

* EPA made incorrect assumptions to cover data gaps, specifically with regards to the concentration of oxygen for each pollutant and stack flows.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 2

Comment: The Wheelabrator Shasta (CA Wheelabrator Shasta) renewable energy facility should not be included in the CISIW MACT floor analysis. The three (3) WTI "CA Wheelabrator Shasta" biomass fired boilers at our California renewable energy facility appear to be included as CISWI units based on the proposed solid waste definition rule and the fact these units are permitted to combust small amounts of solid waste. While the units were permitted years ago to combust small amounts of solid waste (such as paper cubes and cardboard), these fuel types have not been combusted in years and therefore these units should be appropriately regulated under Boiler MACT. One of the Wheelabrator Shasta units, despite combusting only biomass fuels, was one of the top 12% performing CISWI energy recovery units and its data used in the proposed lead and cadmium limits for existing energy recovery units. Further one of the units was also the single best performing unit and used as the basis for the cadmium floor for new energy recovery units.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 4

Comment: At the time EPA was developing the proposed rule, two of the CNH units (KSCNHWichita and NDCNHAmerica) were duel burnoff ovens (for cleaning hooks and grates) and incinerators (for burning paint filters). The units are able to run different programs, some designed for filters and some for hooks and grates. The cycles vary by length depending on the size/amount of material to be cleaned or filters to be burned. The ovens were permitted under the 2000 rule and had performed required stack testing. The data used in the MACT floor analysis was for batches when the units were burning filters. Therefore, the emissions data is not representative of burnoff oven emissions and must not be included in the MACT floor analysis.

While we have requested that the data for two of our facilities be excluded because it is not data from a burnoff oven operation, if it continues to be utilized in the MACT floor analysis, the HCI data for KSCNHWIchita needs to be corrected. We can not locate a stack test report that reports the value contained in the MACT floor analysis.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 7

Comment: The 114 request issued to cement kilns did not capture the necessary data to accurately convert the reported emissions. To overcome these data gaps, EPA used inappropriate assumptions, including:

An oxygen level of 0% was used to adjust the measured concentration when the data was not available; an appropriate assumption is to use the default oxygen value of 7%

Use of the capacity firing rate of the unit to calculate the theoretical flow rate when stack flows were not reported. The correct approach is to use the actual firing rate

These assumptions resulted in the unrealistic dilution of the emissions.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Timothy J. Porter
Commenter Affiliation: Wheelabrator Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2090.1
Comment Excerpt Number: 8

Comment: EPA Did Not Adequately Address Test Method Precision And Accuracy.

One of the key considerations in proposing an emission standard is to assess the ability to accurately demonstrate compliance with the proposed standard. ASME in conjunction with USEPA evaluated the precision of EPA test methods and published a final report entitled "Reference Method Accuracy and Precision (ReMAP): Phase 1, Precision of Manual Stack Emission Measurements" in February 2001. EPA provided funding and personnel support for the ReMAP project. Page 5 of the report states: "Databases used to establish MACT standards are generally developed based on reports from tests using published EPA methods. A critical portion of these data-data from facilities defining the best performing 12% of the facilities- is extracted to define the MACT technology or the MACT based emission limits. Do these data characterize exceptionally well-designed and operated facilities or do the key data represent imprecision in the measurement methods? This concern applies to any analysis where the best 12% of the data

are selected for examination but it is even more critical when those data indicate results below the range for which the test method was validated." In essence one of the main objectives of the ReMAP project was to ensure emission limits would properly consider the inherent accuracy and precision limits of the test methods used to demonstrate compliance such that a facility would not be in violation of a limit as a result of this inherent variability.

The ReMAP project defined precision as random error that inadvertently enters the measurement process. This error may enter at any stage of the measurement process including sample collection, sample recovery, or sample analysis. The impact of such errors is that measurement results deviate from the true stack concentration. The report includes several figures that provide the precision metrics (or the measure of method imprecision) of the various EPA test methods. The precision metric for 99% coverage triplicate measurements" provides the precision limit range or imprecision (+ or -) as a % of the true stack concentration, meaning that 99 of 100 three (3) run averages would fall within that precision band. The ReMAP precision estimates do not account for accuracy in the 02 measurement necessary to convert results to 7% 02. At very low concentrations imprecision of the all test methods tend to increase asymptotically and actually precision metrics may be unknown since the proposed limits are so low they at the very left hand side of the tables. A summary of EPA's proposed limits for energy recovery units with corresponding precision metric is summarized in the Table below. [See submittal for table comparing precision metrics for proposed ERU limits.]

EPA's responded to a similar comment in the HMIWI MACT rule by stating "EPA's responded to a similar comment in the HMIWI MACT rule by stating "...we already took into account variability inherent in the data representing emissions and process operations in establishing the emissions limit. By using UCLs to set our emission limits, we have inherently accounted for measurement precision. In fact the adjustments we made to the average stack concentrations for the best performing 12 percent of units to calculate the final emissions more than account or the Precision Metrics cited by the commenters. Thus any additional adjustments of measurement to account for method precision are unnecessary." (74 FR 51383) This is simply not true. Test method imprecision is applicable for each and every independent testing event and must be addressed appropriately.

Response: We agree that test method measurement imprecision is a contributor to the variability of a set of emissions data. One element is associated with method detection capabilities and a second is a function of the measurement value. Measurement imprecision is proportionally highest for values measured below or near a method's detection level and proportionally decreasing for values measured above the method detection level.

The probability procedures applied in calculating the floor or an emissions limit inherently and reasonably account for emissions data variability including measurement imprecision when the database represents multiple tests from multiple emissions units for which all of the data are measured significantly above the method detection level. That is less true when the database includes emissions occurring below method detection capabilities and are reported as the method detection level values.

EPA's guidance to respondents for reporting pollutant emissions used to support the data collection specified the criteria for determining test-specific method detection levels. Those criteria insure that there is about a 1 percent probability of an error in deciding that the pollutant measured at the method detection level is present when in fact it was absent. Such a probability

is also called a false positive or the alpha, Type I, error. Because of sample and emissions matrix effects, laboratory techniques, sample size, and other factors, method detection levels normally vary from test to test for any specific test method and pollutant measurement. The expected measurement imprecision for an emissions value occurring at or near the method detection level is about 40 to 50 percent. Pollutant measurement imprecision decreases to a consistent relative 10 to 15 percent for values measured at a level about three times the method detection level.

Also in accordance with our guidance, source owners identified emissions data which were measured below the method detection level and reported those values as equal to the method detection level as determined for that test. An effect of reporting data in this manner is that the resulting database is truncated at the lower end of the measurement range (i.e., no values reported below the test-specific method detection level). A floor or emissions limit based on a truncated database or otherwise including values measrued near the method detection level may not adequately account for measurement imprecision contribution to the data variability.

We applied the following procedures to account for the effect of measurement imprecision associated with a database that includes method detection level data. The first step was to define a method detection level that is representative of the data used in establishing the floor or emissions limit and that also minimizes the influence of an outlier test-specific method detection level value. We reviewed each pollutant-specific data set to identify the highest test-specific method detection level reported that was also equal to or less than the average emissions level (i.e., unadjusted for probability confidence level) calculated for the data set. We believe that this approach is representative of the data collected to develop the floor or emissions limit while to some degree minimizes the effect of a test(s) with an inordinately high method detection level (e.g., the sample volume was too small, the laboratory technique was insufficiently sensitive, or the procedure for determining the detection level was other than that specified).

The second step in the process is to calculate three times the representative method detection level and compare that value to the calculated floor or emissions limit. If three times the representative method detection level were less than the calculated floor or emissions limit calculated from the UPL, we would conclude that measurement variability was adequately addressed. The calculated floor or emissions limit would need no adjustment. If, on the other hand, the value equal to three times the representative method detection level were greater than the UPL, we would conclude that the calculated floor or emissions limit does not account entirely for measurement variability. If indicated, we substituted the value equal to three times the representative method detection level to apply as the adjusted floor or emissions limit. This adjusted value would ensure measurement variability is adequately addressed in the floor or the emissions limit.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 9

Comment: EPA adopted a very aggressive timeframe for developing these rules and its database contained countless errors that sources needed to first quality control before analyzing the conclusions EPA 6 reached in reliance on the data.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 9

Comment: * EPA HCI emissions database contains data obtained by using disapproved analytical test methods 26 A vs. 320/321

* EPA has used PM emissions data based on Method 201A that measure PM10 concentrations instead of total filterable PM.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 10

Comment: Numerical limits should be based on quantifiable and reproducible test results consistent with reliable source test methods that have well-established performance. Limits should not be based on tests and methods that raise issues of significant measurement and other uncertainties.

Response: We agree that test method measurement imprecision is a contributor to the variability of a set of emissions data. One element is associated with method detection capabilities and a second is a function of the measurement value. Measurement imprecision is proportionally highest for values measured below or near a method's detection level and proportionally decreasing for values measured above the method detection level.

Probability procedures applied in calculating the floor or an emissions limit inherently and reasonably account for emissions data variability including measurement imprecision when the database represents multiple tests from multiple emissions units for which all of the data are measured significantly above the method detection level. That is less true when the database includes emissions occurring below method detection capabilities and are reported as the method detection level values.

We applied the following procedures to account for the effect of measurement imprecision associated with a database that includes method detection level data. The first step was to define

a method detection level that is representative of the data used in establishing the floor or emissions limit and that also minimizes the influence of an outlier test-specific method detection level value. We reviewed each pollutant-specific data set to identify the highest test-specific method detection level reported that was also equal to or less than the average emissions level (i.e., unadjusted for probability confidence level) calculated for the data set. We believe that this approach is representative of the data collected to develop the floor or emissions limit while to some degree minimizes the effect of a test(s) with an inordinately high method detection level (e.g., the sample volume was too small, the laboratory technique was insufficiently sensitive, or the procedure for determining the detection level was other than that specified).

The second step in the process is to calculate three times the representative method detection level and compare that value to the calculated floor or emissions limit. If three times the representative method detection level were less than the calculated floor or emissions limit calculated from the UPL, we would conclude that measurement variability was adequately addressed. The calculated floor or emissions limit would need no adjustment. If, on the other hand, the value equal to three times the representative method detection level were greater than the UPL, we would conclude that the calculated floor or emissions limit does not account entirely for measurement variability. If indicated, we substituted the value equal to three times the representative method detection level to apply as the adjusted floor or emissions limit. This adjusted value would ensure measurement variability is adequately addressed in the floor or the emissions limit.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 10

Comment: The company that operates these two facilities will submit comments that show these two units are misclassified as burn-off ovens when they should be incinerators. ,In addition, when the misclassification of this category is corrected, the floor for all of the pollutants will need to be recalculated since these two units were only facilities with data for cadmium, hydrogen chloride, lead, mercury, and dioxin/furans. They were also in the top performers for carbon monoxide.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 13

Comment: There Is Significant Concern About The Quality Of The Data EPA Has Relied On In this Rulemaking.

General Concerns with Data Quality

ACC is concerned about the quality of the data that EPA is using to support the proposed rule. These concerns stem, in part, from the data collection process. In 2008, EPA distributed a survey as an ICR (Phase 1) targeted at major sources of hazardous air pollutants and facilities believed to have units that would be regulated under CISWI. This survey was intended to gather information on individual units to be regulated under either section 112 of the CAA (in the Boiler MACT) or section 129 (in the CISWI rule). Respondents were asked to submit summaries of available emission test and fuel analysis results using spreadsheets. A database was created from the spreadsheet submissions and it was used to inform Phase 2 of the information collection. In 2009, a second ICR mandated extensive stack testing and fuel analyses at many facilities. Companies were given only four months to conduct this testing and submit the results to EPA, which was insufficient for many companies to accommodate already scheduled shutdowns, to get enough of the fuel EPA wanted them to test, and to be able to schedule testing contractors.

Microsoft Access emissions databases were then created by EPA that contained information about the units that EPA proposes to regulate under section 129 using the proposed definition of solid waste (ciswidbpropapp041310.mdb), or the alternative approach (ciswi_db_alt_app_041310.mdb). The database for the proposed approach contains 9,898 records with emission test results; 12,311 records with fuel analysis information; and 2,787 records with CEMS data. The database for the alternative approach contains a larger number of records for emission tests, fuel analysis, and CEMS data. The emissions data in the proposed approach database used to set these standards should be checked by EPA for accuracy. ACC believes it is imperative for EPA to review the data to ensure sources complied with EPA‘s instructions, performed the test methods correctly, and reduced the data correctly. This check would help determine whether EPA has properly subcategorized the units before promulgating emission limits.

EPA should also compare test results reported by 2008 survey respondents (Phase 1 ICR) with test results from the 2009 mandatory test program (Phase 2 ICR) to ensure the data were reduced using the same methodology, particularly with respect to the handling of non-detect data since most of EPA‘s test methods do not address how to report non-detect data. Based on a review of a limited amount of data generated under the 2009 test program, not all of the 2009 testing and reporting was conducted in accordance with EPA‘s final instructions and guidance.

EPA issued a set of instructions for the 2009 Phase 2 ICR testing program. These instructions covered:

sampling methods to be used

minimum sampling volumes for different pollutants

how non-detect values should be handled and reported (although the instructions were silent on how method detection limits should be determined, and the methods themselves do not address detection limits)

how boiler heat input rates should be calculated

data reporting and submission procedures, e.g. required use of EPA's Electronic Reporting Tool (ERT)

The initial instructions distributed to the facilities selected by EPA for sampling contained a number of unclear or ambiguous requirements, which necessitated six subsequent Q&A and guidance documents and an EPA webinar to clarify what EPA really wanted. Because EPA set a four month time frame for the tests to be performed and results to be submitted to EPA, many companies had already contracted with stack sampling firms and had an agreed-upon scope of work before EPA made final clarifications to the instructions. Because of the history of the data collection process, there are likely inconsistencies in how non-detect measurements were reported. Emission tests not conducted as part of the 2009 Phase 2 ICR would not necessarily have satisfied all of the 2009 criteria established by EPA. In particular, the handling and reporting of non-detects were generally different, given that EPA stack testing methods other than Method 23 for dioxin/furan are silent on these points. This becomes an extremely important issue when looking at emission test results to identify units with the lowest emission rates.

Non-detect and extremely low readings are particularly important for this rule, as EPA is using the units with the lowest test results to set the floors for each pollutant. This is exacerbated by the fact that many units are burning materials with inherently low pollutant contents and therefore have ultra-low emissions levels. In fact, many of the lowest emission test results in the EPA database are identified as zero, non-detect, below detection level, or detection level limited.

Therefore it is absolutely essential that method detection level information and data reporting procedures for tests conducted and not conducted according to the 2009 EPA protocols be critically examined for consistency. If there are inconsistencies, they need to be resolved so that the test results are compatible and can be used to identify the best performers. Furthermore, if stack testing will be used to determine compliance with emission limits in the future, the methods, data handling protocols, and data reporting procedures should be specified with sufficient detail. Such details are essential so that stack testing firms and facility operators know how to determine method detection levels and minimum reporting levels for each sampling method, and how data falling below these levels should be reported. Unless EPA clarifies these issues, the current confusion will continue and will create compliance uncertainty in the future.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket and the preamble Section V. for the response on Treatment of Detection Levels.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 13

Comment: We note as an issue, that the data base established to date by EPA contains insufficient data from which to establish MACT limits for sources burning significant amounts of coal. By our review, there are only three facilities identified as facilities that burn waste materials with coal firing greater than 50% of the heat input. Clearly, to establish limits that are achievable for coal fired facilities, additional sources must be analyzed.

Response: See preamble Section V. for the response on rationale for subcategories-energy recovery units. Also, see preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 14

Comment: EPA Needs to Ensure that it is Using Data for the Correct Subcategory

EPA should review the data being used to set floors to determine if the data are correct and if the units are in the appropriate subcategory. There are indications that there are units that have been miscategorized and are inappropriately influencing floors in the wrong subcategory, such as the units at KSCNHWichita and NDCNHAmerica, which are not burn-off ovens, but rather incinerators that are already subject to CISWI.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 16

Comment: E. The Database Used to Establish the MACT Limits Must Undergo Further Q/A to Ensure the Limits Proposed Can Be Met by the Best Performing Sources.

Apart from the concern that it is premature to be proposing emission limits, a brief review of the database has shown a few instances where data used to establish the MACT limits are questionable. One instance involves

variation among test runs at an individual source that is so diverse that the test should be invalidated or at least confirmed with additional testing. At the IP Mansfield plant, the individual Cd runs vary by over a factor of 30. Any test that has individual runs varying over an order of magnitude should be invalidated or re-verified to ensure that the data represent achievable emissions limits.

As another example, the MACT database has a CO value for the best performing CISWI energy recovery units of 0.65 ppmdv. This is a level which we believe is unachievable for solid fuels. A review of the data base for the plant that establishes this limit, Emerald Kalama in WA, U2, seems to indicate that the unit was fueled by natural gas during the test. The second lowest CO limit is from this same facility, U7, and this test indicates the fuel was "tar". Again this seems to be a very low CO value, which may not be applicable to other types of fuels.

Based on these findings, as well as some of the unusual levels discussed above, ARIPPA requests that EPA conduct additional quality assurance on these data and seek affirmative

confirmation from each of the sources contributing to a number that factored into a MACT limit. This additional analysis should answer the following questions:

1) Are there 3 test runs and are the results sufficiently consistent across the three runs to determine with some confidence that the values are repeatable at least at the point in time of the test?

2) Was the fuel tested representative of the type of fuel that would be covered under a MACT limit established using the results of this test?

3) Could all other potentially affected facilities that employed identical air pollution controls attain the emission standard demonstrated with a reasonable degree of certainty?

By focusing thorough quality assurance on just the small set of data that contribute to the standard the process can be manageable. The consequences of erroneous data in the data base could be catastrophic.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Further see preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 16

Comment: Given the driving role that units U-2 and U-7 play in EPA's proposed emissions limits, ACC is particularly concerned that EPA has improperly processed test data for those two units. A May 2010 background document prepared for the Kalama plant's Title V permit renewal has the following information for these two boilers:

U-2: capacity of 40,000 lb/hr steam; can burn natural gas, fuel oil, or "tar" (a substance having the consistency of fuel oil which has no sulfur or chlorine); flue gas routed to one of two baghouses when tar is being combusted. The most recent emission tests were done on 11/27/07 (natural gas) and 1/28/09 (tar). Initial tests were done on 3/22/95 (natural gas) and 3/22/95 (tar).

U-7: 1975 B&W water tube boiler with rated capacity of 42,000 lb/hr steam; can burn natural gas, fuel oil, or "tar"; flue gas routed to a baghouse when tar is being combusted. Emission tests were done on 9/25/03 (tar), 11/3/05 (natural gas), and 5/5/09 (tar).

Baghouses: neither equipped with COMS or any CEMS

A review of the MACT floor memo suggests the natural gas test results have been included with those obtained when the boilers were burning tar. For example, the U-2 average CO value of

0.65 ppm is apparently the average of a 3-run 11/27/07 test on natural gas (0 ppm) and a 3-run test on 1/28/09 (1.3 ppm) on tar. It is inappropriate to include test results from natural gas combustion in calculations for the MACT floor for boilers burning solid waste. In addition, in the EPA database, Units U-2 and U-7 are listed as wall-fired boilers designed to burn gaseous

and liquid fuels, but both boilers are mischaracterized as "solid non-coal" energy recovery units. As such, the information in the database should be corrected.

Further, test results from Boiler HB-512 are not representative of solid fuel boiler emissions and should not be used to set limits for solid fuel energy recovery units. The boiler is primarily a natural gas boiler with a rated heat input capacity of 194 x106Btu/hr for natural gas. It is capable of combusting natural gas, landfill gas, and tar. Tar is fired as a liquid fuel; it has a higher heating value of about 18,200 Btu/lb. A report for CO and NOx stack tests conducted on June 14, 2005 indicates 88% of the heat input was from natural gas and 12% from tar. The EPA database contains the CO results but not the NOx results for this test. Because this boiler is burning primarily natural gas with some liquid, it is not appropriate to use this boiler to set emission limits for solid fuel energy recovery units.

EPA also inappropriately relies on results from Boiler#5/Thermal Oxidizer at Pioneer Plastics in setting emissions limits for energy recovery units. This unit is not a traditional boiler. The description of the unit in the facility's Title V permit reads as follows:

"Pioneer operates a VOC Incinerator referred to at the facility as the Thermal Oxidizer. The Thermal Oxidizer is used primarily to destroy volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from the manufacturing process. The Thermal

Oxidizer is also referred to as "Boiler #5" because it has a separate heat recovery component which produces steam for the facility. The Thermal Oxidizer was manufactured by Hirt in 1982. The maximum heat input capacity from No. 6 fuel oil fired in the Thermal Oxidizer is 39.5 MMBtu/hr."

While this unit does recover energy in its waste heat boiler, the above description suggests the unit is not a traditional boiler. Its emission characteristics would be different than a traditional boiler and this unit should not be included in the energy recovery unit subcategory. In fact, this unit may not even belong in CISWI subcategory since it is a control device intended to oxidize VOCs in off-gases from a manufacturing process and is already subject to another MACT standard.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 25

Comment: EPA did not adequately address Test Method Precision and Accuracy.

One of the key considerations in proposing an emission standard is to assess the ability to accurately demonstrate compliance with the proposed standard. The American Society of Mechanical Engineers (ASME) in conjunction with EPA evaluated the precision of EPA test methods and published a final report entitled "Reference Method Accuracy and Precision (ReMAP): Phase 1, Precision of Manual Stack Emission Measurements" in February 2001. EPA provided funding and personnel support for the ReMAP

project. Page 5 of the report states: "Databases used to establish MACT standards are generally developed based on reports from tests using published EPA methods. A critical portion of these data - data from facilities defining the best performing 12% of the facilities - is extracted to define the MACT technology or the MACT based emission limits. Do these data characterize exceptionally well-designed and operated facilities or

do the key data represent imprecision in the measurement methods? This concern applies to any analysis where the best 12% of the data are selected for examination but it is even more critical when those data indicate results below the range for which the test method was validated." In essence one of the main objectives of the ReMAP project was to ensure emission limits would properly consider the inherent accuracy and precision limits of the test methods used to demonstrate compliance such that a facility would not be in violation of a limit as a result of this inherent variability.

The ReMAP project defined precision as random error that inadvertently enters the measurement process. This error may enter at any stage of the measurement process including sample collection, sample recovery, or sample analysis. The impact of such errors is that measurement results deviate from the true stack concentration. The report includes several figures that provide the precision metrics (or the measure of

method imprecision) of the various EPA test methods. The precision metric for 99% coverage triplicate measurements provides the precision limit range or imprecision (+ or -) as a % of the true stack concentration, meaning that 99 of 100 three (3) run averages would fall within that precision band. The ReMAP precision estimates do not account for accuracy in the O2 measurement necessary to convert results to 7% O2. At very low concentrations imprecision of the all test methods tend to increase asymptotically and actually precision metrics may be unknown since the proposed limits are so low they at

the very left hand side of the tables. A summary of EPA's proposed limits for energy recovery units with corresponding precision metric is summarized in the Table below. [See submittal for table provided by commenter summarizing EPA's proposed limits for energy recovery units.]

EPA responded to a similar comment in the HMIWI MACT rule by stating "...we already took into account variability inherent in the data representing emissions and process operations in establishing the emissions limit. By using UCLs to set our emission limits, we have inherently accounted for measurement precision. In fact the adjustments we made to the average stack concentrations for the best performing 12 percent of units to calculate the final emissions more than account or the Precision Metrics cited by the commenters. Thus any additional adjustments of measurement to account for method precision are unnecessary." (74 FR 51383) EPA's response is incorrect. Test method imprecision is applicable for each and every independent testing event and must be addressed appropriately.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2090.1, excerpt 8.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 33

Comment: Method imprecision.

EPA states that measurement imprecision at or near the method detection level is about 40 to 50% and that the imprecision decreases to about 10-15% at about 3 times the method detection level (75 FR 31944). This conclusion was based on the work done by the American Society of Mechanical Engineers ReMAP study. EPA describes a two step process to address this issue. The first step is to identify the highest test-specific method detection level reported in the data set that is at or less than the floor limit. The second step would be to determine a level three times the representative method detection level and then compare it to the floor limit. If three times the method detection limit is less than the floor, they would conclude that measurement variability is adequately accounted for If not, EPA could use three times the method detection level as the floor.

We agree that an adjustment to data near the detection limit may be warranted. However, to do this properly, the Agency should start with the Reporting Limit. This is the lowest value at which an instrument is calibrated. Anything below the Reporting Limit is extrapolation and may not be reliable or defensible. Before we discuss that concern, a common understanding of what "detection limits" means is needed.

EPA has addressed detection level issues in the past. A 1995 paper written by EPA's Engineering and Analysis Division (Development of Compliance Levels from Analytical Detection and Quantification Levels) explores the different ways to describe the limits of analytical methods and concludes that the Minimum

Level (ML) was the appropriate quantification level for both setting standards and showing compliance [see submittal for a copy attached as Appendix C.]

The lowest level an analyte can be detected is generally termed the "detection limit." EPA's commonly used term for the detection limit is the Minimum Detection Limit (MDL). 40 CFR 136, Appendix B defines MDL as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte." EPA's Appendix B contains the procedure for determining the MDL.

Quantification limits are the levels above the detection level where reliable quantification measurements can be made. The Practical Quantification Limit (PQL), the Reliable Detection Limit (RDL) and Reliable Quantification Levels (RQL) are all calculated by multiplying the MDL by various factors. However, none include using a calibration point. The ML, on the other hand, is a quantification level that corresponds to, the lowest level at which the entire analytical system gives reliable signals and includes an acceptable calibration point. This use of an acceptable calibration point is critical in showing that this number is real and not just an extrapolation of statistics from a "detection limit." Most laboratories now use the term Reporting Limit (RL) instead of ML. The meaning of the two terms is the same. CRWI believes that the lowest number that can be used for developing standards and showing compliance with those standards is the ML or RL.

The first thing CRWI suggests is that EPA re-examine the data used to set the standards to make sure that all reported data is either reported as ML- or RL. If it is, then, the discussion of adding variability because the data is at or near the detection limit goes away because all numbers would

be real numbers and not some undefined number between the detection limit and zero. Any number below the RL is not reliable and statistical methods should not, be used on that data.

If the data reported is not based on an RL, CRWI suggests that the quality of the data is not adequate to set standards and other data must be used. To do anything different would be in violation of EPA's own guidelines (Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency EPA/260R02-008 October 2002). CRWI believes that the entire basis for setting standards and showing compliance with those standards is reliable and quantifiable data. Unless the current standards are developed on that foundation, the entire process is suspect. CRWI strongly recommends that EPA examine or re-

examine their data base to ensure that all data reported meets these quality requirements.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2090.1, excerpt 8.

8.3 Data Standardization Techniques

Commenter Name: Richard Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-0095.1
Comment Excerpt Number: 2

Comment: Under the proposed CISWI rule, Portland cement kilns that combust solid waste would be subject to emission standards for several pollutants. A summary of the proposed standards for existing sources appears at 75 FR 31945, Table 1. Note that EPA expresses most of the proposed standards either in the form of concentration limits ("ppmv," meaning "parts per million by volume") or ("mg/dscm" or "milligrams per dry standard cubic meter"). Note also that all proposed emission limits are "measured at 7% oxygen."

As you know, setting emissions standards for a category of existing sources under CAA §129 involves establishing "floor" levels based upon the best performing 12% of the sources in a category. As PCA and its member companies are attempting to evaluate EPA's proposed "floor" levels for purposes of filing comments, they have run into a major roadblock.

Much of the emissions information upon which EPA relied in developing its proposed standards came from data PCA member companies submitted in response to EPA's requests under CAA §114. Much of this data reported emissions in the format of pounds-per-hour, and the companies did not in their submissions (as they were not asked to) convert the pounds-perhour information into comparable concentration levels such as ppmv or mg/dscm. Moreover, the

companies did not report (as they were not asked to) the oxygen levels associated with the emission results.

In its standard-setting process, however, EPA converted these pounds-per-hour data into concentration levels at 7% oxygen. Many of EPA's "best 12%" comparisons are in fact based on these converted numbers and the 7% oxygen level. One cannot rationally convert pounds-perhour emissions data into a concentration level without factoring in key variables associated

with the emissions data from each company, such as gas flow rates, oxygen levels, and specific heat consumption. EPA has thus far, however, withheld from the docket the figures it has used to perform its conversions for each proposed floor standard where such a conversion is necessary.

We have been informed (and as you will see below, EPA personnel have confirmed) that this critical conversion information exists in EPA's files in Excel spreadsheet form. After PCA contractors made several requests for the Excel files that would demonstrate how such calculations were made, however, an EPA staffer rejected PCA's request in a July 2, 2010 e-mail as follows:

Unfortunately, since we are well into the comment period and given the need to allow commenters equal access to all CISWI documents, the Agency's policy is to release only the information that is currently available through the docket center; the excel files that you are requesting have not been submitted to the docket.

The EPA staffer suggested that the contractor file a FOIA request for such information.

We object to EPA's response in the strongest terms. PCA and its members are being denied the ability to review and comment upon the methods EPA utilized to make conversions that are at the heart of proposed standards that would apply to their facilities. There may be mathematical errors or erroneous assumptions imbedded in such conversions. But if the conversion information and calculations are not being revealed in the docket, no one can comment on them.

I understand that since EPA denied the PCA contractor's request, an EPA staffer has been willing in an e-mail exchange with one of PCA's member companies to explain how certain assumptions were "in general" made by EPA personnel in the conversion effort. Such an e-mail response is certainly well-intended. Such a personal e-mail discussing how EPA generally went about making its conversions cannot, however, serve as a substitute for the agency's obligation to reveal the details of its conversion methods now in its files and how they were applied on a facility-by-facility basis to support its critical floor determinations. PCA and its members (and in fact all interested parties) are still being denied critical information supporting EPA's proposed standards.

EPA's Refusal To Post the Excel Spreadsheet In the Docket Is Inconsistent With EPA's Recent Actions

The fundamental logic of EPA's refusal, to the extent we can understand it, appears to be that materials that have not been placed in the docket (for whatever reason) should not now be placed in the docket. But our review of the docket for the CISWI rulemaking on Regulations.gov (EPA-HQ-OAR-2003-01 19) shows that EPA has placed at least twenty new support documents in the docket in the last few days.

On July 2, 2010, EPA posted seven new documents to the CISWI docket, and on July 6, 2010, EPA posted thirteen new documents to the docket. A review of the docket entries shows that each these 20 new documents focuses on data related to the CISWI "floor calculations." Some related specifically to Portland cement kilns.

For example, here are the titles of just two of these twenty documents posted on July 6: "MACT Floor Calculations for Proposed Approach – Floor Analysis Cement Kilns;" "MACT Floor Calculations for Proposed Approach – Data Variability Cement Kilns." (I should note that none of these postings includes the Excel spreadsheet that EPA has refused to release.)

The logic of EPA's actions here frankly escapes us. We simply cannot understand how EPA can maintain on July 2 that it is too late to add a document to the docket that would show how EPA personnel made certain necessary calculations to support its floor calculations, even though EPA posted numerous other documents supporting these floor calculations on July 2 and July 6.

EPA's Actions Violate the CAA

As I am sure you are aware, CAA §307(d)(3) requires EPA's proposed rules to include a summary of the factual data on which the proposal is based, as well as "the methodology used in obtaining the data and in analyzing the data." This CAA paragraph then provides that "all data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule." It is obvious from the e-mail rejecting PCA contractor's request that such data and information exists, yet EPA has

refused to release it and put the material into the docket.

We also should remind you of a few passages from Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973), in which Judge Leventhal stated certain basic principles that became imbedded in CAA §307(d) and which have been cited approvingly in dozens of D.C. Circuit cases over the last few decades. The D.C. Circuit ruled that there had been a "critical defect" in the rulemaking based upon the petitioner's "initial inability to obtain – in a timely fashion" certain data. Id. at 392. In language directly applicable to EPA's current

refusal to release its data showing how it derived it standards, the Court made the following observations:

Obviously a prerequisite to the ability to make meaningful comment is to know the basis upon which the rule is proposed.

. . .

It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, critical degree, is known only to the agency.1

. . .

In order that rule-making proceedings to determine standards be conducted in orderly fashion, information should generally be disclosed as to the basis of a proposed rule at the time of issuance. If this is not feasible, as in case of statutory time constraints, information that is material to the subject at hand should be disclosed as it becomes available . . . .

Id. at 393-94 (emphasis added).

Response: To address situations like this where public commeters are apparently unable or unwilling to utilize database software, we are submitting active spreadsheets to the docket to the fullest extent possible. Note that some spreadsheet inputs may be the results of database queries and exports from the relational database used to store information on CISWI sources. The database with the data tables is available to the public in the docket. See preamble Section V. for the response on consistency between other applicable NESHAP limits. Further, see the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Richard Stoll

Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-0095.1
Comment Excerpt Number: 5

Comment: We are quite confident, in any event, that EPA's continued failure to provide the data from its files necessary for PCA and its member companies to provide meaningful comment on the proposed CISWI emission limits would be deemed reversible error in the D.C. Circuit.

Response: See the response to comments EPA-HQ-OAR-2003-0119-0095.1, excerpt 2 and EPA-HQ-OAR-2003-0119-1107.1, excerpt 2.

Commenter Name: Richard G. Stoll
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1107.1
Comment Excerpt Number: 2

Comment: July 2, 2010 – EPA rejected PCA's request for the Excel spreadsheets showing how EPA had made key conversion calculations to derive its proposed standards. EPA cited the "courtordered deadline" as one reason. EPA made clear "the excel files that you are requesting have not

been submitted to the docket."

July 2-6, 2010 – EPA added 20 support documents to the CISWI docket. PCA technical consultants have confirmed that none of these documents represent the Excel spreadsheets EPA refused to release on July 2.

July 13, 2010 – I sent my letter to you protesting EPA's denial of the Excel spreadsheets and arguing for more time to comment. My letter asserted (quoting from the relevant court order) that the "court-ordered deadline" applies to two other pending proposed rules but not to the CISWI proposal.

July 16, 2010 – PCA representatives held a conference call with EPA OGC lawyers and OAQPS personnel. EPA personnel articulated a position that everything PCA needed to evaluate and comment upon the proposed emission standards was available in the docket as of June 4, 2010 (the Federal Register publication date).

July 22, 2010 -- EPA published a Federal Register notice extending the CISWI comment deadline to August 23, 2010. EPA made these two assertions at the end of the notice (75 FR at 42677):

[1] – "At the time of publication of the proposed rules [June 4, 2010], the docket contained Adobe Acrobat(copyright) versions of the spreadsheets used in the MACT floor calculations, as well as

associated memoranda describing in detail EPA's calculation of the MACT floor for each proposed set of emissions standards."

[2] – "Since the publication date, EPA has added to the

docket the same spreadsheets in Excel format."

EPA's Record Is Legally Deficient

In our written comments next month, we will elaborate in detail on numerous serious deficiencies in the proposed rule. As we will explain, the deficiencies are so serious that EPA is legally required to re-propose a CISWI rule for Portland cement kilns based upon a record in the docket that will give PCA and other parties a technical, legal, and policy basis upon which to provide meaningful comment. For now, we will focus on one major deficiency: the failure to include all relevant supporting materials in the docket – both as of the date of Federal Register proposal, and even now.

Even though EPA states on its July 22 Federal Register notice (signed July 16) that it "has added to the docket" certain spreadsheets, our review of the docket (which we are continuing to monitor on a daily basis) shows that no new support documents other than hearing transcripts have been added since July 6. Our technical consultants advise us that the materials added by July 6 do not include the missing spreadsheets, and our conference call with EPA personnel on July 16 confirmed that the Excel spreadsheets we were seeking had not at that time been added to the docket.

As explained in my July 13 letter to you, CAA §307(d) requires that all data and information upon which a proposed rule is based must be placed in the docket by the date the proposed rule is published in the Federal Register. Even if these missing spreadsheets are placed in the docket in the next few days, they will be placed there weeks later than required by the CAA. Time is now running short for PCA and its consultants to review these critical conversion calculations and have a meaningful opportunity to comment upon them. If EPA relies on documents "entered on the docket too late for any meaningful public comment" the "structure and spirit of section 307 [will] have been violated." Sierra Club v. Costle, 657 F.2d 298, 398 (D.C. Cir. 1981).

Both in EPA's July 22 Federal Register notice and in our conference call of July 16, EPA personnel asserted that the record was complete as of the date of Federal Register publication. They also asserted that PCA had everything it needed in the record as of that date to evaluate and comment upon the basis of EPA's proposed rule. We disagree.

First, as explained above, the Excel spreadsheets that would show how EPA made critical conversion calculations remain unreleased. Second, EPA added twenty support documents to the docket with certain information on how MACT floors were calculated several weeks after June 4. This certainly calls into question the assertion that everything that was needed was in the docket June 4.

Our technical consultants assure us that as of June 4, the docket simply did not contain sufficient material for them to discern how EPA had developed its proposed standards. EPA's claims of sufficiency appear to be based upon a theory that if someone knew where to look, and could do some sort of "reverse engineering" by assuming EPA staff and contractors' thought patterns, one might be able to divine EPA's methods. This falls far short of the requirements of the CAA and the Administrative Procedure Act, however. "A notice of proposed rulemaking must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully." See Cement Kiln Recycling Coalition v. EPA, 493 F.3d 207, 225 (D.C. Cir. 2007) (quoting Honeywell Int'l, Inc. v. EPA, 372 F.3d 441, 445 (D.C. Cir. 2004)). Even if all the data required to recreate EPA's calculations were somehow discoverable within the docket, that

information could be strewn throughout any of the sixty-five (65) supporting materials currently posted. Asking PCA to guess at the data EPA examined, to try and recreate EPA's methodology, and to discover the basis of EPA's proposed standards is exactly the kind of "hunt the peanut" exercise the D.C. Circuit has strongly disapproved. Connecticut Light and Power v. NRC, 673 F.2d 525, 530-31(D.C. Cir. 1982). As the Court explained, "[i]f the notice of proposed rule-making fails to provide an accurate picture of the reasoning that has led the agency to the proposed rule, interested parties will not be able to comment meaningfully upon the agency's proposals." Id. at 530, emphasis added.

Response: See the response to comments EPA-HQ-OAR-2003-0119-0095.1, excerpt 2.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 2

Comment: PCA had indicated in two letters (dated July 13 and July 27, 2010) to show that EPA refused on July 2, 2010 to release a critical Excel spreadsheet (or spreadsheets) that would allow commenters to determine how EPA had, from kiln-specific data in the record, used certain assumptions and made certain calculations to determine the proposed CISWI emission standards. Specifically, EPA has refused to make public cells in the appropriate Excel spreadsheet showing EPA's conversion calculations which are imperative in determining how EPA established the proposed MACT floors and emission limits. The information in these hidden cells is only known to EPA and it is imperative for the public to have access to this information so it can meaningfully comment on the Proposed Rule.

Response: See the response to comments EPA-HQ-OAR-2003-0119-0095.1, excerpt 2 and EPA-HQ-OAR-2003-0119-1107.1, excerpt 2.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 2

Comment: The two letters (dated July 13 and July 27, 2010) show that EPA refused on July 2, 2010 to release a critical Excel spreadsheet (or spreadsheets) that would allow PCA and other commenters to determine how EPA had, from kiln-specific data in the record, used certain assumptions and made certain calculations to determine the emission standards in the Proposed CISWI Rule. Specifically, EPA has refused to make public cells in the appropriate Excel spreadsheet (or spreadsheets) showing EPA's conversion calculations which are imperative in determining how EPA established the proposed MACT floors and emission limits. The information in these cells is only known to EPA and it is imperative for the public to have access to this information so it can meaningfully comment on the Proposed Rule. To this day, the spreadsheets that EPA refused to release and place in the docket have still not been released or

placed in the docket. These letters also show how EPA placed numerous documents in the docket weeks after the proposed rule had been published in the Federal Register, thereby further reducing the opportunity for meaningful comment.

Included in Mr. Page's letter is at least a partial explanation of why EPA had refused on

July 2 to release the spreadsheets PCA had requested (emphasis added):

EPA included an Adobe Acrobat version of the floor spreadsheets in the docket at the time of publication of the proposed rule because of concerns that metadata found in the Excel files contained deliberative information. As noted above, EPA also included in the docket memoranda that provided the information necessary to conduct the floor calculations using the Adobe Acrobat spreadsheets. Once EPA received the request for the Excel version of the floor spreadsheets, we removed the metadata and posted the Excel versions of the floor spreadsheets on our website. We also placed the Excel files in the docket for the CISWI rule.

PCA reserves the right to seek the withheld metadata through a Freedom of Information Act (FOIA) request or other process, and we note that it may be questionable whether metadata for an Excel file would likely contain truly deliberative material in the nature of internal legal or policy debate or discussion. Moreover, we also note that this Administration has issued many strong policy statements supporting transparency and open government, and material that may arguably be exempt from disclosure under FOIA Exemption 5 may still be released by EPA, and in fact often is.

EPA appears to be arguing in Mr. Page's letter that as of June 4, 2010 – and even well before then – PCA and other commenters had access to everything needed to determine how EPA had taken data from facilities and had applied and converted that data in calculating its proposed emission standards. We reserve the right to respond to EPA's assertions in more detail, but for now we have the following reactions, showing our strong disagreement with EPA's new assertions.

The bottom line is that we still cannot find anywhere in the record the actual calculation (equation with variables filled in) for the conversion of reported emissions to the emissions used to represent each kiln in EPA's determination of the floors. EPA's letter states that "the reported concentration data and flue gas characteristics . . . and the normalized concentration data . . . are contained in the Access database." EPA also appears to argue that there is enough data in the Access database to reproduce all of its conversions. But here are the facts as we find them in the EPA emissions data base for kilns: [Footnote: Data on waste-burning kilns contained in CISWI 2009 Alternative Approach Database (EPAHQ-OAR-2003-1119-0046).]

c. Fields in the data base for flow rates, oxygen concentration, etc. are often blank, even though such information is needed to perform conversions.

Examples: Holcim Midlothian K2 test dated 27-Feb-2007 for mercury (emissions reported in lb/hr and normalized emission values given, but oxygen, moisture, and flow rate fields are blank.) Lafarge Whitehall K3 test dated 12/13-Jun-2007 for PM (emissions reported in lb/hr and normalized emission values given, but oxygen, moisture and flow rate fields are blank.)

d. There are fields for emissions as reported and emissions as normalized, but the first is not always given (it may be blank or zero). We are left uninformed as to whether the normalized values were reported in the standardized units or whether a conversion was performed elsewhere and its result entered into the database.

Examples: Lehigh Mason City 302.203 tests dated 4/13-Aug-2009 for mercury (emissions as reported blank, oxygen blank, but normalized emission values given). Ash Grove Seattle test dated 6-Aug-1996 for cadmium, Ash Grove Durkee tests dated 15-Nov-2001 for cadmium and 16-Apr-2002 for HCl (emissions as reported zero, oxygen zero, but normalized emission values given).

g. There is no flag in the Access database to indicate which test values were converted and which were used as reported.

h. There are cases where there is no value for emissions as reported (blank or zero), but oxygen values are reported at levels other than 7%. It is not possible to determine what the reported value was and whether or not it was converted.

Examples: Lehigh Evansville 121 test dated 12-Jan-2006 for lead and 13-Jan-2006 for dioxin/furans. SCNorboard test dated 13-Dec-2001 for CO. Monarch Humboldt K5 tests dated 04-Jun-2009 for dioxin/furans.

i. There are instances where the record indicates emissions in lbs/hr or gm/hr as reported and a stack gas flow rate is given, but oxygen content is not present; or the record indicates emissions in ppm as reported, but moisture content is not present. It is clear that EPA performed a conversion, but its assumptions for oxygen and moisture are not documented. We are left uninformed as to whether a blank field means the values were assumed to be zero, or whether the values used in the conversions were not entered, or whether a conversion was not done.

Examples: Lehigh York 200 test dated 4-Jan-2007 for mercury (gm/hr as reported, but missing oxygen). Lafarge Buffalo K1 tests dated 14-Jun-2007 and 15-Jun-2007 for PM (lb/hr as reported, oxygen missing). Mitsubishi 4-RK-1 tests dated 25-Mar-1998 for CO, NOx, and SO2 (ppm as reported, but moisture missing).

j. The database includes flow rate codes distinguishing actual cfm (acfm) from dry cfm (dscfm and scfm/1000), but nowhere do we see a code saying the flow rate was based on capacity or another assumption versus being an actual value taken from a filing.

Response: See the response to comments EPA-HQ-OAR-2003-0119-0095.1, excerpt 2 and EPA-HQ-OAR-2003-0119-1107.1, excerpt 2.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 11

Comment: Errors and Bias in Assembling the Emissions Database

In assembling the emissions database used to determine the floors, EPA has used default assumptions that incorrectly results in low estimates of emission concentrations that bias the resulting floors to values below what a correct treatment of the data would give. A large number of other errors have been identified that result in setting incorrect floors. PCA has undertaken an extensive review of the emissions data for best performing kilns.

The 114 data requests issued to cement kilns did not request all of the data needed to convert reported emissions to the concentration units of the proposed standards. The proposed standards are all based on emissions adjusted to 7% oxygen. The concentration of oxygen (or other diluent gas) was requested in the 114 only when CO emission data were submitted, but the actual oxygen level at the time of the test is needed for all pollutants whenever the respondent entered emissions data on a basis other than 7% oxygen (which was acceptable and occurred frequently). In these circumstances, EPA has indicated to our contractor [Footnote: Email from T. Jones of EPA to R. Cheng of AEMS dated July 9, 2010.] that a default oxygen level of zero percent was assumed and then the data were adjusted to 7% oxygen. This assumption is not realistic and has no relationship to the performance of any of the sources examined by EPA in setting the MACT standard.

We have reviewed the underlying stack test reports for the 114 filings and, in almost all instances, the test reports have the information on oxygen content that EPA did not request. We have determined the actual oxygen level for almost all of the tests in question, and in no instance was the actual oxygen content zero or close to zero. Instead, typical oxygen contents range from 4% to 9%, and a default assumption of 7% oxygen (no correction) would have been more reasonable than EPA's default value of zero. The dilution in emissions concentration that occurs on paper when one adjusts from zero to 7% oxygen leads to a one-third reduction in emission concentrations and creates concentrations that are biased low. This in turn results in floor levels that are grossly incorrect and biased low in a manner that violates the CAA. We have corrected for this error in our corrected database.

For some data in the docket, stack flow was not reported, and EPA has indicated [Foonote: Email from T. Jones to H. Ybanez dated July 8, 2010] that they used the capacity firing rate of the unit to calculate flow. This method does not represent the operating conditions of the sources examined. Whenever capacity was used, rather than the actual firing rate, it is likely that the flow was over estimated. As with the default assumption for oxygen, this assumption also results in unrealistic dilution of the emissions on paper and lower floors than should actually be established. We have been able to acquire the actual flows for a number of these facilities and have computed the proper emissions concentrations in our corrected database.

Response: See the response to comments EPA-HQ-OAR-2003-0119-0095.1, excerpt 2 and EPA-HQ-OAR-2003-0119-1107.1, excerpt 2.

9.0 RULE LANGUAGE CORRECTIONS

9.1 Rule Language: Definitions (existing)

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 6

Comment: The term 'bypass' as used in the CISWI rule under proposed 40 CFR 60.2265 and 60.2875, as it relates to incinerator operation is somewhat different than a 'bypass' as used in a cement plant. In this Proposed rule, EPA should provide clarification that 'bypass' and its related

requirements in the CISWI rule do not apply to CISWI kilns that possess alkali bypass stacks or other process vents that may emit kiln gases directly to the atmosphere.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 37.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 10

Comment: EPA has proposed the following definition of "Solid waste incineration unit":

"Solid waste incineration unit means a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term „„solid waste incineration unit?? does not include

(A) materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals,

(B) qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes, or

(C) air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule."

FSI requests that EPA clarify the term "burn homogenous waste". The FSI boilers all burn bagasse, which is a co-product of the raw sugar processing operations. Some of the FSI boilers may burn from time to time other biomass materials that originate from various activities, such as clean wood from yards, clippings, hurricane debris, wood recyclers, construction and demolition debris, and biomass materials separation processes. Although these materials can vary somewhat in size, moisture content, heating value, etc., they are all "clean biomass" materials and they are mixed in the fuel yard prior to delivery to the boilers. EPA should clarify that burning biomass of any type is considered to be a "homogenous" material stream. It should also be clarified that burning biomass of any type in conjunction with fossil fuel, as part of normal operations (including startup, shutdown and malfunction), still constitutes a "homogenous" stream of materials that would be exempt from Subpart CCCC.

Response: See preamble Section V. for the response on homogeneous waste.

Commenter Name: David A. Buff

Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 12

Comment: EPA proposes in the proposed rule to remove the definition of "agricultural waste". The FSI strongly agrees with this action. The current definition of this term in 40 CFR 60, Subpart CCCC is:

Agricultural waste means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

As the FSI has commented previously, sugarcane "bagasse" has never been considered a "waste" previously, because it has never been "discarded" or thrown away. It has always been used as fuel or as raw material for other products such as paper. Therefore, the FSI agrees with the proposed deletion of this definition. However, if this definition is retained, the term "bagasse" should be removed from the definition.

Response: EPA thanks the commenter for their input. The term "agricultural waste" is not defined in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 37

Comment: Bypass. The term "bypass" is defined in the CISWI rule under the proposed 40 C.F.R. 60.2265 and 40 C.F.R. 60.2875 as it relates to incinerator operation, which bypass pollution control devices during upset conditions in order to protect the equipment. CISWI kilns are not generally equipped with bypass devices in the CISWI sense of the rule. However, it could be unintentionally confused with an alkali bypass stack on cement kilns, which bypass pollution control devices during upset conditions in order to protect the equipment. EPA should clarify that "bypass" and its related requirements in the CISWI rule do not apply to CISWI kilns that possess alkali bypass stacks or other process vents that may emit kiln gases directly to the atmosphere.

Commercial and industrial solid waste incineration unit. The definition of CISWI unit under the proposed 40 CFR 60.2265 and 40 CFR 60.2875 does not provide an understandable unit boundary for kilns. And, given the operational differences and importance of interfaces with other federal emission standards, EPA needs to clearly define CISWI unit boundaries for kilns specifically and ensure their exemption from potentially overlapping § 111 or § 112 emissions standards to avoid regulatory applicability confusion. PCA believes the boundary should begin with the NHSW injection location into the kiln, include the kiln system, and end at the clinker discharge point from the kiln. The boundary should exclude all pollution control devices, kiln

stacks, CKD handling, recycling, clinker coolers and transfer operations. And, as elaborated on in other areas of our comments, state that CISWI kilns have no fugitive ash sources.

Startup period and Shutdown. The terms startup period and shutdown as defined in the current 40 CFR 60.2265 regulations are ambiguous to kiln operation and, again, EPA has failed to account for how such terms would apply to CISWI kiln operation in the Proposed CISWI Rule. Applicable and understandable definitions for these should be incorporated into the final rule by EPA. Specifically, startup and shutdown activities for a cement kilns are not

relevant to NHSW usage. Therefore, the existing definition improperly captures what appears EPA's intent to define CISWI unit startup and shutdown periods.

Response: Alkali bypass stacks on a cement kiln are a separate stack that draws off a portion of the kiln exhaust to prevent chlorides or other alkali materials from building up in the product. Operation of the alkali bypass is dependent on the permissible alkali content of the cement and the amount of alkali materials in the raw materials. If the use of the bypass is necessary this is considered to be part of normal operation of the kiln. Since all CISWI standards are concentration standards, all kiln standards and compliance requirements apply to the alkali bypass, except that if the source has a separate bypass stack they can do emission testing in lieu of a continuous monitor. See Preamble Section V. on startup, shutdown and malfunction discussion.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 8

Comment: Use of the term "capacity" is unclear because the term is not defined with respect to small remote incinerators and the intent of the term is not addressed in the preamble. Because virtually all small, remote incinerators use a batch process, AOGA believes that the appropriate definition of "capacity" is the maximum amount of solid waste that will be combusted in a day. AOGA believes that basing "capacity" on a pound per hour rating is inappropriate because small, remote incinerators cannot be recharged on an hourly basis and/or because the amount of solid waste generated at the small, remote facility is less than the rated capacity of the incinerator.

Response: See Preamble Section V. on discussion of the small remote subcategory and revisions to the definition of this type of unit.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 19

Comment: EPA must make further clarifications and changes to the final rule to facilitate implementation.

EPA should clarify its use of the terms "incinerator" and "incineration units", specifically distinguishing between when the term refers to all subcategories of CISWI units and when it is meant to apply only to the "incinerator" subcategory.

For example, emission limits cited in §60.2105 (b) for "incinerators" commencing construction after November 30, 1999 is presumed to apply only to the incinerator subcategory since it would be unreasonable to interpret the provision as applying retroactively to existing boilers that are refined as CISWI energy recovery units at some point in the future. In contrast, the applicability section §60.2010 uses the "incineration unit" term to describe units subject to the rule, which we understand to mean CISWI units in all subcategories including both incinerators and energy recovery units.

Response: See the definitions in the regulatory text and discussions on applicability and subcategories in Preamble Section V.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 12

Comment: Due to varying interpretations by state agencies, we request that terms like annual be clarified, for example: on an annual calendar basis, but no less than 6 months, and no more than 18 months apart.

Response: See the final regulatory text for new and revised definitions.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 21

Comment: Bypass. The term "bypass" is defined in the CISWI rule under the proposed 40 CFR 60.2265 and 40 CFR 60.2875 as it relates to incinerator operation. CISWI kilns are not generally equipped with bypass devices in the CISWI sense of the rule. However, it could be unintentionally confused with an alkali bypass stack on cement kilns. EPA should clarify that "bypass" and its related requirements in the CISWI rule do not apply to CISWI kilns that possess alkali bypass stacks or other process vents that may emit kiln gases directly to the atmosphere.

Commercial and industrial solid waste incineration (CISWI) unit. The definition of CISWI unit under the proposed 40 CFR 60.2265 and 40 CFR 60.2875 does not provide an understandable unit boundary for kilns. And, given the operational differences and importance of interfaces with other federal emission standards, EPA needs to clearly define CISWI unit boundaries for kilns specifically and ensure their exemption from potentially overlapping Section 111 or 112

emissions standards to avoid regulatory applicability confusion. Lafarge believes the boundary should begin with the NHSM injection location into the kiln, include the kiln system, the kiln pollution control devices, and end at the clinker discharge point from the kiln. The boundary should exclude all CKD handling, recycling, and transfer operations. And, as elaborated on in other areas of our comments, state that CISWI kilns have no fugitive ash sources.

Startup period and Shutdown. The terms startup period and shutdown as defined in the current 40 CFR 60.2265 regulations are ambiguous to kiln operation and, again, EPA has failed to account for how such terms would apply to CISWI kiln operation in the proposed rule. Applicable and understandable definitions for these should be incorporated into the final rule by EPA. Specifically, startup and shutdown activities for cement kilns are not relevant to NHSM usage. Therefore, the existing definition improperly captures what appears to be EPA's intent to define CISWI unit startup and shutdown periods.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 37.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 87

Comment: Section 60.225(c) removes the definition of "Malfunction." 75 FR 31983. However, this term is still used in the following sections: §§ 60.2210(k) and 60.2770(k). 75 FR 31999.

The definition for "minimum voltage or amperage" is unclear and incorrect. CIBO proposes to delete the words "measured from the pressure drop and liquid flow rate monitors" 75 FR 31983, 31999.

Response: EPA thanks the commenter for their input. A definition for "malfunction" is included in the final rule.

9.2 Rule Language: Definitions (new)

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 36

Comment: It is apparent that EPA has not taken due care in reviewing many sections of the existing CISWI rule language in it's proposal. For example, the proposed rule fails to properly revise or address their applicability on a number of terms in the existing rules that are not properly defined, ambiguous, non-applicable or potentially confusing for kiln operators that could be subject to the CISWI rule. Without clarification, provisions would make the proposed CISWI rule for cement kiln operators at best difficult, if not impossible to comply with. We have identified the following terms that EPA has failed to properly consider or address in the proposal rule below.

Fugitive Ash Sources.

* The proposed rule provides a limitation on fugitive ash sources from CISWI kilns (currently found in Table 7 of proposed Subpart CCCC and Table 8 of Subpart DDDD). The terms "ash", "fugitive ash", and "fugitive ash sources" are undefined in the rules. Furthermore, portland cement kilns do not produce ash.

* Given the above, EPA should strike all references to fugitive ash sources from the rule specifically related to CISWI kilns (including, but not limited to, those found in Table 7 of proposed Subpart CCCC, Table 8 of proposed Subpart DDDD) and clearly exclude CISWI kiln operators from all requirements related to fugitive ash sources.

* Charge Rate. The proposed rule does not define the term "charge rate," especially how such a foreign term or concept could be applied to CISWI kilns where a commercial product is being manufactured in intimate contact with ingredients and fuels deemed "solid waste" by the companions solid waste identification rulemaking. Furthermore, PCA does not believe the term or related requirements apply to CISWI kilns. We request that EPA clarify this term and its non-applicability to CISWI kilns.

Response: EPA has removed the fugitive ash requirements for waste-burning kilns. The charge rate for kilns would reflect the operating or production rate, since fuels and ingredients are in intimate contact during the production process.

Commenter Name: David W. Hacker
Commenter Affiliation: United States Steel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2091.1
Comment Excerpt Number: 2

Comment: U. S. Steel believes that U. S. EPA should include a definition for "traditional fuels" in 40 CFR § 60.2265 — "What definitions must I know?" This is especially appropriate since the term, "traditional fuels," has not been specifically defined in the proposed non-hazardous secondary materials regulation.

Response: Traditional fuels are defined in the Solid Waste Definition Rule, and the rule exempts traditional fuels from being solid waste.

Commenter Name: David W. Hacker
Commenter Affiliation: United States Steel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2091.1
Comment Excerpt Number: 3

Comment: For clarification, U. S. Steel also requests that U. S. EPA consider the following definitions for inclusion in 40 CFR § 60.2265:

Traditional Fuels - means materials that have been historically managed as valuable fuels products and not wastes. Traditional fuels include but are not limited to fossil fuels (e.g. coal, oil,

on and off spec used oil, and natural gas), fossil fuel derivatives (e.g., petroleum coke, bituminous coke, coal tar oil, refinery gas, synthetic fuel, asphalts, blast furnace gas, basic oxygen furnace gas, recovered gaseous butane, and coke oven gas), and clean cellulosic biomass materials.

Clean Cellulosic Biomass - means those non-hazardous materials that have not been altered either chemically or throgh some type of production process such that it contains contaminants not normally found in virgin biomass material. Clean cellulosic biomass materials include but are not limited to forest derived materials such as green wood, forest thinnings, clean and unadulterated bark, sawdust, trim, tree harvesting residuals from logging and sawmills, wood collected form forest fire clearance activities, trees and clean wood found in disaster debris, and other land clearing operations. Biomass including but not limited to materials from crops and fast growing grasses such as corn stover, energy cane, bagasse, peanut shells, millet hulls, sunflower hulls/screenings, rice hulls, oat hulls, distillers grain, flour dust screenings, elevator screenings of wheat soy, and oats, hay, and grasses.

Response: Traditional fuels are defined in the Solid Waste Definition Rule (NHSM), and the rule exempts traditional fuels from being solid waste. To the extent this comment has been provided in that rulemaking, it will be addressed there.

Commenter Name: Mary Uhl
Commenter Affiliation: New Mexico Environment Department
Document Control Number: EPA-HQ-OAR-2003-0119-2151.1
Comment Excerpt Number: 1

Comment: EPA requests in the preamble (page 31960) comments on the need of air curtain incinerators that burn "clean wood" to obtain a Title V permit. It is unclear what is meant by "clean wood," as neither the preamble nor the proposed rule provides a definition for "clean wood." 40 CFR 60.2875 "What definitions must I know?" includes a definition for "clean lumber". Is it to be assumed that these terms have the same meaning, which limits air curtain incinerators to the combustion of wood products outlined in the definition found in 40 CFR 60.2875? Furthermore, under the definition of a solid waste incinerator unit in § 60.2265 and § 60.2875 of the proposed rule, the term solid waste incinerator does not include air curtain incineration units that burn only wood wastes, yard wastes and clean lumber. Clarification of the term "clean wood" would be appropriate.

Response: See Section 129 of the CAA for the reduced provisions for air curtain incinerators burning certain materials. Also see title V discussion elsewhere in this document.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 20

Comment: It is apparent that EPA has not taken due care in reviewing many section of the existing CSIWI rule language in its proposal. For example, the proposed rule fails to properly revise or address their applicability on a number of terms in the existing rules that are not properly defined, ambiguous, non-applicable or potentially confusing for kiln operators that would be subject to the CISWI rule. Without clarification, provisions would make the proposed CSIWI rule for cement kiln operators at best difficult, if not impossible to comply with. We have identified the following terms that EPA has failed to properly consider or address in the proposal rule below. They may be more:

1. Fugitive Ash Sources.

* The proposed rule provides a limitation on fugitive ash sources from CISWI kilns (currently found in Table 7 of proposed Subpart CCCC and Table 8 of Subpart DDDD). The terms "ash", "fugitive ash", and "fugitive ash sources" are undefined in the rules. Furthermore, Portland cement kilns do not even produce ash.

* Given the above, EPA should strike all references to fugitive ash sources from the rule specifically related to CISWI kilns (including, but not limited to, those found in Table 7 of proposed Subpart CCCC, Table 8 of proposed Subpart DDDD) and clearly exclude CISWI kiln operators from all requirements relevant to fugitive ash sources.

2. Charge Rate. The proposed rule does not define the term "charge rate", especially how such a foreign term or concept could be applied to CISWI kilns. Furthermore, Lafarge does not believe the term or related requirements apply to CISWI kilns. We request that EPA clarify this term and its non-applicability to CISWI kilns.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 36.

9.3 Rule language: Subpart CCCC (NSPS) Rule language

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 39

Comment: The Proposed CISWI Rule proposes a series of monitoring and testing requirements that are ambiguous or conflicting in certain areas for kiln operators. PCA recommends that EPA align monitoring and testing conditions consistent with the recently-issued Pre-Publication Portland Cement NESHAP and NSPS Subpart F requirements.

* Unclear intention to regulate CO emissions from CISWI kilns. Table 8 of Subpart DDDD and Table 7 of Subpart CCCC (75 Fed. Reg. 32002, 32003 and 31987) include specific limitations for CO, however there are no substantive requirements incorporated into the proposed rules implementing these monitoring requirements.

* Performance Testing for D/F. The Proposed CISWI Rule is unclear if annual performance testing for D/F is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(i) and 2730(i).

* Performance Testing for Mercury. The Proposed CISWI Rule is unclear if annual performance testing for mercury is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(j) and 2730(j).

Detailed comments on EPA's proposed monitoring and testing requirements are included with these comments [see submittal for Attachment 4 provided by commenter.]

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 40.

Commenter Name: Chris Hornback
Commenter Affiliation: National Association of Clean Water Agencies (NACWA)
Document Control Number: EPA-HQ-OAR-2003-0119-2123.1
Comment Excerpt Number: 2

Comment: The SSI exclusions need to be revised to correct an important typographical error and to clarify the

description of SSIs.

The SSI exclusions are contained in paragraph 60.2020(n) (NSPS program) and paragraph 60.2555(n) (EG program). However, due to an apparent oversight, the proposed applicability sections read: "This subpart exempts the types of units described in paragraphs (a), (c) through (i) and (m) of this section ..." (italics added). To correct this error, sections 60.2020 and 60.2555 should read:

"This subpart exempts the types of units described in paragraphs (a), (c) through (i), and (m) through (n) of this section ..."

We also request that the description of SSI under paragraph (n) be modified to account for those SSIs that also combust scum (e.g. skimmings, the floatable materials removed during wastewater treatment) and recognized that SSIs may also combust these materials for waste heat recovery and/or energy recovery. We propose the following description:

"Incineration units combusting sewage sludge or scum (the floatable materials removed during wastewater treatment) for the purpose of reducing the volume of the sewage sludge by removing combustible matter or for heat or energy recovery. Sewage sludge incineration unit designs may include fluidized bed and multiple hearth."

Response: See the response to comment EPA-HQ-OAR-2003-0119-2123.1, excerpt 3.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 23

Comment: Monitoring and Testing Issues

The CISWI rule embarks upon proposing a series of monitoring and testing

requirements that are ambiguous or conflicting in certain areas for kiln operators. Overall, it might be beneficial that EPA align monitoring and testing conditions consistent with the recently-issued revised NESHAP and NSPS Subpart F requirements.

* Unclear intention to regulate CO emissions from CISWI kilns. Table 8 of Subpart DDDD and Table 7 of Subpart CCCC (Pages 32002, 32003 and 31987) include specific limitations for CO, however there are no substantive requirements incorporated into the proposed rules implementing these monitoring requirements.

* Performance Testing for D/F. The proposed rules are unclear if annual performance testing for D/F is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(i) and 2730(i).

* Performance Testing for Mercury. The proposed rules are unclear if annual performance testing for mercury is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(j) and 2730(j).

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 40.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 86

Comment: The first paragraph of § 60.2020 omitted subparagraph (n) and should read "This subpart exempts the types of units described in paragraphs (a), (c) through (i), (m) and (n) of this section . . ." 75 FR 31974.

Response: See the response to comment EPA-HQ-OAR-2003-0119-2123.1, excerpt 3.

9.4 Rule language: Subpart DDDD (EG) Rule language

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 40

Comment: The Proposed CISWI Rule proposes a series of monitoring and testing requirements that are ambiguous or conflicting in certain areas for kiln operators. PCA recommends that EPA align monitoring and testing conditions consistent with the recently-issued Pre-Publication Portland Cement NESHAP and NSPS Subpart F requirements.

* Unclear intention to regulate CO emissions from CISWI kilns. Table 8 of Subpart DDDD and Table 7 of Subpart CCCC (75 Fed. Reg. 32002, 32003 and 31987) include specific limitations for CO, however there are no substantive requirements incorporated into the proposed rules implementing these monitoring requirements.

* Performance Testing for D/F. The Proposed CISWI Rule is unclear if annual performance testing for D/F is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(i) and 2730(i).

* Performance Testing for Mercury. The Proposed CISWI Rule is unclear if annual performance testing for mercury is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(j) and 2730(j).

Detailed comments on EPA's proposed monitoring and testing requirements are included with these comments [see submittal for Attachment 4 provided by commenter.]

Response: See the final regulatory language for revisions to the monitoring provisions.

Commenter Name: Chris Hornback
Commenter Affiliation: National Association of Clean Water Agencies (NACWA)
Document Control Number: EPA-HQ-OAR-2003-0119-2123.1
Comment Excerpt Number: 3

Comment: The SSI exclusions need to be revised to correct an important typographical error and to clarify the description of SSIs.

The SSI exclusions are contained in paragraph 60.2020(n) (NSPS program) and paragraph 60.2555(n) (EG program). However, due to an apparent oversight, the proposed applicability sections read: "This subpart exempts the types of units described in paragraphs (a), (c) through (i) and (m) of this section ..." (italics added). To correct this error, sections 60.2020 and 60.2555 should read:

"This subpart exempts the types of units described in paragraphs (a), (c) through (i), and (m) through (n) of this section ..."

We also request that the description of SSI under paragraph (n) be modified to account for those SSIs that also combust scum (e.g. skimmings, the floatable materials removed during wastewater treatment) and recognized that SSIs may also combust these materials for waste heat recovery and/or energy recovery. We propose the following description:

"Incineration units combusting sewage sludge or scum (the floatable materials removed during wastewater treatment) for the purpose of reducing the volume of the sewage sludge by removing combustible matter or for heat or energy recovery. Sewage sludge incineration unit designs may include fluidized bed and multiple hearth."

Response: EPA thanks the commenter for their input and has corrected the reference error in 60.2020 and 60.2555. The final regulation provides a definition of SSI.

Commenter Name: Craig S. Campbell

Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 24

Comment: Monitoring and Testing Issues

The CISWI rule embarks upon proposing a series of monitoring and testing

requirements that are ambiguous or conflicting in certain areas for kiln operators. Overall, it might be beneficial that EPA align monitoring and testing conditions consistent with the recently-issued revised NESHAP and NSPS Subpart F requirements.

* Unclear intention to regulate CO emissions from CISWI kilns. Table 8 of Subpart DDDD and Table 7 of Subpart CCCC (Pages 32002, 32003 and 31987) include specific limitations for CO, however there are no substantive requirements incorporated into the proposed rules implementing these monitoring requirements.

* Performance Testing for D/F. The proposed rules are unclear if annual performance testing for D/F is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(i) and 2730(i).

* Performance Testing for Mercury. The proposed rules are unclear if annual performance testing for mercury is required for kilns but the rule alludes to such a possible requirement in 40 CFR 60.2165(j) and 2730(j).

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 40.

9.5 Other - Rule Language Corrections

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 44

Comment: The Proposed CISWI Rule incorporates a series of operator training and qualifications requirements (75 Fed. Reg. 31974, 31990) as statutorily required under § 129 of the CAA. Kiln operators are highly trained and qualified individuals and subjected to specific training on kiln operations, pollution control operation, response to process upsets and malfunctions, and other relevant subject matters. This training is expected to be at least as effective as that incorporated into the current CISWI rules. Accordingly, we request that EPA incorporate language into the final rule that allow operators of CISWI kilns to either meet the training and certification requirements of the CISWI rule or provide that CISWI kiln owner and operators be allow to conduct site-specific operator training and certification.

Response: As the commenter has noted, Section 129 of the CAA contains operator training requirements as part of the implementation of the rule. States may petition the Administrator on alternate operator training programs, provided they are at least as effective as the model training program required in the emission guidelines.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 11

Comment: We request that some of the 2000 rule language be modified. The training requirements are some of the most confusing ever written and they were not modified (only added to). Two examples, in particular:

o An "operator training course" and "review of information" are required prior to an employee assuming responsibility for a CISWI unit. 11 topics are specified for the operator training course (2075) and 10 topics are specified for the review of information (2095).

o An "annual review or refresher course" and "review of information" are required of an annual basis. Again, 5 topics are specified for the annual review or refresher course (2085) and 10 topics are specified for the review of information (2095).

Please clarify the difference between courses and review of information and revise the number of topics be consistent.

Response: These provisions have been successfully implemented since 2000.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 28

Comment: The CISWI rules incorporate a series of operator training and qualifications requirements (Page 31974 and page 31990) as statutorily required under Section 129 of the CAA. Kiln operators are highly trained and qualified individuals and subjected to specific training on kiln operations, pollution control operation, response to process upsets and malfunctions, and other relevant subject matters. This training is expected to be at least as effective as that incorporated into the current CISWI rules. Accordingly, we request that EPA incorporate language into the final rule that allow operators of CISWI kilns to either meet the training and certification requirements of the CISWI rule or CISWI kiln owner and operators be allow to conduct site-specific operator training and certification.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 44.

10.0 TESTING AND MONITORING

10.1 Stack Test Methods

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 19

Comment: Use of data from ASTM Method D6784-02 for setting source mercury

emission standards In the proposed regulation, EPA has specified that as an alternative to using EPA Method 29, ASTM Method D6784-02 may be used to demonstrate compliance with the standard. This ASTM method is similar to EPA Method 29 in that it utilizes a probe and filter assembly to capture any mercury present in the solid phase. The gaseous oxidized or elemental mercury is captured in a series of three impingers containing KCl, an empty impinger, and three potassium permanganate impingers. The processing of the sample results in five sub-samples containing mercury from the stack gases. These consist of digested samples from the filter and probe residue and contents from impingers 1-3, impinger 4, and impingers 5-7. The volumes of these samples vary depending upon the stack volume and moisture content and sample dilution required during digestion. The estimated volumes of the sub-sample that would be obtained during a run on a biomass boiler based on the maximum sample volume of 2.5 m3 on a dry basis would be approximately 100 mL each for the filter and the probe wash, 1.2 liters for impingers 1-3, 150 mL for impinger 4 and 500 mL for impingers 5-7. Aliquots of these samples are analyzed using CVAA and the amount of mercury in the samples is corrected for sample dilution.

In its proposal and in its Phase 2 ICR EPA has specified the use of either Method 29 or ASTM Method D6784-02 for measuring stack emissions of mercury and has used data obtained with

either of the two methods to set the proposed MACT standards for mercury. In doing this, EPA has failed to recognize the differences between the two methods as described below:

In its 2009 ICR, EPA also specified a 4-hour run and a sample volume of 4 m3. However, the ASTM method specifies that the sampling duration should not exceed 3 hours and a maximum sample volume of 2.5 m3 is specified. It is known that as the averaging period for a standard goes down, the emission profile changes and gives higher peaks.

Consequently, it would not be appropriate to use ASTM Method 6784-02 to demonstrate compliance with a 4-hour mercury emission standard.

An examination of the two methods would show that the resulting volumes of the sub-samples obtained with the two methods are different. Thus if one follows the EPA 2009 ICR protocol for reporting values below the method detection limit as being equal to the detection limit, one would get different results when sample fractions are non-detect. For example, in Method 29 when the contents of the KMnO4 impingers are processed, one obtains two 500 mL sub-samples for mercury analysis. In the case of ASTM Method D6784-02, the processing of the KMnO4 impinger solution would result in a single 500-600 mL sample. Thus, if the detection limits of the analyzers used with the two methods are the same, the emission rate reported for non-detect

measurements when Method 29 is used would be nearly twice that reported for the ASTM method.

Based on the above inconsistencies between the two methods, we recommend that EPA should either use the results of only one of the two methods or conduct simultaneous tests on sources to determine whether or not the two methods give the same results. Additionally, EPA should reexamine its requirement to test sources for 4 hours and a 4 m3 volume, since this cannot be achieved when ASTM D6784-02 is utilized for source testing.

Response: We agree with the commenter, and the final rule clarifies minimum sample volumes and assures that the specifications are consistent between test methods and with the method capabilities.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 25

Comment: Demonstrating compliance with the proposed 2.2 ppmv CO standard for existing incinerators using EPA Reference Method 10 will be very difficult, and may not be possible. CRWI's interpretation of Methods 10 and 7E is that the span of the CO analyzer cannot be greater than 5 ppmv, as Section 3.4 of Method 10 notes that the measured emissions should be between 20-100 percent of the calibration span. EPA makes some allowance for this requirement by allowing a 10 ppmv span gas. So,, even if measured emissions were 2.2 ppmv, the span could not exceed 10 ppmv. Section 9.0 of EPA Method 7E has a QA/QC table that states that the analyzer and calibration gas performance must be within 2% of the calibration span of the analyzer (2% of 10 ppmv = 0.2 ppmv) or alternatively 0.5 ppmv. Using the 2% criteria means that the acceptable result of the span calibration verification would have to be within 2% or within 0.2 ppmv of the calibration gas. This borders on the reasonable detection capabilities of a CO emission analyzer. Thus, one would be forced to use the alternative 0.5 ppmv fOr QA/QC purposes. This level is troubling in that the uncertainty of the measurement is 23% of the proposed emission limit in this case (2.2 ppmv), thus further contributing to the challenges of meeting a 2.2 ppmv standard on a consistent basis.

In addition, EPA Method 7E requires the use of three calibration gases between the 0-5 ppmv level (or alternatively 0-10 ppmv level as per Table 6 of Subpart DDDD) in order to meet the QA/QC requirements for the analysis. Obtaining and using three different calibration gas standards in this range is excessive and may be difficult to accomplish. CR'M suggests that the QA/QC requirements should be modified to require only a single point calibration, at these low concentrations.

Similar to the calibration concerns, CRWI also notes that allowable drift would also have to meet the same alternative criteria of 0.5 ppmv (or 0.2 ppmv as per Table 6), which again is 50% (or alternatively 10%) of the allowable CO concentration.

Response: We agree with the commenter on two points. First, we agree that Method 7E and by extension Method 10 provide procedures that allow for instrument calibration error of 0.5 ppmv or less for span values up to 25 ppmv and proportionally higher for span values greater than 25

ppmv. This level of allowable concentration error limits the quality of data when actual concentrations approach very low ppmv concentrations. Second, we agree that the final rule must specify instrument span values that are commensurate with both the CO measurement instrument capabilities and the level of the emissions limit. We have considered both of these issues in establishing CO floor values, the resulting CO emissions limits, and the method specific directions in the rule (e.g., establishing span values from 2 to 4 times the concentration corresponding to the compliance limit).

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 29

Comment: Dioxin/Furan standards.

Analytical Perspectives (a CRWI Associate Member and one of the laboratories that analyze dioxin/furan samples) prefers to work at a level of quantification (LOQ) of 14.5 TEQ pg/dscm for dioxin and furan samples. This is based on a sample time of three hours drawing a cubic meter per hour. The proposed dioxin/furan standards for new sources for incinerators is 0.73 pg/dscm, for energy recovery units is 2.7 pg/dscrn, and for burn-off ovens is 0.86 pg/dscrn. To meet the LOQ for these units, a new incinerator would have to sample approximately 60. hours (14.5 divided by 0.73 times 3 hours), a new energy recovery unit would have to sample for 16 hours, and a new burn-off would have to sample for 51 hours. If EPA changes the minimum sample volume for D/F to 4 cubic meters, this would effectively increase the sample time requirements above by 33%, further compounding the problem. The sample times for existing source standards are a little better. Here the standards for incinerators, energy recovery units, and burn-off ovens are 2.5 pg/dscm, 59 pg/dscm, and 25,000 pg/dscm, respectively. A three hour sample time would obviously be adequate for the energy recovery units and burn-off ovens (additional concerns in the next paragraph). However, one would need a 16 hour sample time for incinerators.

Response: We disagree with the commenter about the conclusion that testing to show compliance with a mass emissions limit for dioxin and furans for this rule would require extraordinary sampling volumes and sample times. The commenter raises and mixes several data reporting issues that lead to a faulty conclusion. First, the commenter suggests that a laboratory's preferred level of quantitation (or other similar laboratory-derived reporting limits) be used to establish the floor and the applicable limit. This approach is at odds with the guidance we provided with the information collection request and with the reference test method. EPA's guidance to respondents for reporting pollutant emissions used to support the data collection specified the criteria for determining test-specific method detection levels, as required in Method 23 for measuring dioxin and furan concentrations (section 9.8), not arbitrary laboratory reporting levels. Second, the commenter refers to TEQ adjusted data in reporting dioxin and furan analytical results. Not only is this approach also at odds with the guidance EPA provided for the data collection, the adjustments the commenter then makes distort the method's detection levels

in favor of those compounds at the lower end (i.e., lower TEF values) of the TEQ scale. This distortion inordinately inflates the method detection level and by inference sample volume required in order to establish a floor or compliance with an emissions limit that is based on mass emissions concentration (e.g., pg/dscm). The final rule will clarify and reiterate the need to report D/F emissions concentration as prescribed in Method 23, on a mass basis and to follow the method's procedures for reporting values measured below the test-specific minimum detectable limit.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 47

Comment: Problems with EPA Method 5 Data used for Setting PM Standards

In setting the proposed standards for PM, EPA has utilized data obtained with Method 5 of 40 CFR 60, Appendix A. This method utilizes a probe to extract isokinetically a measured volume of the stack gas which passes through a glass fiber filter maintained at a temperature of 248 ± 25°F. The particulate matter collected in the probe and on the filter is recovered and weighed. The method requires two separate weight determinations – one is the determination of the amount of the material collected in the probe and the other is the increase in the filter weight. The moisture and oxygen contents of the stack are also determined to enable the calculation of PM concentration in the stack gas in grains/dscf corrected to a specified level of oxygen. If emissions are required to be reported as lb/MMBtu, stack gas flow rate and heat input rate or fuel F-factor information is utilized.

Although EPA Method 5 has been in use over 35 years, EPA has not included any information on its detection and quantitation limits in the description of the method. Our search of EPA's database did not provide any reports which were available to the public which contain information on Method 5 detection and quantitation limits. One place where EPA has provided information of the Method 5 detection limit is in the write-up on EPA Method 5I. In Section 2.3 of Method 5I, EPA has stated the following:

"EPA has conducted a systematic laboratory study to define what is the MDL for Method 5 and determined the Method to have a calculated practical quantitation limit (PQL) of 3 mg of PM and an MDL of 1 mg."

In the same document, in section 2.3 (c), relative to the data obtained with Method 5I, EPA has stated the following:

"For purposes other than determining compliance, results should be divided into two categories – those that fall between 3 mg and 1 mg and those that are below 1 mg. A sample catch between 1 and 3 mg may be used for such purposes as calculating emission rates with the understanding that the resulting emission rates can have a high degree of uncertainty. Results of less than 1 mg should not be used for calculating emission rates or pollutant concentrations."

It is very important to note that the above EPA findings are based on laboratory studies and do not include any errors associated with non-uniformity of PM in stack gases, stack gas velocity

changes associated with load swings, and errors in stack gas moisture and oxygen content measurements, all of which go into the calculation. These variabilities were examined in a study partially funded by EPA and published by Arkley [Footnote: Arkley, S. 2000. Compliance problems encountered in testing particulate matter at low concentration sources. Draft for Managing Title V Compliance Conference, February 2000.]

, where two single-point Method 5 trains were run simultaneously on different stacks to examine source emission variability. The National Council for Air and Stream Improvement (NCASI) [Footnote: The National Council for Air and Stream Improvement (NCASI) is an independent, non-profit research institute that focuses on environmental topics of interest to the forest products industry.] conducted a detailed analysis of these data (Technical Bulletin 852) and concluded that the detection and quantitation limits of Method 5 based on Arkley's work would be 2 and 6 mg, respectively, which are two times the values suggested by EPA in its write-up of Method 5I. It is noteworthy that Arkley's studies, although much closer to the real world than the EPA laboratory studies, were themselves limited in scope in that they did not examine the impacts of stack traverse and stack gas stratification on the detection and quantitation limits of EPA Method 5, and it would be reasonable to expect that the detection and quantitation limits measured by Arkley would have been higher had the stack variability been included in his study.

The above discussion clearly suggests the need for comprehensive EPA Method 5 detection and quantitation limit studies to determine the capability of the method to quantify low levels of PM in stack gas. In the absence of such information, in the interim period, EPA may use a 1.2 to 1.5 multiplier to the 6 mg PQL determined from Arkley's studies to establish all measurements below the PQL as a less than value and use that in setting the emission standards.

Other Problems with EPA Method 5

In addition to not specifying the test method detection and quantitation limits, one major shortcoming of EPA Method 5 is the absence of any discussion of the treatment of negative changes in the weight of the PM filter. As described earlier, after EPA Method 5 samples have been processed and dried, the analyst is left with (a) a sample of the material collected in the probe and (b) the filter which is used to capture the particulate matter in the gases being sampled. NCASI's review of the PM data shows that in many instances the increase in the weight of the filter after testing was negative and that such negatives were treated in two different manners. Some testing companies added the negative increase in the filter mass to the positive value for the probe residue to obtain the net mass of the captured particulate matter, whereas other testing companies treated the negative change in filter weight as zero and reported the mass of the residue collected in the probe as the net mass captured.

Recommendations Regarding the PM Data in EPA's Database

The above discussion clearly identifies that (a) there are severe limitations associated with the PM data that have been used to set the CISWI standards, and (b) there are deficiencies in EPA Method 5 that must be corrected in order to ensure that consistent data are obtained with EPA Method 5.

We recommend that EPA (a) sponsor studies aimed at determining the detection and quantitation limits of Method 5, and (b) promulgate changes to Method 5 that describe the procedures to deal with negative increases in filter weight. As a minimum, EPA should establish a quantitation limit

of Method 5 based on extrapolation of Arkley's work and treat all data below the method quantitation limit as a less than value in its analysis of the data aimed at developing the standard.

Problems with EPA Method 10 used for Measuring CO Emissions from Sources

EPA Method 10 is an instrumental method for measuring CO emissions from stacks. The method provides for a multitude of alternatives, including correction for stack gas CO_2 concentration if a CO_2 trap is used ahead of the analyzer. The CO analyzer itself has to meet the performance specification of analyzers in EPA Method 7E.

EPA has not provided any information on the detection and quantitation limits of Method 10 in the write-up of the method. However, in the write-up of Method 10 that is used for determining the CO emissions in certifying CEMS at petroleum refineries, it is stated in Section 13.4 that the detection limit of the method "is 3 ppmv based on a change in concentration equal to three times the standard deviation of the reagent plant solution." This would imply that the quantitation limit of the wet chemistry method based on reagent blank solution analysis is 10 ppmv. This would further imply that the quantitation limit of the CEM used to monitor the stack gas CO concentration would be substantially higher than the quantitation limit of the wet chemistry method used to certify its accuracy.

An examination of the CO emission data in the database shows that a large number of measurements were well below the 10 ppm practical quantitation limit of the wet chemistry reference method described in Method 10A.

EPA should establish the detection and quantitation limits of Method 10 prior to setting the standards for CISWI sources.

Problems with EPA Method 23 and Data Used to Propose the Standards for Chlorinated Dioxins and Furans

In proposing the MACT chlorinated dioxins and furans standards, EPA has utilized data obtained with Method 23. In this method, the stack gas sample is withdrawn isokinetically using a glass-lined probe. The sample passes through a glass fiber filter and an adsorbent trap where PCDD/DFs are captured. A dry gas meter is used to measure the total volume of the stack gas that is sampled. PCDD/DFs captured in the probe, on the filter and the adsorbent material are recovered, cleaned, separated on a high resolution gas chromatographic column, and analyzed using high resolution mass spectrometer. Although this method includes significant information on calibration and use of internal standards, EPA has not developed any information on the detection and quantitation limits of this method when used on a stack. Consequently, most analysts evaluate individual isomer peaks to determine whether or not a peak is a detect. Peaks which cannot be quantified are reported as being below the method detection limit. The method also specifies in Section 9.9 that all measurements below the detection limit should be treated as zero "for the purpose of calculating the total concentration of PCDDs and PCDFs in the sample."

In its September 18, 2009 guidance to sources which conducted tests following EPA's 2009 ICR, EPA, however, decided to deviate from the protocol of Method 23 and "calculate the in-stack emissions rate for any analytical measurement below detection level using the relevant detection level as the "real value."

An extremely wide range of detection limits were observed in these tests. For example, the values reported as non-detect for 2,3,7,8-TCDD range from 0.00021 to 0.008 ng/dscm. The proposed dioxin/furan emission limit for incinerators under Subpart DDDD is 0.0025 ng/dscm

on a TEQ basis. Given the extremely wide range of detection limits observed in various tests, facilities following EPA guidance regarding the treatment of non-detects may find it impossible to comply with the proposed standards even though all their measurements are below their respective detection limits. To avoid such an outcome, EPA should reanalyze all its data in a manner consistent with the treatment of non-detect measurements specified in Method 23. Failing the above, EPA should sponsor studies to develop the detection and quantitation limits of PCDD and PCDF measurements in stack gases, specify that all measurements below the method quantitation limits should be reported as less than values, and conduct data analysis for setting the MACT standards.

Problems with EPA Method 29 Data used for Setting the Metals

Emission Standards

In EPA Method 29, stack gas is drawn isokinetically from the stack through a sampling probe followed by an external heated filter to capture the particulate metals. The gases leaving the filter pass through a series of impingers which capture gaseous metals. The volume of the gases drawn from the stack is measured via a dry gas meter. The probe, filter and impinger contents are recovered by transferring the captured material, including the filter catch, wash solutions, and impinger contents, to several containers for digestion and further processing for analysis. This processing of the samples results in five sub-samples which are identified as sub-samples 1B, 2B, 3A, 3B and 3C. These samples are analyzed separately using cold vapor atomic absorption spectroscopy. A series of reagent blanks are also analyzed. The blank-corrected concentrations (µg/L) in the five sub-samples are multiplied by the amount of sample liquid, and the calculated masses are summed. The sum is divided by the volume of stack gases sampled to calculate the concentration in µg/m3 in the stack gas. This concentration is multiplied by the appropriate fuel F-factor, corrected for the stack gas oxygen (or CO_2) content, to obtain the emission rate in lb/1012Btu.

the sample being analyzed. In reporting the results, Method 29 does not require reporting of mercury masses in each of the five sub-samples, nor does the method provide guidance as to how to determine the detection limits of the sub-samples and how any non-detect values of these sub-samples should be handled when calculating the total mass of mercury in the samples. In the absence of such guidance, testing companies have used a variety of different approaches.

However, for the mandatory 2009 sampling, EPA specified that the mercury content of each sub-sample should be reported and instructed that values below the analytical detection limit should be assigned the detection limit value when the total amount of mercury in the five samples was computed. When a calculated emission rate included a non-detect from one or more of the five sub-samples, it was to be identified with a less than (<) sign preceding the numerical value.

Thus, there is certainly the potential for reporting inconsistencies between the Method 29 results for the 2009 sampling versus the pre-2009 sampling results in the EPA survey data base. We have found these inconsistencies in the data used to develop the Boiler MACT standards upon review of a select set of test reports, and the same problems likely exist with the CISWI data.

Recommendations Regarding EPA Method 29 Data

EPA has used inconsistent and incompatible data in proposing the mercury and metals emission standards. We recommend that to address these deficiencies, EPA should implement the following three steps prior to setting the MACT standards:

(a) Define a procedure for determining detection and quantitation limits of various fractions of mercury and other metals obtained with Method 29.

(b) Sponsor field studies to establish the detection and quantitation limits of various obtained with Method 29. In the absence of such a study, EPA may choose the 95th percentile of the combined detection and reporting levels corrected to quantitation limits and use such values in its data analysis.(c) Reanalyze all of its data by replacing all measured values below their respective quantitation limits with a less than quantitation limit value so that all the results are on a common basis

Response:

Method 5

We agree that the correct approach to measuring low quantities of PM emissions is to specify collection of a minimum sample volume that assures accuracy sufficient to determine compliance at the level of the emissions standard. We can calculate that minimum sample volume needed from knowledge of the mass of PM that can be measured with a known level of confidence and the stack emissions concentration at the level of the standard. Based on the results of the ASME Reference Method Accuracy and Precision (ReMAP): Phase 1, Precision of Manual Stack Emission Measurements study (ASME, Research Committee on Industrial and Municipal Waste, February 2001), this PM mass is on the order of 4 mg. In order to assure the adequacy of a compliance test measurement for a standard of 1.8 mg/dscm, we specify in the rule a minimum sample volume of 4 dscm. One may collect 4 dscm in 3 to 4 hours of testing with Method 29 or with Method 5.

We agree with the commenter that it would be useful to have guidance on how to treat negative filter weights resulting from Method 5 testing. The proper approach is to treat the negative filter weights as zero. We are planning to include such guidance in our next rulemaking update to Method 5; in the meantime, we will plan to include a recommendation as part of the frequently asked questions (FAQ) for Method 5 on our Emission Measurement Center website at www.epa.gov/ttn/emc. We recognize that uncertainty of the measurement may gradually increase at particulate matter (PM) catch levels below 5 mg, we generally agree with the commenter that target mass relative to the applicable emissions limit for filterable PM using Method 5 is on the order of 5 to 10 mg. In addition, we have taken this uncertainty (variability) into account in setting the standard.

M10

We do agree with the commenters assertion that the method detection limit for Method 10 is 3 ppmv resulting in a PQL for Method 10 and CO CEMS of 10 ppmv and above. For CO data several testers reported Method 10 detection limits well under 3 ppmv. In addition, since Method 10 (as well as Performance Specification 4 for CO CEMS) are performance based, the method detection limit can be pushed below 3 ppmv as long as appropriate calibration gases are available and the method performance criteria can be met. According to vendors, Protocol 1 CO gases are currently available down to around 1 ppm which would allow for a span of 5 ppm and method detection limits on the order of 0.1 to 0.2 ppmv.

M23

Regarding the emission standard for dioxins/furans and the use of Method 23, we believe that the commenter is confused regarding EPA's guidance on reporting of non-detect values for

compliance purposes. For purposes of the ICRs, we specified in the September 18, 2009 guidance that facilities "calculate the in-stack emission rate for any analytical measurement below detection level using the relevant detection level as the 'real value'". We do not intend for that guidance to be followed in determining compliance with the dioxins/furans emission limit; rather sources should to use the guidance in Section 9.9 of Method 23 that all measurements below the detection limit (calculated as per Method 23) should be treated as zero for the purpose of calculating dioxins/furans emissions. We disagree that method detection limits must be specified in Method 23 and that EPA must conduct a study to define them. As the commenter pointed out, laboratories routinely report sample specific method detection limits which is the proper lab practice. In the future, we may consider specifying target detection limits in Method 23, but we do not see this as necessary at this time.

M29

As stated above in regard to Method 23, EPA does not agree that it is necessary for a method to specify how to determine a method detection limit; a quality laboratory will determine the method detection limit using a suitable approach. EPA was disappointed to discover, that some laboratories had ignored our September 18, 2009 guidance for reporting metals emissions results for the ICRs and were relying on reporting limits as opposed to method detection limits; however, EPA does not believe that this had any significant effect on the emissions limits determined for the MACT floor. In the longer term, it is still under consideration whether it makes sense to specify one or more standard Agency practices for method detection limit determination.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 18

Comment: EPA Should Address Key Concerns Regarding the Test Methods

ACC has reviewed the reference test methods from EPA's database and has identified numerous concerns regarding the use of those test methods for establishing emissions standards. Below is a more detailed discussion of the detection and quantitation limit issues with the test methods utilized for obtaining data for setting the MACT standards.

Problems with EPA Method 5 data used for setting PM standards

In setting the proposed standards for PM, EPA has utilized data obtained with Method 5 of 40 CFR 60, Appendix A. This method utilizes a probe to isokinetically extract a measured volume of the stack gas which passes through a glass fiber filter maintained at a temperature of 248 ± 25?F. The particulate matter collected in the probe and on the filter is recovered and weighed. The method requires two separate weight determinations – one is the determination of the amount of the material collected in the probe and the other is the increase in the filter weight. The moisture and oxygen contents of the stack are also determined to enable the calculation of PM concentration in the stack gas in grains/dscf corrected to a specified level of oxygen. If

emissions are required to be reported as lb/MMBtu, stack gas flow rate and heat input rate or fuel F-factor information is utilized.

Although EPA Method 5 has been in use over 35 years, EPA has not included any information on its detection and quantitation limits in the description of the method. Our search of EPA's database resulted in no publicly available reports containing information on Method 5 detection and quantitation limits. One place where EPA has provided information of the Method 5 detection limit is in the write-up on EPA Method 5I. In Section 2.3 of Method 5I, EPA states the following:

"EPA has conducted a systematic laboratory study to define what is the MDL for Method 5 and determined the Method to have a calculated practical quantitation limit (PQL) of 3 mg of PM and an MDL of 1 mg."

In the same document, in section 2.3 (c), relative to the data obtained with Method 5I, EPA has stated the following:

"For purposes other than determining compliance, results should be divided into two categories – those that fall between 3 mg and 1 mg and those that are below 1 mg. A sample catch between 1 and 3 mg may be used for such purposes as calculating emission rates with the understanding that the resulting emission rates can have a high degree of

uncertainty. Results of less than 1 mg should not be used for calculating emission rates or pollutant concentrations."

It is very important to note that the above EPA findings are based on laboratory studies and do not include any errors associated with non-uniformity of PM in stack gases, stack gas velocity changes associated with load swings, and errors in stack gas moisture and oxygen content measurements, all of which go into the calculation. These variabilities were examined in a study partially funded by EPA and published by Arkley [Footnote: Arkley, S. 2000. Compliance problems encountered in testing particulate matter at low concentration sources. Draft for Managing Title V Compliance Conference, February 2000.], where two single-point Method 5 trains were run simultaneously on different stacks to examine source emission variability. The National Council for Air and Stream Improvement (NCASI) [Footnote: The National Council for Air and Stream Improvement (NCASI) is an independent, non-profit research institute that focuses on environmental topics of interest to the forest products industry.] conducted a detailed analysis of these data (Technical Bulletin 852) and concluded that the detection and quantitation limits of Method 5 based on Arkley's work would be 2 and 6 mg, respectively, which are two times the values suggested by EPA in its write-up of Method 5I. It is noteworthy that Arkley's studies, although much closer to the real world than the EPA laboratory studies, were themselves limited in scope in that they did not examine the impacts of stack traverse and stack gas stratification on the detection and quantitation limits of EPA Method 5, and it would be reasonable to expect that the detection and quantitation limits measured by Arkley would have been higher had the stack variability been included in his study.

The above discussion clearly suggests the need for comprehensive EPA Method 5 detection and quantitation limit studies to determine the capability of the method to quantify low levels of PM in stack gas. In the absence of such information, in the interim period, EPA should use a 1.2 to 1.5 multiplier to the 6 mg PQL determined from Arkley's studies to establish all measurements below the PQL as a less than value and use that in setting the emission standards.

In addition to not specifying the test method detection and quantitation limits, one major shortcoming of EPA Method 5 is the absence of any discussion of the treatment of negative

changes in the weight of the PM filter. As described earlier, after EPA Method 5 samples have been processed and dried, the analyst is left with (a) a sample of the material collected in the probe and (b) the filter which is used to capture the particulate matter in the gases being sampled. NCASI's review of the PM data shows that in many instances the increase in the weight of the filter after testing was negative and that such negatives were treated in two different manners. Some testing companies added the negative increase in the filter mass to the positive value for the probe residue to obtain the net mass of the captured particulate matter, whereas other testing companies treated the negative change in filter weight as zero and reported the mass of the residue collected in the probe as the net mass captured.

The above discussion clearly identifies that (a) there are severe limitations associated with the PM data that have been used to set the MACT standards, and (b) there are deficiencies in EPA Method 5 that must be corrected in order to ensure that consistent data are obtained with EPA Method 5.

We recommend that EPA (a) sponsor studies aimed at determining the detection and quantitation limits of Method 5, and (b) promulgate changes to Method 5 that describe the procedures to deal

with negative increases in filter weight. At a minimum, EPA should establish a quantitation limit of Method 5 based on extrapolation of Arkley's work and treat all data below the method quantitation limit as a less than value in its analysis of the data aimed at developing the standard.

Problems with EPA Method 10 used for measuring CO emissions from sources

EPA Method 10 is an instrumental method for measuring CO emissions from stacks. The method provides for a multitude of alternatives, including correction for stack gas CO_2 concentration if a CO_2 trap is used ahead of the analyzer. The CO analyzer itself has to meet the performance specification of analyzers in EPA Method 7E. Method 10 does include this language:

4.1 Precision. The precision of most NDIR analyzers is approximately ±2 percent of span.

4.2 Accuracy. The accuracy of most NDIR analyzers is approximately ±5 percent of span after calibration.

Thus, it would appear that actual upscale span needs to be evaluated for every Method 10 emission test used to establish the MACT floor.

EPA has not provided any information on the detection and quantitation limits of Method 10 in the write-up of the method. However, in the write-up of Method 10 that is used for determining the CO emissions in certifying CEMS at petroleum refineries, it states in Section 13.4 that the detection limit of the method "is 3 ppmv based on a change in concentration equal to three times the standard deviation of the reagent plant solution." This would imply that the quantitation limit of the wet chemistry method based on reagent blank solution analysis is 10 ppmv. This would further imply that the quantitation limit of the CEMS used to monitor the stack gas CO concentration would be substantially higher than the quantitation limit of the wet chemistry method used to certify its accuracy.

An examination of the CO emission data in the database shows that a large number of measurements were well below the 10 ppm practical quantitation limit of the wet chemistry reference method described in Method 10A.

EPA should establish the detection and quantitation limits of Method 10 prior to setting the standards for CISWI sources.

Problems with EPA Method 23 and data used to propose the standards for chlorinated dioxins and furans

In proposing the MACT chlorinated dioxins and furans standards, EPA has utilized data obtained with Method 23. In this method, the stack gas sample is withdrawn isokinetically using a glass-lined probe. The sample passes through a glass fiber filter and an adsorbent trap where PCDD/DFs are captured. A dry gas meter is used to measure the total volume of the stack gas that is sampled. PCDD/DFs captured in the probe, on the filter and the adsorbent material are recovered, cleaned, separated on a high resolution gas chromatographic column, and analyzed using high resolution mass spectrometer. Although this method includes significant information on calibration and use of internal standards, EPA has not developed any information on the

detection and quantitation limits of this method when used on a stack. Consequently, most analysts evaluate individual isomer peaks to determine whether or not a peak is detected. Peaks which cannot be quantified are reported as being below the method detection limit. The method also specifies in Section 9.9 that all measurements below the detection limit should be treated as zero "for the purpose of calculating the total concentration of PCDDs and PCDFs in the sample."

In its September 18, 2009 guidance to sources which conducted tests pursuant to EPA's 2009 Phase 2 ICR, EPA deviated from the protocol of Method 23 and instructed sources to calculate the in-stack emissions rate for any analytical measurement below detection level using the relevant detection level as the "real value."

An extremely wide range of detection limits were observed in these tests. For example, the values reported as non-detect for 2,3,7,8-TCDD range from 0.00021 to 0.008 ng/dscm. The proposed dioxin/furan emission limit for incinerators under Subpart DDDD is 0.0025 ng/dscm on a TEQ basis. Given these wide ranges of detection limits, facilities following EPA guidance regarding the treatment of non-detects may find it impossible to comply with the proposed standards even though all their measurements are below their respective detection limits. To avoid such an outcome, EPA should (a) establish the 95th percentile detection limit values for the 17 PCDD/F congeners as detection limit values, (b) multiply the detection limit values by 3 or a similar factor to establish the quantitation limit for each of the 17 congeners, (c) reanalyze all of the data by substituting the quantitation limit values for all measurements below the quantitation limit, and (d) set dioxin/furan standards based on these new values and the applicable toxicity equivalents.

Problems with EPA Method 29 data used for setting the metals emission

standards and recommendations

In EPA Method 29, stack gas is drawn isokinetically from the stack through a sampling probe followed by an external heated filter to capture the particulate metals. The gases leaving the filter pass through a series of impingers which capture gaseous metals. The volume of the gases drawn from the stack is measured via a dry gas meter. The probe, filter and impinger contents are recovered by transferring the captured material, including the filter catch, wash solutions, and impinger contents, to several containers for digestion and further processing for analysis. This processing of the samples results in five sub-samples which are identified as sub-samples 1B,

2B, 3A, 3B and 3C. These samples are analyzed separately using cold vapor atomic absorption spectroscopy. A series of reagent blanks are also analyzed. The blank-corrected concentrations (µg/L) in the five sub-samples are multiplied by the amount of sample liquid, and the calculated

masses are summed. The sum is divided by the volume of stack gases sampled to calculate the concentration in µg/m3 in the stack gas. This concentration is multiplied by the appropriate fuel F-factor, corrected for the stack gas oxygen (or CO_2) content, to obtain the emission rate in lb/1012Btu.

A critical aspect of Method 29 is the need to sum five different measurements (1B, 2B, 3A, 3B and 3C), each with its own detection limit, to obtain the total mass of mercury in the sample being analyzed. In reporting the results, Method 29 does not require reporting of mercury masses in each of the five sub-samples, nor does the method provide guidance as to how to determine the detection limits of the sub-samples and how any non-detect values of these sub-

samples should be handled when calculating the total mass of mercury in the samples. In the absence of such guidance, testing companies have used a variety of different approaches.

However, for the Phase 2 ICR sampling, EPA specified that the mercury content of each sub-sample should be reported and instructed that values below the analytical detection limit should be assigned the detection limit value when the total amount of mercury in the five samples was computed. When a calculated emission rate included a non-detect from one or more of the five sub-samples, it was to be identified with a less than (<) sign preceding the numerical value.

Thus, there is the potential for reporting inconsistencies between the Method 29 results for the Phase2 sampling and the Phase I ICR sampling results in the EPA survey data base, as well as inconsistencies in the Phase 2 ICR data reporting as compared to EPA‘s instructions. Based on our review of a select set of test reports, we have found these inconsistencies in the data used to develop the proposed Boiler MACT standards and the same problems are likely to exist with the CISWI data.

EPA has used inconsistent and incompatible data in proposing the mercury and metals emission standards. We recommend that to address these deficiencies, EPA should implement the following three steps prior to establishing the MACT standards:

establish the 95th percentile detection limit values for the 5 mercury fractions as detection limit values.

multiply the detection limit values by 3 or a similar factor to establish the quantitation limit.

reanalyze all of the data by substituting the quantitation limit values for all measurements below the quantitation limit.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 47.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 30

Comment: It will be infeasible to conduct performance tests to demonstrate

compliance with the proposed standards

Many part reclamation units do not have stacks because of their small size. The small units may only have a vent of 2-3 inches in diameter, which cannot accommodate the EPA methods' requirements for sampling. . In essence, EPA is proposing requirements that in many cases have no test methods to accommodate the operations of these units. EPA acknowledges this in the preamble. [Footnote: 75 FR 31951.] In addition, these units (both small and large) are batch operated and many run on short cycles. For example, the cycle can consist of 2 hours of heat-up, followed by 2-3 hours of pyrolysis, and finally by 2-3 hours of cool down. Some units may only have batch operating times of 2 - 4 hours total. The sampling methods for a number of the regulated pollutants require a sample time of three or more hours which can easily exceed the pyrolysis time of the units. In the Boiler MACT proposal, EPA noted the difficulty in performing emissions testing on units less than 10 mmBtu/hr heat input, and did not propose emission limits for those small sources. The problems apply even more so to burn-off ovens, so the same logic should apply that it is not feasible to establish representative emissions limits or to conduct realistic representative emissions testing on burn-off ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 4

Comment: Burn-off Oven Operations Run for Shorter Durations than Feasible for Performance Testing.

As EPA recognizes in the NPRM, for burn-off ovens, "the configuration of the stacks that serve these units precludes the use of some EPA test methods for measuring emissions and could affect the ability to install certain control devices" [75 FR 31951]. Additionally, these ovens run as batch-type units with total operating times as short as 2-4 hours, rendering lengthier performance tests infeasible as a method to demonstrate compliance. EPA should not propose requirements for which they do not have appropriate test methods.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 30.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 17

Comment: Use of Disapproved HCl Test Methods

The HCl emissions data contained in EPA's database are based on four different test methods and include two test methods that EPA has disapproved. EPA Method 26 and CARB Method

421 for HCl are disapproved, and all HCl data that are based on those methods should be removed from the floor determination. PCA's review found that EPA Method 26 or CARB 421 instead of EPA Method 321 or ASTM D6348 were used for 5 of the 9 best performing kilns for HCl. [See submittal for Table A-3 provided by commenter] that demonstrates that one-half of EPA's HCl database consists of data obtained used disapproved (or undocumented) test methods. These tests should be put aside. In our later floor analysis, the lowest ranked 7 kilns of those that remain in the table become best performers (lowest ranked 9 under the alternative solid waste definition).

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 18

Comment: Improper Test Methods for PM

In three instances, EPA has used PM emissions data based on Method 201A that measure PM10 concentrations instead of total filterable PM. These are the tests dated 12-Jan-2006, 31- Oct-2006, and 1-Nov-2006 for the Lehigh Evansville 121 kiln. EPA should replace these test data with the total PM concentrations or drop the tests from the database. The brief period allowed for comment on this rulemaking has precluded PCA from doing so.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments. See also the Database Corrections memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 57

Comment: EPA's own NESHAP report suggests the lowest measureable level for HCl is 3.0 ppmvd. "In order to account for measurement variability, we multiplied the highest reported minimum detection level for the analytic method by a factor of three which results in a level of 0.9 ppmv. This represents the lowest level that can be reliably measured using this test method, and we therefore believe that it is the lowest level we can set as the MACT limit taking the appropriate measurement variability into account. Converting this level to a dry basis at 7 percent oxygen results in a floor of 3 ppmvd for both new and existing sources." - EPA Method 321 Detection Limits and Minimum Quantification Limit, July 26, 2010.

Response: See the "CISWI Test Data Database – Post Proposal Data Corrections" memorandum in the docket. Further, see preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 83

Comment: EPA has proposed a standard of 60 mg/dscm for existing plants which is equivalent to 0.026 gr/dscf. Most well maintained baghouses and ESPs can meet this standard. A one-hour Method 5 test combined with Method 29 in the back half would be used to demonstrate compliance with both the PM and the Cd and Pb standards.

The proposed standard of 1.8 mg/dscm for new kilns is equivalent to 0.0008 gr/dscf. This would be difficult to meet today in most plants even using the best baghouse filtration media. Compliance testing would be using the Method 5/29 combination; however, for demonstrating compliance at this level one would need to test for at least three hours.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 47.

Commenter Name: David P. Tenny
Commenter Affiliation: National Alliance of Forest Owners (NAFO)
Document Control Number: EPA-HQ-OAR-2003-0119-1945.1
Comment Excerpt Number: 5

Comment: There are no EPA-approved methods that are appropriate in measuring the proposed HCI limits. [See submittal for Attachment 1, Letter from Kerry R. Flick,

Metso Power, to Donna Harman, America Forest & Paper Association at 4 (Aug. 13, 2010).] For mercury, the available methods are not adequate because their reliable detection limits are well above the proposed emission limits.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 17, and EPA-HQ-OAR-2003-0119-1951.1, excerpt 47.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 31

Comment: Required sample volumes

CRWI also notes that the minimum sample volumes vary from one standard dry cubic meter (e.g., hydrogen chloride for existing incinerators, see Table 6 to Subpart DDDD, 75 FR 32001) to four standard dry cubic meters (e.g., cadmium for new incinerators, see Table 5 to Subpart CCCC, 75 FR 31985). CRWI is not sure why EPA is proposing to specify minimum volumes. ,There does not appear to be any discussion for this in the preamble. We see no reason to specify

the minimum sample volumes required. Facilities know the standards that need to be met during their testing. They can design their testing program to show they meet the standards required. Besides, a specification of minimum volume may be counterproductive in the future. As analytical methods continue to improve, facilities may be stuck with a required four cubic meter sampling volume when the analytical methods no longer require that to meet the desired quantification lirnits.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 47.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 32

Comment: PM standard

The proposed new source incinerator standard for PM is 0.0077 mg/dscm.

CRWI estimates that to show compliance with this proposed standard, the facility will need to sample 125 dry standard cubic meters to gather enough mass on a Method 5 filter in order to be able to reliably measure any PM captured on the filter. Typically,' a Method 5 probe will sample one dry standard cubic meter per hour. This means that a new incinerator would need to sample for 125 hours to be able to show compliance with this proposed standards. This seems a bit ridiculous and points out the problems of using data without questioning the validity of that data.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 47.

Commenter Name: Eric Trauner
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 6

Comment: Stack testing demands should be lowered to biennial at first, then trending toward once per five years after two successful tests. It must be underlined that there are relatively few stack testing firms that are qualified to conduct such testing, and excessive testing will result in a rush of unqualified, inexperienced stack testers hitting the market. In turn, there would be a rush of flawed emissions data hitting the very database that US-EPA is seeking to create.

Response: We disagree with the commenters' assertions that the performance testing requirements are excessive. As discussed earlier, the combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate for assuring continuous compliance with the emissions limitations. Without recurring testing, we would have no way to know if parameter ranges established during initial performance testing remained viable in the future. The commenter correctly notes that CEMS may be used as an option and, if so, annual performance testing is not required for the pollutant being measured by a CEMS.

10.2 Stack Tests: Allowing Use Of Previously Conducted Tests For Compliance

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 15

Comment: Use of previous test results: CES would like to express its concern for EPA's proposal to use previous test data to represent HAP metal emissions. CES feels that because of the complexity of the process and the heterogeneousness nature of the feed material previous measurements based on infrequent, scheduled performance tests will represent optimal performance rather than sustained typical performance and should not be used to set the MACT floor.

Response: We believe that the commenter has misinterpreted the provision in the preamble to the proposed rule. This provision refers to a change in the rule that would allow the submittal of previously collected (within previous 2 years) compliance test data to demonstrate initial compliance with the standard. This provision is unrelated to the collection of data used to establish the limits in the revised regulation. However, as noted in the final preamble, EPA has elected not to provide for this use of prior test results. Given the expectation that there will be recurring testing under this rule, the allowance for prior test results seems unnecessary as a general allowance. A source may seek a waiver of testing under the general provisions of Part 60 and should also review EPA's "Clean Air Act National Stack Testing Guidance" (dated April 27, 2009), which contains additional discussion on stack test waivers.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 76

Comment: Use of Previous Test Data Should be Allowed

As EPA states in the preamble, sources already subject to the CISWI rule have conducted extensive stack testing and are currently subject to only limited ongoing periodic testing requirements. Those facilities should be allowed to use previous test data to demonstrate compliance with the proposed limits, if possible, instead of being required to complete an entire suite of initial performance testing again. These facilities already conduct ongoing continuous monitoring to ensure their continued good performance.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 15.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 91

Comment: EPA seeks comment on whether it is appropriate to allow the use of performance tests conducted within the past 2 years to satisfy current performance testing requirements. PCA supports this proposal.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 15.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 18

Comment: Use of Existing Stack Test Data

EPA proposes to allow facilities to use the results of emissions tests conducted within the previous two years to demonstrate initial compliance with the revised emission limits, provided that the sources certify that the previous test results are representative of current operations. NESCAUM would support this provision, provided that the previously conducted performance tests meet with all the requirements of the permitting authorities regarding data acquisition, load conditions, and review of test protocol and test report. In addition, in areas where witnessing of a stack test is required, notice to the appropriate authorities must be have been made.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 15.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 57

Comment: Use of Previous Test Data Should be Allowed

As EPA states in the preamble, sources already subject to the CISWI rule have conducted extensive stack testing and are currently subject only to limited ongoing periodic testing requirements. [Footnote: 75 FR 31961.] Those facilities should be allowed to use previous test data to demonstrate compliance with the proposed limits, if possible, instead of being required to complete an entire suite of initial performance testing again. These facilities already conduct ongoing continuous monitoring to ensure their continued good performance.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 15.

10.3 CEMS: General

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 77

Comment: a. EPA should allow cement plants to use solid material sampling and

analysis to demonstrate compliance with the final mercury standards because: (a) EPA relied on this approach to establish the mercury standards; and (b) EPA's rejection of solid material sampling and analysis based on cost is incorrect and inappropriate.

EPA's rejection of solid material sampling and analysis is based on EPA's own conclusions about monitoring costs, lacks any technical basis, and fails to consider other issues. Nowhere in the proposed rule does EPA offer any technical basis for not allowing solid material sampling and analysis for low level mercury emitting facilities that can comply with the standards without add on controls. For these facilities, only the solid material sampling and analysis approach meets EPA's stated desire to implement the standard in a manner consistent with its development. Cost considerations are best estimated on a facility specific basis. Costs for implementing mercury CEMS at cement plants meeting EPA's technical requirements are not yet known because it has never been done. Therefore, EPA's basis for cost comparison is unclear. Furthermore, other factors must be considered in addition to cost such as: the reliability of the monitoring approach, risk of data loss, ability to adapt existing plant-specific feed and fuel monitoring programs to include sampling for mercury, etc. Clearly, there is no "one size fits all" solution.

b. Facilities that control mercury emissions from cement kilns should be allowed to use solid or liquid material sampling and analysis to demonstrate mercury removal as an optional monitoring approach.

Facilities that waste CKD or implement dust management programs (such as wasting bag house dust collected during in-line raw mill off periods) to minimize mercury emissions should be allowed to implement solid material sampling and analysis procedures to quantify the mass of mercury removed. Sources choosing this option in conjunction with solid material sampling to determine total mercury input would subtract the documented mercury removed to demonstrate compliance with the mercury standards. The optimal sampling location and approach must be determined on a site-specific basis. For example, while frequent sampling and compositing of baghouse dust during in-line mill off would be very difficult, sampling the wasted CKD from transport trucks or at the point of disposal may be quite simple at some facilities. Site-specific protocols describing sampling locations, sampling methods, sampling frequencies, compositing procedures, sample preservations, analysis procedures, etc. would need to be developed. Because the averaging period of the standard is at least 30 days, the exact timing of the mercury removal and mercury input sampling programs need not be exact, but should be consistent over time.

Similarly, sources with add-on controls should be allowed to implement material sampling and analysis procedures to quantify the mass of mercury removed and subtract the documented mercury removed to determine compliance with mercury standards. For example, sources with wet-scrubbers for SO2 removal may be able to demonstrate mercury removal by sampling and analyzing the scrubber sludge at the point it is removed from the process or disposed. Again, site-specific sampling and analysis protocols would be required to ensure the accuracy of the mass of mercury removed which would be subtracted from the total mercury input determined by other solid material sampling and analysis procedures.

c. Mercury CEMS have not been evaluated through long-term field trials at cement plants in the U.S. in accordance with the proposed performance specifications and quality assurance procedures. Therefore, the reliability and performance of these measurement systems and the adequacy of the technical specifications cannot be determined.

EPA is requiring mercury CEM having undertaken no investigation or field studies assessing the technical performance of mercury CEMS at cement plants. Accordingly, EPA has no basis to accept the proposed mercury CEMS performance specifications and quality assurance procedures (as well as anticipated mercury CEMS performance) as they are based entirely upon speculation. EPA should undertake the necessary technical investigations, identify the monitoring problems, develop solutions, and then re-propose its mercury monitoring regulations for cement plants, if warranted.

d. Actual experience does not indicate that issues with mercury monitors at cement plants in Europe are resolved.

Direct communication with a world-wide cement manufacturer representative who is an expert in CEMS and has attempted multiple mercury CEMS applications in Europe (including three CEMS certified by the German TUV) demonstrate the problems with mercury CEMS. He found that none of the commercially available CEMS operated reliably as originally designed. Much work was devoted to improvements and the accuracy problems during direct operation (mill off) for plants with in-line raw mills for mercury CEMS installed at European plants have not been resolved. He reported major problems due to interferences by iodine, sulfur dioxide and ammonia on a plant- and monitor-specific basis. He concludes that one cannot predict whether a mercury CEMS will work or not at a particular plant [Footnote: Communication with Josef Waltisberg dated December 10, 2006.]

Information provided by Martin Oerter (Environmental Monitoring Department, FIZ GmbH) explains that the mercury CEMS problems are not resolved for the 34 monitors in Germany. He states:

"Due to tremendous efforts that have been undertaken by the German cement industry over the last years, currently indeed 34 of these mercury CEMs are operated in the German cement industry. But it has to be pointed out that there are still difficulties concerning the reliable, long-lasting operation of these devices. This, by the way, was also the reason why the Technical Working Group (TWG) which was responsible for the revision of the current cement and lime BREF did not yet consider the continuous monitoring of mercury as a best available technique (BAT) for the cement industry. This is a clear statement made in the revised BREF document."

Martin Oerter provides a journal article describing many of the problems previously encountered (including major cross-sensitivity due to SO2 interference sometimes resulting in negative mercury concentrations) [Footnote: Limiting and Determining Mercury Emissions in the Cement Industry" M. Schneider, M. Oerter ZKG International No. 3 2000] and an executive summary of an upcoming presentation [Footnote: Monitoring of Mercury and its Behavior in the Clinker Burning Process, August 2009.]

Most recently, "Best Available Techniques Reference Document on The Cement, Lime and Magnesium Oxide Manufacturing, Industry Final" (CLM BREF) May 2009 prepared for the

European Commission [Footnote: This document reflects an information exchange carried out under Article 17(2) of Council Directive 2008/1/EC (IPPC Directive) of the European Parliament and the Council concerning integrated pollution prevention and control (IPPC).] includes important statements about the status of mercury CEMS in "Chapter 1 Cement Industry," "1.7 Conclusions and recommendations," including the following:

* "Conclusions on the long term stability of these devices are not yet available. Intervals

for a periodic maintenance of CEMs have to be adjusted based on future experiences."

* "Furthermore, proper calibration of CEMs according to the European standard EN 14181 is a challenge. In the case of mercury CEMs, this calibration procedure needs greater effort than for CEMs for other emissions, e.g., dust or NOx."

* "The ongoing development process should be followed. The outcome should be taken into consideration for the next review of this CLM BREF document and information and data regarding this issue should be collected in order to make general quantitative statements on the continuous measurement of mercury emissions."

* "The ongoing research process should be followed and investigations should be made in terms of improvements and further developments. The outcome should be taken into consideration for the next review of this CLM BREF document and information and data regarding this issue should be collected in order to make general quantitative statements on the continuous measurement of mercury emissions."

These statements clearly indicate there is much work left to do before it can be concluded that performance issues with mercury CEMS at cement plants in Europe have been resolved and to determine the appropriate quality assurance procedures that are necessary to maintain acceptable performance.

Mercury CEMS operating in Germany are subject to monitoring regulations that are far different than the US regulations and are used in an entirely different regulatory context than that proposed by EPA. It is emphasized that none of the monitors used in Germany, or those that are available from other European or Asian manufacturers, were able to demonstrate acceptable performance in the EPRI Trimble County Mercury CEMS study. It is also noted that the brand of monitors alleged to perform "acceptably" in Germany at cement plants are not among the 600 mercury CEMS that have recently been purchased by the electric utility industry in the United States. EPA has not collected nor offers any detailed analysis of actual CEMS operation and quality assurance data and offers no valid comparison of the applicable technical requirements.

Therefore, direct comparisons between the German mercury CEMS program and that proposed for U.S. cement plants cannot be made.

e. EPA should not revert to 2004 CEMS performance specifications

and should not require any specifications that are more restrictive

than the 40 CFR 75, Appendix A and B requirements promulgated in January 2008.

It is well known that the U.S. utility industry spent millions of dollars of research and development funds over many years in efforts to implement mercury CEMS for their cap-andtrade application under the now vacated CAMR Rule. These efforts were critical in the development and subsequent revision of the technical requirements contained in 40 C.F.R. Part 75, Appendix A and B for mercury CEMS. The Part 75 Appendix A and B requirements for mercury CEMS are certainly the most comprehensive and up-to-date set of specifications for Hg CEMS and are consistent with current measurement technology as reflected by their revision and publication in the Federal Register in January 2008. Yet in the recent proposal of Performance Specification 12A, EPA reverts to 2004 regulations and seeks to require more restrictive and more difficult technical specifications for mercury CEMS at all facilities, including cement plants. EPA provides no technical justification for these actions and appears to ignore the comments and results of subsequent rulemaking.

f. After field validation, and promulgation of instrumental CEMS

and technical specifications and after NIST traceable calibration standards at the necessary concentrations are available, EPA should allow at least one year for purchase, installation and startup of CEMS and a one-year trial implementation period before requiring the use of monitoring data to demonstrate compliance with emission limits.

As described in detail in the specific comments that follow, there are various technical issues which need to be addressed, evaluated during field trials, and then the performance specifications finalized through proposal and promulgations. Additional work is required by EPA and NIST to resolve outstanding issues with NIST Traceability for oxidized mercury gas generators and to expand the range of NIST certified elemental mercury gas generators to the levels required to monitor kiln and kiln/in-line raw mill emissions. Only after the technical specifications are finalized and when calibration standards are available can the cement industry begin the process of selection, purchase and installation of mercury CEMS or STMS.

It is expected that the capital cost for purchase and installation of a single mercury CEMs alone will be in the range of $300,000 – $500,000 (depending on type selected), and that start-up and certification of the CEMS will be very costly. Extensive training and manufacturer support will be needed for operating and maintaining these technically challenging devices as the cement industry has no experience with their use (and most have no experience with dilution extractive monitors) and manufacturers have not sold any mercury CEMS in the cement industry. Ongoing operation will require dedicated personnel at each plant and very high operating expenses. There are many challenges that will need to be addressed for mercury monitoring systems, including:

very complicated hardware required to continuously sample in the presence or reactive particulate matter, consistently convert oxidized mercury to elemental mercury, quantitatively dilute the extracted sample and transport, and analyze mercury;

complex equipment necessary to generate elemental and oxidized mercury calibration standards for each CEMS;

* high concentration spikes expected during raw mill off conditions for plants having an in-line raw mill configuration;

* resolution of issues associated with combined effluent streams to the main kiln stack (i.e., clinker cooler, coal mill, etc.);

* difficulties of monitoring downstream of wet scrubbers in the presence of water droplets, gypsum and cement residue;

* monitoring very low concentration levels of reactive condensable compounds of oxidized mercury; and,

* natural inherent variability of mercury compounds in the limestone and other feed materials.

7. Instrumental Mercury GEMS Monitoring Issues

* The potential use of Thermo and Tekran Hg CEMS is at best speculative. There is no legitimate technical basis on which to establish detailed performance specifications or QA requirements for these CEMS. There is no legitimate technical basis to conclude that these CEMS could meet such requirements over any extended period when installed and operated at a cement plant.

* The potential use of all other Hg CEMS (including the 34 systems in Germany that supposedly provide "acceptable performance") are entirely undemonstrated and unproven for any use at Portland cement plants to demonstrate compliance with Hg emission limits in the USA in accordance with EPA technical requirements.

* An evaluation of the performance of Hg CEMS at cement kiln systems must be conducted to acquire the information necessary to serve as the basis for technical specifications and requirements. After such information is available and analyzed, EPA should re-propose appropriate and demonstrated performance specifications and quality assurance procedures for Hg CEMS to monitor kiln and kiln/in-line raw mill Hg emissions.

It is emphasized that there are no Hg CEMS installed at Portland cement plants in the United States and that there is no long term demonstration that contemporary Hg CEMS can meet requirements such as those proposed in Performance Specification 12A and Appendix F, Procedure 5 when installed and operated to monitor kiln emission at Portland cement plants. Furthermore, there have been no long-term trials of such systems at cement plants. As demonstrated in the well known multi-year Electric Power Research Institute (EPRI) Trimble County Hg CEMS test program, a variety of Hg CEMS (including those provided by European manufacturers) failed to meet the then applicable Part 75 Hg CEMS performance specifications and failed to operate reliably. The only monitors that are judged to have exhibited provisionally

acceptable performance were the Thermo Fisher Scientific "Mercury Freedom System" and Tekran Hg Monitoring system. Only these two manufacturers have achieved any significant market share of the approximate 600 Hg CEMS purchased by the electric utility industry. Only these two manufactures participated in the EPRI and EPA field demonstration program to

establish NIST/EPA traceability protocol requirements for elemental and oxidized Hg calibration gas generators. Based on these facts, the only potentially viable Hg CEMS for use at cement plants as of this writing are the Thermo and Tekran Hg CEMS. It is noted that both of these systems are extractive dilution Hg CEMS which appears to be the only viable technology. Both of these systems provide wet basis Hg measurements, are capable of operation in speciation mode to quantify both total Hg and HgCl2, and are capable of direct calibration of the elemental Hg analyzer. Each of these characteristics is important to the potential implementation of appropriate certification and quality assurance procedures that are described below. There is insufficient information to determine if the suggested procedures could be applied to other designs. Further, both of these manufacturers have elemental Hg and HgCl2 calibration gas generation systems that have been evaluated by EPA, NIST and evaluated extensively during field testing by the utility industry.

In view of the lack of reliable information about Hg CEMS in EPA's docket, together with the evolving state of this immature technology, the PCA and its members reserve the right to amend and supplement these comments and provide additional information to EPA during this rulemaking, and any future rulemakings involving re-proposed regulations.

Response: See preamble Section V. for the responses on testing and monitoring requirements and Control Technology Assumptions for the Floor and Beyond-the-Floor. Also, as noted in publishing the final national emissions standards for hazardous air pollutants from the Portland cement manufacturing industry (75 FR 54970), we believe that Hg CEMs meeting Performance Specification 12A are fully capable of measuring Hg emissions from many applications including kilns. There is no technical barrier to applying Hg CEMS meeting this performance specification for the waste kiln facilities covered by this rule. Also, EPA has added sorbent trap monitoring (PS 12B) and adjusted the averaging periods to address elements of the commenter's concerns.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 75

Comment: We –- so we think that's it's really important to have tighter rules. What we're concerned about, though we think that the rules should be tighter, and particularly since some in trash and sewage sludge what's burned is –- changes from minute to minute. So we believe that there should be much stricter, continuous emissions monitoring.

Our trash incinerators are monitored once a year for dioxins and for metals and so on; but we believe that the newer technology allows much more -– allows for continuous emissions monitoring for not just particulates but also the metals themselves. We believe that mercury, and lead, and arsenic, and chromium should be at least some of the metals that are monitored continuously because they vary so much from time to time.

Response: For these operations and facilities subject to the rule, we believe that the combination of periodic compliance emissions testing and continuous monitoring of operational and

parametric control measure conditions is appropriate for assuring ongoing compliance. The rule allows for the source owner or operator to install and operate continuous emissions monitoring systems in lieu of some testing and parametric monitoring. This process requires source owners to propose site-specific monitoring plans for approval. These plans would include CEMS performance specifications and periodic quality assurance and quality control steps to assure the quality of the alternative monitoring data. Currently, EPA has the requisite CEMS performance specifications for mercury monitoring systems and not for multiple metals CEMS.

Commenter Name: Philip Dufresne
Commenter Affiliation: Ohio Lumex Company
Document Control Number: EPA-HQ-OAR-2003-0119-0062
Comment Excerpt Number: 1

Comment: Under Section III "Summary of the proposed Rule", Part D, Item 2, it is stated: "Existing kilns would monitor Hg emissions using a Hg continuous emissions monitoring systems (CEMS) and would perform annual testing for CO, NOx, SO2, PM, HCl, and opacity"

A Sorbent Trap Measurement System should be allowed for the measurement of Hg in addition to CEMS.

Sorbent trap compliance monitoring systems such as those used for Appendix-K (40 CFR Part 75 Appendix-K) monitoring at coal-fired power plants or those compliant with Method 12 B are more reliable than mercury continuous emission monitors and have proven their value over the last several years in similar applications at coal-fired power plants.

These systems are directly NIST traceable, less expensive to purchase and operate and are less prone to data loss due to breakdowns than mercury CEMs. It can also be argued that they provide more reliable data on mercury emissions. Additionally, these systems are uniquely able to measure at low emission levels which might be required at some facilities.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 77.

Commenter Name: David Mickey
Commenter Affiliation: Blue Ridge Environmental Defense League
Document Control Number: EPA-HQ-OAR-2003-0119-1966.1
Comment Excerpt Number: 5

Comment: We support continuous emissions monitoring and a more transparent reporting system that better informs the surrounding community. We find that very often communities and public officials are unaware of the impacts from incinerators. Readily available data and reports would be a valuable tool. Continuous emissions monitoring is an essential step toward making that a reality.

Response:

We agree with the commenter about the need for the source to demonstrate and report on continuous compliance, and the final rule uses an appropriate mix of testing and monitoring requirements to achieve this objective.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 75

Comment: Mercury Monitoring Requirements

EPA has inappropriately specified undemonstrated and unproven continuous compliance monitoring provisions for the proposed mercury standards without considering the limitations of the proposed monitoring methods or the differences between the methodology used by EPA to establish the standards and that proposed to demonstrate compliance. EPA should properly consider these factors and re-propose emission standards and compliance monitoring provisions. It is apparent that EPA:

Has no information regarding the actual measurement variability of instrumental Hg CEMS or sorbent tube monitoring systems as installed on cement plants,

Provided no analysis to demonstrate that the variability of data provided by the proposed emission monitoring methods would be equivalent to the variability of the solid material sampling and analysis,

Provided no consideration for the effects of missing data due to CEM (or sorbent tube monitoring) downtime, malfunction, or "out-of-control" periods, and

Provided no consideration of the allowed measurement bias for mercury CEMS or sorbent tube monitoring programs on the achievability of the emission standards.

EPA must consider the measurement variability, bias and measurement system limitations of the proposed compliance demonstration method and the relationship of these factors to methods used to acquire data for standard setting to determine the achievability of the emission standard.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 77. Further, see preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 76

Comment: Difficulties in the Use of CEMS in the Utility Industry Are Well Documented

1. Number of Installations in the Utility Industry

Because of the Court of Appeals for the D.C. Circuit vacature of CAMR, the U.S. utility sector is generally in a wait-and-see mode as far as Hg CEMS are concerned. Prior to the rule being vacated, approximately 650 continuous mercury monitors (CMMs) (one-third Tekran and two-thirds Thermo systems) were ordered, but many were not installed [Footnote:. Personal Discussions with Tekran and Thermo Scientific, Aug 2008.] Based on discussions with RMB Consulting, which has been tracking Hg CEMS for the electric utility industry, there are only about 35–40 CMMs installed and certified to date (not yet with a National Institute of Standards and Technology (NIST) traceable calibration source) [Footnote: Personal Discussions with Richard McRanie, of RMB Consulting, Aug 2008..] It does not yet appear that a substantial number of orders have been cancelled, but clearly, most utilities have slowed down their overall mercury-monitoring programs. In fact, at the 2009 Electric Utility Environmental Conference, there was a paper on how to mothball Hg CEMS [Footnote: Marsh, T. How to "Mothball" Your Hg CEMS. In Proceedings of EUEC Energy & Environmental Conference; Phoenix, AZ, Feb 2009.]

2. NIST Certification

It is stated in the proposed rule that there are numerous utility boilers that have installed and certified mercury CEMs. This statement is simply not true. The Hg CEM certification requirements outlined in PS-12A state that all calibration and "span" gases must be NIST-certified. The draft protocols were just released by NIST in July 2009. The major vendors of Hg CEM are just now advertising NIST-certified calibration sources. Therefore, none of the Hg CEMs that have been previously installed are certified.

NIST does not currently directly certify oxidized mercury calibrations. The Interim EPA Traceability Protocols now in place provide for certification of evaporative generators by certification of the individual components of the calibrator. Therefore, the language used in Section 7.0 that refers to a NIST trace oxidized mercury calibrator needs to be clarified or changed. The method for providing an oxidized mercury calibration gas is different for the two major vendors. Tekran oxidized mercury calibrators are designed to vaporize a known quantity of HgCl2 solution. This vapor is then diluted to the required oxidized mercury concentration. This method results in an oxidized mercury calibration gas that is very near 100% HgCl2. The method used by ThermoScientific is considerably different. ThermoScientific uses its elemental mercury calibrator to generate a known concentration of elemental mercury. The elemental mercury vapor is passed over a heated catalyst and mixed with chlorine gas to convert the elemental mercury to oxidized mercury. It should be noted that this calibrator is not 100% efficient. However, prior to CAMR being vacated, EPA had eliminated the language that required a very high conversion (Hg0 to Hg2+) efficiency for the calibrators (>90%). The eventual language only required the majority of the calibration gas be oxidized mercury. This does not appear to be the case in PS-12A.

Difficulties Encountered in the Utility Industry – The utility industry experience with these monitors has been mixed. There have been some plants that have had good experiences, but others have had a very high degree of difficulty in getting them to work and keeping them working. The EERC is currently working with one plant that has been trying to get a monitor operating consistently since the spring of 2007. During this period, the vendor has been on-site to repair the monitor six to eight times each year for about a week per time (at the plant’s expense).

Usually the technician gets it to work, but within 2 weeks to a month, the monitor again becomes highly erratic and does not calibrate properly. The vendor has made numerous changes to the monitor but without much success. One problem that appears to occur on a regular basis at this plant is rapidly decreasing lamp intensity. This will causes erratic operation. As a result, the plant has replaced lamps approximately every 3 months. Although this is highly unusual, the vendors have indicated that there are problems associated with the mercury lamps and are working on the quality control of the vendors. These lamps were meant to last 2–3 years and are relatively expensive and difficult to replace. Although the experience at this plant is somewhat extreme, it is not the only plant that has problems.

Another example was at the Lewis & Clark Station in Sidney, Montana. The Results Engineer for the plant stated that installation of a ThermoScientific system began in the spring of 2006. It was not until October of 2008 that the system passed the relative accuracy test audit (RATA) and began producing good data. They started with "a game cube"-type probe system, but in a 3-month period, they have had to replace them twice. Other problems that have occurred at the Lewis & Clark Station include severe plugging and destruction of O-rings. In addition, there have been problems associated with the heated umbilical line that transfers the mercury sample from the stack to the analyzer in the control room. After the initial installation of the umbilical line, the analyzer began receiving a grease-like substance that damaged the system. The umbilical line was replaced with a new one, and the problem occurred again. This problem has also been acknowledged by the vendor as a manufacturing problem with Teflon lines and not something unique to this plant. As a result, this plant and others are required to flush the umbilical line with acetone at least every 6 months to eliminate the problem. This is a difficult task, as these lines can be up to 500 ft long and weigh hundreds of pounds. The Lewis & Clark Station has also experienced problems with short mercury lamp life in its instrument.

Other plants have also reported similar experiences in vendor user group meetings. Based on personal discussions with several large power companies, because of these problems and others like it, they have estimated that for every Hg CEM on their sites about one-half 1/2 time is required for a technician.

3. Installation on "Wet Stacks"

Installing a Hg CEM on a "wet" stack (those stacks located after a wet scrubber without reheat) has been a major problem that has not been totally resolved. The problems encountered depend on whether the flue gas/water entering the stack is acidic (pH <6.0) or basic (pH >8.0). Under both conditions, there have been significant plugging and major problems with probes and dilutions systems. Although the vendors have developed different probe systems, such as ThermoScientific's so-called "Game Cube" for these applications that have helped somewhat, the problem still persists and has to be dealt with by the plants that have wet stacks. For those stacks that are acidic, there is serious corrosion of the stingers and probes (the portion of the analyzer that is directly in contact with the flue gas). As a result, these parts of the analyzer are required to be made of very expensive Hastalloy to withstand the conditions that occur in a wet acidic stack.

The problem is clearly demonstrated in Figures 1 and 2. Figure 1 is a photograph of a new probe, and Figure 2 is a picture of the same probe after 1 month in a wet acid stack showing substantial corrosion. These probes were made with 316 stainless steel. If the flue gas/water entering the stack is basic in nature, corrosion is not as much of a concern. However, under these conditions,

substantial buildup of solids occurs around the probe and stinger that can make it almost impossible to remove the stinger from the sample port without damaging it. A photograph in Figure 3 shows this situation [See submittal for Figures 1 through 3 showing probes in various phases of corrosion provided by commenter.]

Although wet scrubbers are not currently common in the cement industry, under the proposed rule, they may be required to a greater extent. With their increased use it is likely that many of these same problems with Hg CEMS potentially could occur for the cement industry as well.

Discrepancies Between Calibration Sources – PS-12A, as did Part 75 under CAMR, will require a system integrity check using an oxidized Hg NIST calibration source. This is designed to ensure the convertor portion of the Hg CEM is converting all of the mercury to elemental Hg (the analyzer portion of these monitors only measure elemental mercury, so a convertor is necessary to ensure all the mercury is in that form). However, there is a discrepancy between the oxidized and elemental mercury calibrators of about 7% in both the Tekran and ThermoScientific instruments. The cause of this discrepancy is still unknown.

4. Data Output Requirements

Both the Tekran and ThermoScientific monitors were designed to measure mercury on a wet basis at 20°C because CAMR required the mercury be reported on a wet basis. The same approach would be applicable in the cement industry because the effluent flow rate must be measured on a wet basis. There is no need for dry basis measurements and language in the Subpart should be included to provide an exemption from this requirement for cement plants or PS 12A should be revised.

A commonly used practice in the cement industry is to apply a factor to the PCL/data acquisition system (DAS) using as a basis 1) stack test moisture data and 2) material mass balance and vapor releases. However, if the language in PS-12A is taken literally, i.e., that the Hg CEMs must be capable of measuring on dry basis, these practices may not be acceptable. In that case there are only two options. The first is that Hg CEM vendors redesign the monitors such that the data are reported on a dry basis or as a potential second option that a continuous water vapor monitor be incorporated with the Hg CEM. Changes to the instrument design will be based entirely on how the vendors perceive the market for their instruments: cement industry demands versus those of the utility industry. The second option will require the cement plant purchase, install, and maintain a continuous water vapor monitor. Software will also have to be written such that the data from both CEMs can be incorporated into the data acquisition systems at the plants. This language needs to be clarified by EPA.

5. Hg CEMs Compared to Reference Methods for Mass Balance Calculations

Under the proposed rule, the MACT floor was set based on a mass balance approach. However, compliance emission measurements will need to be made based on continuous measurements. There is not a substantial amount of data in the utility industry comparing mercury mass balance calculations to mercury emissions measured using a reference method (such as ASTM International D6784-02 "Ontario Hydro Method"), but there is none for the cement industry. There is no basis for EPA's assumption that mass balance data calculations made for the cement industry correlate with the emission measurements that may be made in the future with Hg CEMs.

6. Cost

These monitors are very expensive both to purchase and to maintain. An estimated cost is shown in Tables 4 and 5 [see submittal for tables showing total capital and operating and maintenance costs provided by commenter.] These costs were developed by the EERC in discussion with vendors and utilities that currently are using Hg CEMs. The analyzer portion of the monitor requires constant temperature or there is substantial calibration drift. Therefore, temperature control housing is needed. The cost of this is not included in the tables below. Assuming Hg CEMs were to be installed on all cement kilns (167) for non-waste-burning U.S. cement facilities, based on the costs provided above, the total capital costs would be approximately $45 million, with annual operating costs being about $25 million.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 77.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 8

Comment: EPA Should Provide Compliance Flexibility For Owners of Continuous Emissions Monitors.

Arkema appreciates that EPA did not require continuous emissions monitors ("CEMS") in the proposed Boiler MACT and generally achievable control technology ("GACT") area source standards. EPA also did not require extensive CEMS use in the proposed CISWI standards. However, situations may exist where a facility may elect to install, or may have already installed, one or more CEMS units on units regulated in one of the proposed source categories. In these cases, EPA should allow facilities to demonstrate compliance using common CEMS protocols and relative accuracy test audit ("RATA") protocols used for other Clean Air Act obligations. Facilities opting into using CEMS for compliance with one or more pollutants should be exempted from the proposed testing requirements so long as the facility follows appropriate CEMS performance demonstrations.

Response: See preamble Section V. for the responses on testing and monitoring. Further, we agree that we should encourage use of CEMS including for conducting initial compliance tests and for demonstrating ongoing compliance. The final rule includes use of CEMS in some applications and allows use of CEMS as alternatives to other monitoring in other applications.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Management (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 14

Comment: CEMS

NESCAUM supports EPA's requirement to use CEMS, where feasible, provided EPA promulgates appropriate performance and quality assurance specifications where necessary before requiring such CEMS.

Response: See preamble Section V. for the responses on testing and monitoring.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 34

Comment: Mercury CEMs should not be used as a compliance method for waste-burning kilns.

EPA is proposing to require waste-burning kilns to use either continuous emission monitors (CEMs) or sorbent monitoring traps to measure compliance with the proposed mercury standard. There is limited discussion in the preamble of the ability of these units to work on cement kilns. CRWI has specific concerns about the accuracy and reliability of mercury CEMs.

CRWI would like to remind EPA of a study carried out in 1997 where a number of _mercury CEMs were installed on a cement kiln burning hazardous waste located in Holly Hill, NC. When EPA published the report on this experiment (62 FR 67788, December 30, 1997), the Agency concluded there were numerous problems with these instruments. In the notice for this report, EPA states:

In summary, the Agency found certain aspects of the testing program revealed substantial problems regarding the measurement of the Hg CEMS accuracy and precision. EPA found it difficult to dynamically spike known amounts of mercury (in the elemental and ionic form) and obtain manual method and Hg CEMS measurements that agree at the test source. As a result, the Agency now believes it has not sufficiently demonstrated the viability of Hg CEMS as a compliance tool at all hazardous waste combustors and should not require their use.

In the September 30, 1999, final rule for hazardous waste incinerators, cement kilns, and lightweight aggregate kilns (64 FR 52930), EPA made similar statements:

In the March 1997 NODA, we elicited comment on early aspects of our approach to demonstrate total mercury CEMS. And, in the December 1997 NODA, we presented a summary of the demonstration test results and our preliminary conclusion that we were unable to adequately demonstrate total mercury, CEMS at a cement kiln, a site judged to be a reasonable worst-case for performance of the total mercury CEMS. As new data are not available, we continue to adhere to this conclusion, and comments received in response to the December 1997 NODA concur with this conclusion. Therefore, we are not requiring total mercury CEMS in this rulemaking.

CRWI understands that these experiments happened more than ten years ago and it is possible that mercury CEMs have improved significantly since then. However, some of the same issues plaguing these instruments in 1997 are still around today. The primary issue facing mercury CEMs is whether there is a NIST traceable standard that can be used to calibrate the unit at the levels required for this rule.

Second, the reliability of mercury CEMs on cement kiln stacks has not been demonstrated in the U.S. While they have been used in Germany, these units must conform, to CEN (Comite Europeen de Normalisation; European Committee on Standardization) regulations for monitoring emissions, but they are not required (nor demonstrated) to utilize gas calibration standardslo verify performance on a daily basis as required by 40 CFR 60.13(d) or 40 CFR 63.8(c). In addition, they are not subject to relative accuracy test requirements. In regards to the mercury CEMs used at coal-fired power plants, these instruments have been demonstrated in a fairly consistent gas stream environment, meaning consistent mercury concentrations and effluent conditions. These conditions may not be similar to the stack gas environment at cement kilns. These differences are likely to impose new technical challenges and problems that have not been encountered in the evaluation of mercury CEMs at coal-fired power plants. Based on the evidence EPA has presented so far, the problems observed at Holly Hill, and the experience of CRWI members, we believe that mercury CEMs do not provide a reliable method for assuring compliance.

Response: As noted in publishing the final national emissions standards for hazardous air pollutants from the Portland cement manufacturing industry (75 FR 54970), we believe that Hg CEMs meeting Performance Specification 12A are fully capable of measuring Hg emissions from many applications including kilns. There is no technical barrier to applying Hg CEMS meeting this performance specification for the waste kiln facilities covered by this rule.

10.4 CO CEMS : Use For Other Subcategories

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 33

Comment: Proposed CO Limits For New Incinerators And Energy Recovery Units Will Be Difficult To Measure Accurately

ACC believes EPA has proposed CO emission limits that are too low to reliably measure. While proposing use of a CEMS specification that is designed for measurements below 200 ppmv, [Footnote: EPA's proposed rule references EPA Performance Specification (PS) 4A for a CO CEMS. Proposed 40 CFR 60.2145(f)(2). Section 1.2.1. of PS 4A states that this specification was developed primarily for CEMS that comply with low emission limits (less than 200 ppmv).] EPA is proposing enforceable CO limits that are less than 5 ppmv. Due to the QA/QC issues discussed below, EPA may need to make additional adjustments if CO emission limits are set at less than 5 ppmv.

EPA's proposed CO limits are too low:

Proposed limit of 1.4 ppmv CO at 7% oxygen for incinerators

Proposed limit of 3.0 ppmv CO at 7% oxygen for energy recovery units

Proposed limit of 4.0 ppmv CO at 7% oxygen for small, remote incinerators

A CO CEMS will have to be ranged from 0 to 10 ppmv in order to adequately measure CO concentrations in the range required for these three subcategories. The accuracy of a CO CEMS meeting the requirements of Performance Specification 4A is 5% of the range, or in this case + 0.5 ppmv (see Section 13.2 of PS 4A). Given that the proposed emissions limits only range from 1.4 to 4.0 ppmv, an accuracy range of ± 0.5 ppmv is troubling because the uncertainty of the measurement is 13-36% of the proposed emission limits, thus further contributing to the challenges of meeting a standard (1.4 ppmv, 3.0 ppmv, or 4.0 ppmv) on a consistent basis.

In addition, such low proposed emission limits will make conducting the Relative Accuracy (RA) Audits and Tests very difficult. Section 13.2 of PS 4A requires that the RA of the CEMS must be no greater than 5 percent when the applicable emission standard is used to calculate RA. Although EPA makes some allowance for this difficulty in the Subpart CCCC Tables 5, 6 and 9 by changing the RA requirement to 0.5 ppmv, it is still an issue. Thus, one would be comparing values that are less than either 1.4 ppmv, 3.0 ppmv, or 4.0 ppmv and looking for agreement between those values when the accuracy of EPA Method 10 is itself only about 0.2 ppmv, or in this case 5%, 7%, or 14% of the allowable CO emission concentration. The final rule should allow for an absolute difference of less than 1 ppmv to be used for QA/QC purposes.

EPA Method 10 is prescribed for existing units under Subpart DDDD (see Table 6), and the emission limit of 2.2 ppmv creates particular difficulty for the incinerator subcategory. ACC's understanding of Methods 10 and 7E is that the span of the CO analyzer cannot be greater than 5 ppmv, as Section 3.4 of Method 10 notes that the measured emissions should be between 20 and 100 percent of the calibration span. EPA makes some allowance for this requirement by allowing a 10 ppmv span gas. So, even if measured emissions were 2.2 ppmv, the span could not exceed 10 ppmv. Section 9.0 of EPA Method 7E has a QA/QC table that states that the analyzer and calibration gas performance must be within 2% of the calibration span of the analyzer (2% of 10 ppmv = 0.2 ppmv) or alternatively 0.5 ppmv. Using the 2% criteria means that the acceptable result of the span calibration verification would have to be within 2% or within 0.2 ppmv of the calibration gas, which borders on the reasonable detection capabilities of a CO emission

analyzer.

Thus, facilities likely will be forced to use the alternative 0.5 ppmv for QA/QC purposes. This level is troubling because the uncertainty of the measurement is 23% of the proposed emission limit (2.2 ppmv), thus further contributing to the challenges of meeting a 2.2 ppmv standard on a consistent basis.

ACC also requests EPA to reconsider the calibration requirements. EPA Method 7E requires the use of three calibration gases between the 0-5 ppmv level (or alternatively 0-10 ppmv level as per Table 6 of Subpart DDDD) in order to meet the QA/QC requirements for the analysis.

Obtaining and using three different calibration gas standards in this range is a requirement that is excessive in this case and that the QA/QC requirements should be modified to require only a single point calibration at these low concentrations.

Similar to the calibration concerns, ACC also notes that allowable drift would have to meet the same alternative criteria of 0.5 ppmv (or 0.2 ppmv as per Table 6), which again is 50% (or alternatively 10%) of the allowable CO concentration.

ACC believes EPA has proposed CO emission limits that will be exceedingly difficult to measure, even given the few adjustments that EPA made to PS-4A and the test methods in the

respective Tables for Subparts CCCC and DDDD. The proposed emission limits are simply too low to be reliably measured in such a manner as to assure compliance. ACC believes the emissions limits must be upwardly adjusted (for three subcategories in Subpart CCCC and one subcategory in Subpart DDDD) so that the existing PS and test methods can be used to accurately measure compliance.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2101, excerpt 10. Further, see preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 14

Comment: With regard to the limited actual emissions monitoring that is required under the proposed CISWI rule, EPA solicits comments on the extent to which all subcategories of CISWI should be required to use CO and PM CEMS to monitor their emissions. We believe that EPA should require CO and PM CEMS for all new and existing CISWI. Both the docket of the proposed rule and EPA's past use of CEMs bears out the superiority of this method for monitoring actual emissions. In analyzing the costs of installing monitoring equipment, EPA noted in the docket of the proposed CISWI rule that "[t]he most direct means of monitoring compliance is the use of CEMS to measure the emissions of a pollutant on a continuous basis." Correspondence with Office of Management and Budget (OMB) Regarding Technical Memos and Regulatory Impact Analysis (RIA) (3/30/2010), EPA Doc. No. EPA-HQ-OAR-2003-0119-0041, ("Correspondence with OMB"), at 184.

EPA has in other rulemakings noted the superior accuracy of CEMs as compared to other methods of emissions monitoring. For example, more than a decade ago, EPA proposed and adopted PM CEMS monitoring requirements for cement kilns, noting that they could be implemented at a reasonable price. See, e.g., National Emissions Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry; Final Rule, 64 Fed. Reg. 31,898 (June 14, 1999).[See DCN: EPA-HQ-OAR-2003-0119-2027.6 for attachment provided by commenter.] In addition to cement kilns, PM CEMS have also been required in a growing number of PSD permits and consent decrees applicable to coal-fired power plants [Footnote: 1Robyn Andracsek, Mary Hauner, Craig Clapsaddle & Steve Noland, PM CEMS: The Current Reality of Monitoring Particulate Matter (Nov. 28, 2006) ("Andracsek Technical Paper"), at 1 ("Many recent Prevention of Significant Deterioration permits have required particulate matter (PM) continuous emission monitoring systems (CEMS) ..."); id. at 2 ("During the past several years, the EPA or state agencies have required several coal-fired boilers to install PM CEMS as part of a consent decree order.").]

EPA has identified PM CEMs as far superior to BLD systems. In the 1999 NESHAP for Hazardous Waste Combustors, EPA explicitly declined to require adoption of BLD systems in recognition of their significant shortcomings. NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, 64 Fed. Reg. 52,828 (Sept. 30, 1999). [See DCN:

EPA-HQ-OAR-2003-0119-2027.7 for attachment provided by commenter] With CEMs, EPA has found that "assumptions to assure compliance are fewer and less conservative (direct measure of the standard is the top of the monitoring hierarchy)," and "CEMS are less intrusive on the facility." Revised Standards for Hazardous Waste Combustors; Proposed Rule, 61 Fed. Reg. 17,358, 17,379 (Apr. 19, 1996).[See DCN: EPA-HQ-OAR-2003-0119-2027.8 for attachment provided by commenter.] Further, many CISWI may already be required to install CEMs as the result of other rulemakings. For example, EPA "assumed all [cement kiln] units will require Hg CEMS, but that they would have installed these already to comply with the

requirements of the proposed Portland cement NESHAP." Correspondence with OMB at 184. In light of EPA's decades of experience with CEMs and the analysis contained in the record, EPA must require CO and PM CEMs monitoring for all subcategories of CISWI.

Response: See preamble Section V. for the response on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS).

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 69

Comment: CO CEMS should not be required for all units

EPA should allow sources to perform stack tests for CO and demonstrate compliance with CO limits by monitoring operating parameters that ensure good combustion and proper operation of the unit. This approach is allowed under the current CISWI rule and requiring CO CEMS on each unit will further increase the cost of a very expensive rule. With continuous monitoring of operating parameters to ensure good combustion and proper operation of the unit, CO CEMS are not necessary for all units.

Response: See preamble Section V. for the responses on testing and monitoring requirements and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 9

Comment: EPA has proposed Carbon Monoxide limitations that present a number of measurement and analytical testing problems. Dow requests that certain emission limits be upwardly adjusted so that these problems do not exist.

Dow provides the following comments on the proposed emission standards and measurement and analytical testing problems:

CO CEMS are prescribed for new units under Subpart CCCC, and the following emission limits create difficulty for those devices:

* CO - Proposed level of 1.4 ppmv at 7% oxygen for incinerators

* CO – Proposed level of 3.0 ppmv at 7% oxygen for energy recovery units

* CO – Proposed level of 4.0 ppmv at 7% oxygen for small, remote incinerators

Comments on Continuous Emission Monitoring Systems: EPA's proposed rule references EPA Performance Specification 4A for a CO CEMS, and Section 1.2.1. of PS 4A states that this specification was developed primarily for CEMS that comply with low emission limits (less than 200 ppmv). Dow believes that EPA may need to make additional adjustments if CO emission limits are indeed set at a level of less than 10 ppmv for gas due to QA/QC issues as discussed below. However, Dow does not believe EPA has followed proper procedure to make the QA/QC adjustments they have already proposed. Ultimately, Dow believes that EPA has proposed limits that are too low to reliably measure.

A CO CEMS will have to be ranged from 0 to 10 ppmv in order to adequately measure CO concentrations in the range required for these three subcategories. The accuracy of a CO CEMS meeting the requirements of Performance Specification 4A is ~ 5% of the range or in this case + 0.5 ppmv (see Section 13.2 of PS4A). This level is troubling in that the uncertainty of the measurement is 13-36% of the proposed emission limits in this case, thus further contributing to the challenges of meeting a standard (1.4 ppmv, 3.0 ppmv, or 4.0 ppmv) on a consistent basis.

In addition, such a small allowable emission level will make conducting the Relative Accuracy Audits and Tests very difficult to complete. Section 13.2 of PS4A requires that the RA of the CEMS must be no greater than 5 percent when the applicable emission standard is used to calculate RA. Although EPA makes some allowance for this difficulty in the Subpart CCCC Tables 5, 6 and 9 by changing the RA requirement to 0.5 ppmv, it is still an issue. Thus, one would be comparing values that are less than either 1.4 ppmv, 3.0 ppmv, or 4.0 ppmv and looking for agreement between those values when the accuracy of EPA Method 10 is itself only about 0.2 ppmv or in this case 5%, 7%, or 14% of the allowable CO emission concentration. Dow comments that the final rule would need to allow for an absolute difference of less than 1 ppmv or more for example vs. a 0.5 ppmv value to be used for QA/QC purposes.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 15

Comment: NESCAUM supports the use of CO CEMS at CISWI facilities larger than 100 mmBtu/hr, and PM CEMS at facilities larger than 250 mmBtu/hr.

Response: See preamble Section V. for the responses on testing and monitoring requirements and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 24

Comment: Carbon monoxide (incinerator subcategory)

CRWI is concerned that the data collected during the 114 performance tests did not correspond to the proposed requirements. For example, if the CO was measured during the tests using a CEMs calibrated for a 0-200 ppmv range, Performance Specification 4B has an acceptable daily error of +/-3% of span (or 3% of 200 ppmv = 6 ppmv). Even though a facility's CO CEMs is working properly, it is possible that a reported measurement of 2 pprnv could actually be 2 ppmv, as much as 8 ppmv,, or as little as 0 ppmv simply because of the accuracy of the instrument at that level. In calculating the floor, EPA should account for this uncertainty in the measurement itself. EPA may have already done this but there does not appear to be any discussion of this in the support documents. Of course, if the data is collected from a CEMs with an even-larger span than 0-200 ppmv, this concern is magnified.

Also, if data were collected using CEMs with a 0-200 ppmv span, it would be improper to require future CEMs to be'spanned 0-10 ppmv. The span basis required for future compliance should be the same as the span basis on which the data was collected. CRWI suggests that EPA go back to the raw dataand determine the span for the CO CEMs used in the data gathering. EPA should set the required span for compliance at the same span as used to collect the data used to develop the standard. Otherwise, the accuracy of the data used to develop the standard and the ability of the regulated community to show compliance is compromised.

Performance Specification 4B for CO CEMs on HWCs specifies a calibration drift of no more than 3% of span, while Performance Specification 4A for CO CEMs on other sources specifies a calibration drift of 5% of span. As proposed, the new requirement is for a calibration drift of 2% span. This defines anew level of performance compared to all previous performance specifications. Further, this information says nothing about calibration error or relative accuracy requirements. Considering that the limited information available defines a new standard for CEMs performance, CRWI is concerned that facilities cannot determine if CEMs technology could accurately or precisely determine compliance, since they have not previously been proven at these levels.

EPA's proposed rule references EPA Performance Specification 4A for a CO CEMS. Section 1.2.1. of Performance Specification 4A states that this specification was developed primarily for CEMS that comply with low emission limits (less than 200 ppmv). CRWI is concerned that. EPA may need to make additional adjustments if CO emission limits are indeed set at a level of less than 10 ppmv for gas due to QA/QC issues as discussed below.,

EPA has proposed new source CO limits of 1.4 ppmv (7% oxygen) for incinerators, 3.0 ppmv (7% oxygen) for energy recover units, and 4.0 ppmv (7% oxygen) for small, remote incinerators. To use a CO CEMs for new units in these three sub-categories, the instruments will have to be ranged from 0 to 10 ppmv. The accuracy of a CO CEMs meeting the requirements of Performance Specification 4A is 5% of the range or in this case + 0.5 ppmv (see Section 13.2 of

Performance Specification 4A). This level is troubling in that the uncertainty of the measurement is 13-36% of the proposed emission limits in this case, thus further contributing to the challenges of meeting these standards (1.4 ppmv, 3.0 ppmv, or 4.0 ppmv) on a consistent basis.

Such small allowable emission level will make conducting the-Relative Accuracy (RA) Audits and Tests very difficult. Section 13.2 of Performance Specification 4A requires that the RA of the CEMs must be no greater than 5 percent when the applicable emission standard is used to calculate RA. Although EPA makes some allowance for this difficulty in the Subpart CCCC Tables 5, 6 and 9 by changing the RA requirement to 0.5 ppmv, it is still an issue. Thus, one would be comparing values that are less than either 1.4 ppnnv, 3.0 ppmv, or 4.0 ppmv and looking for agreement between those values when the accuracy, of EPA Method 10 itself is only about 0.2 ppmv or in this case 5%, 7%, or 14%t of the allowable CO emission concentration. CRWI suggests that the final rule should instead allow for an absolute difference of less than 1 ppmv or more for example instead of the proposed 0.5 ppmv value.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 48

Comment: CO CEMS Should Not be Required for All Units

EPA should allow sources to perform stack tests for CO and demonstrate compliance with CO limits by monitoring operating parameters that ensure good combustion and proper operation of the unit. This approach is allowed under the current CISWI rule. However, EPA is proposing to require CO CEMS on each unit. . With continuous monitoring of operating parameters to ensure good combustion and proper operation of the unit, CO CEMS are not necessary for all units. Additionally, requiring CO CEMS will further increase the cost of a very expensive rule.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33, and see the response to comments EPA-HQ-OAR-2003-0119-2101, excerpt 10.

The final rule will not require CO CEMS for all units.. The rule will require operational parametric monitoring, as the commenter suggests, for many units affected by the rule, with CO CEMS allowed as an option at the source owners discretion.

10.5 PM CEMS: Use for Other Subcategories

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 4

Comment: PM CEMS: CES does not agree with EPA's proposal to require PM CEMS to the extent they would be intended to serve as a surrogate for HAP metal emissions.

Response: See preamble Section V. for the responses on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS) and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 15

Comment: With regard to the limited actual emissions monitoring that is required under the proposed CISWI rule, EPA solicits comments on the extent to which all subcategories of CISWI should be required to use CO and PM CEMS to monitor their emissions. We believe that EPA should require CO and PM CEMS for all new and existing CISWI. Both the docket of the proposed rule and EPA's past use of CEMs bears out the superiority of this method for monitoring actual emissions. In analyzing the costs of installing monitoring equipment, EPA noted in the docket of the proposed CISWI rule that "[t]he most direct means of monitoring compliance is the use of CEMS to measure the emissions of a pollutant on a continuous basis." Correspondence with Office of Management and Budget (OMB) Regarding Technical Memos and Regulatory Impact Analysis (RIA) (3/30/2010), EPA Doc. No. EPA-HQ-OAR-2003-0119-0041, ("Correspondence with OMB"), at 184.

EPA has in other rulemakings noted the superior accuracy of CEMs as compared to other methods of emissions monitoring. For example, more than a decade ago, EPA proposed and adopted PM CEMS monitoring requirements for cement kilns, noting that they could be implemented at a reasonable price. See, e.g., National Emissions Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry; Final Rule, 64 Fed. Reg. 31,898 (June 14, 1999). In addition to cement kilns, PM CEMS have also been required in a growing number of PSD permits and consent decrees applicable to coal-fired power plants [Footnote: 1Robyn Andracsek, Mary Hauner, Craig Clapsaddle & Steve Noland, PM CEMS: The Current Reality of Monitoring Particulate Matter (Nov. 28, 2006) ("Andracsek Technical Paper"), at 1 ("Many recent Prevention of Significant Deterioration permits have required particulate matter (PM) continuous emission monitoring systems (CEMS) ..."); id. at 2 ("During the past several years, the EPA or state agencies have required several coal-fired boilers to install PM CEMS as part of a consent decree order.").See DCN: EPA-HQ-OAR-2003-0119-2027.9 for attachment provided by commenter]

EPA has identified PM CEMs as far superior to BLD systems. In the 1999 NESHAP for Hazardous Waste Combustors, EPA explicitly declined to require adoption of BLD systems in recognition of their significant shortcomings. NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, 64 Fed. Reg. 52,828 (Sept. 30, 1999). With CEMs, EPA has found that "assumptions to assure compliance are fewer and less conservative (direct measure of the standard is the top of the monitoring hierarchy)," and "CEMS are less intrusive on the facility." Revised Standards for Hazardous Waste Combustors; Proposed Rule, 61 Fed.

Reg. 17,358, 17,379 (Apr. 19, 1996). Further, many CISWI may already be required to install CEMs as the result of other rulemakings. For example, EPA "assumed all [cement kiln] units will require Hg CEMS, but that they would have installed these already to comply with the

requirements of the proposed Portland cement NESHAP." Correspondence with OMB at 184. In light of EPA's decades of experience with CEMs and the analysis contained in the record, EPA must require CO and PM CEMs monitoring for all subcategories of CISWI.

Response: See preamble Section V. for the responses on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS) and Control Technology Assumptions for the Floor and Beyond-the-Floor.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 70

Comment: PM CEMS Should Not be Required

EPA has asked for comments on its determination that PM CEMS should be required and used for determining compliance with the emission standards on energy recovery units larger than 250 MMBtu/hr and for any other units. The installed PM CEMS will be required to meet Performance Specification 11 and also comply with Procedure 2 in Appendix F to 40 CFR 60. EPA's requirement that PM CEMS should be used to demonstrate continuous compliance on all energy recovery units larger than

250 MMBtu/hr (or on any type of unit) is arbitrary and not supported by any data. There is no published information documenting that PM CEMS installed on multi-fuel boilers or incinerators can measure PM emissions accurately and demonstrate compliance with PS 11. The bulk of experience with PM CEMS is on coal-fired utility boilers, which operate at a fairly constant load firing one low-moisture fuel.

In order for a CEMS to be suitable for demonstrating compliance, a CEMS must be accurate and precise under all operating conditions, and must have demonstrated the capability of sustained operations for long periods of time. However, as discussed below, these needs are not met when considering installation of PM CEMS on solid fuel energy recovery units. AF&PA is not aware that EPA has provided any technical information regarding the suitability of PM CEMS as compliance monitors.

An examination of the history of PS 11 and Procedure 2 would show that EPA promulgated PS 11 and Procedure 2 based on very limited data [Footnote: http://www.epa.gov/ttn/emc/cem/pmcemsknowfinalrep.pdf]

When EPA initially proposed PS 11, it was based on EPA's view of what the capabilities of PS CEMS should be. However, the very few PM CEMS installed on electric utility industry boilers could not meet the proposed limits. Consequently, PS 11 was extensively modified based upon

utility industry data. At the time of the promulgation of PS 11, no information was provided by EPA regarding the capability of PM CEMS to satisfy PS 11 on sources other than coal-fired electric utility boilers nor was an opportunity provided to the industry to comment on the suitability of implementing PS 11 and Procedure 2 on specific source types.

There are several significant issues with installing PM CEMS on units other than coal-fired utility boilers that need to be addressed before installation of such systems:

(i) Among the instruments used to quantify PM emissions are light scattering, optical scintillation, electrostatic induction and beta gauge instruments. The responses of these instruments are expected to be affected by the size and nature of particles being emitted. Thus the calibration curve for such instruments would be expected to change as the fuel mix changes. Boilers, kilns, and incinerators may burn multiple types of fuels and wastes. Each of these fuels and wastes may be fired at different levels during an operating day depending upon process conditions and availability. EPA has not published the results of any study examining these issues and thus is not in a position to confirm that given the changing nature of PM emissions from these types of units, PM CEMS will accurately measure source PM emissions.

(ii) Although EPA has mentioned installation at utility industry boilers, it has not provided reference to any peer-reviewed publication documenting that PM CEMS are routinely capable of meeting the requirements of PS 11 and PS2 and measure PM emissions accurately.

PS 11 specifies in Section 8.6 (4) (i) that simultaneous CM CEMS and reference method tests must be performed to obtain three levels of PM mass concentrations. Section 8.6 (4) (ii) specifies that the three PM concentrations must be distributed over the complete operating range experienced by the source. Thus, if a source experiences high PM emissions for short periods of time due to process upsets or malfunctions, the facility would have to conduct the correlation tests at emission levels that exceed the emission standards. This raises the following issues:

(i) Does EPA have the legal authority to require a source to operate above its permit limit?

(ii) EPA has assumed that PM emissions from a source are like “dial a PM” and can be controlled within a narrow range through minor operating changes. Such changes in PM emissions are, however, not always easily accomplished. For example, the efficiency of a wet scrubber is affected by the particle size distribution, gas flow rate, pressure drop, and scrubbing solution flow rate. Thus a facility cannot just dial a PM emission rate and continue their PS 11 test. Similarly, it is not clear how a facility equipped with a bag house will achieve targeted PM emission rates to satisfy the requirements of PS 11, other than purposefully punching a hole in one or more of its bags (certainly not a desirable action).

(iii) Some states ban facilities from operating their control devices below their maximum capability. What mechanism has EPA set up to allow facilities to operate in violation of state permit conditions?

EPA has failed to document that PM CEMS are sufficiently precise and accurate to determine compliance with the applicable standards. PM CEMS are required to meet the requirements of PS 11. PS 11 specifications include a correlation coefficient of ?0.85 between measured and predicted stack gas PM concentrations. A confidence interval (95%) mid range value at the mean PM CEMS response of ±10% of the emission limit, and a tolerance interval mid range 95% confidence interval value such that 75% of all possible values are within 25% of the PM emission limit. This suggests a very high probability that many PM CEMS measurements that

show up as exceeding the standard would actually be below the emission standard. In this situation, operators would be forced to make changes to a control device or even shut down the boiler if these changes did not cause a response, even though PM emissions were in compliance with the standard. This is in direct conflict with the current view of compliance as being either in compliance or out of compliance. If it is EPA's desire to use PM CEMS for demonstrating compliance, it must show how compliance would be determined with devices with such a high error band.

We recommend that prior to requiring the installation of CEMS on units burning multiple types of fuels and wastes, EPA should sponsor field studies to determine the accuracy and precision of PM CEMS on these units.

Response: We agree that not all technologies that can satisfy PS 11 will be suitable for all applications. We disagree that there are no PM CEMS technologies for monitoring emissions from multi-fuel and other industrial boilers, and PM CEMS have been demonstrated for a variety of applications. First, PM CEMS performance specifications and QA procedures have been around quite a while with PS-11 and Procedure 2 promulgated January 2004. There have been at least 65 successful installations in the United States and in other countries. A successful installation is obtained when a PM CEMS passes the PS-11 statistical criteria, thereby demonstrating that an acceptable level of accuracy is achieved. PS-11 provides the steps in obtaining a reliable successful correlation with reference methods, thereby ensuring compliance data that is sufficient to determine compliance with PM emission limits. Procedure 2 describes the required audits to insure that subsequent measurements are stable and within acceptable limits, thereby ensuring reliable compliance data.

Applying a technology suitable for a particular application would naturally take some planning. Section 2.4(1) of PS-11 states that you should select a PM CEMS that is appropriate for your source. EPA encourages you to discuss your specific operations with your vendor and obtain a guarantee from the vendor. EPA is aware of PM CEMS technologies that the measurement of mass concentration is not affected by changes in the particulate composition that may occur with multiple types of fuels and wastes. Manufacturers of beta gauge instruments have demonstrated that the calibration curve does not change as the fuel mix changes. Vendors have guaranteed that their PM CEMS will meet the PS-11 criteria for multi-fuel boilers. PS-11 provides for situations where multiple correlations may be needed for a PM CEMS technology (see Section 2.3 of PS-11).

Section 2.4 of PS-11 stresses the importance of planning for subsequent changes in effluent matrix and/or PM that might influence the correlation and describes the process required to enhance the probability of obtaining a successful correlation and the selection of the most appropriate CEMS for the installation.

On the sensitivity issues raised in the comments, that are related to precision and accuracy, we disagree that measurements made near the emissions limits are indistinguishable from zero. Modern light scatter devices (e.g., the Durag D-R 300-40 at http://www.ppmsystems.fi/files/d-r-300-40.pdf and the Sigrist StackGuard monitor at http://www.photometer.com/en/products/details/features.html?productid=249) can detect very low concentrations including in the microgram/m3 range. These devices can also satisfy the relative accuracy requirements in PS11 at those levels (e.g., with longer PM test runs for reference method PM mass sampling).

On the accuracy issues raised, we understand and appreciate the effect of measurement uncertainty, including the effects of uncertainty inherent in the PM CEMS calibration output, in establishing the applicable limits and in determining compliance. As discussed in responses to other comments about establishing the applicable emissions limits, we considered and accounted for these uncertainties in applying statistically based confidence factors (i.e., the UPL calculations) using the emissions data developed in support of the rule. Once those emissions limits are established, it is agency policy that determinations of compliance are to be based on measurements conducted with the prescribed procedures including meeting all of the control quality assurance and quality control requirements without further adjustment.

Finally, for the process upsets issue raised by the commenter, process upsets are not part of "normal operations" as per PS-11, therefore the facility would not have try to capture that emission level for the correlation testing. Achieving a range of emission levels for units with wet scrubbers or fabric filters is a challenge, but many sources have been able to achieve the requirements of PS-11 by either perturbing these devices and/or by using the "zero point" that is given in section 8.6.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 85

Comment: EPA proposes that compliance with the PM limits shall be demonstrated by PM source tests unless the facility elects to install a PM CEMS. For kilns and kiln/in-line raw mills controlled with fabric filters, EPA's proposal requires installation and operation of a Bag Leak Detector (BLD) and development (and submission for approval) of a site-specific BLD monitoring plan. EPA proposes to allow the use of PM CEMS (meeting the requirements of Performance Specification 11, and Appendix F, Procedure 2) as an alternative to the other PM monitoring requirements and solicits comments making the use of a PM CEMS a requirement.

The proposed PM monitoring provisions appear to be based on an incomplete understanding and outdated knowledge regarding PM monitoring technology and approaches. There is no indication that EPA did anything other than reiterate previous positions without any technical investigation or evaluation. EPA conducted no studies or evaluations of BLDs, or any other PM monitoring devices, on cement kiln or kiln/in-line raw mill emissions. EPA fails to recognize that many BLD designs are entirely inappropriate and inadequate for use under the varying effluent matrix and conditions, especially at kilns/in-line raw mills. EPA makes no mention of these issues and offers no relevant guidance. EPA continues to rely on a single outdated and inadequate guidance document applicable to a single BLD vendor and single fabric filter configuration/cleaning cycle that is not representative of the range of configurations for kilns/in-line raw mills [Footnote: "Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" EPA-454/R-98-015, September 1997.] EPA fails to develop performance specifications and quality assurance requirements for the compliance monitoring techniques it specifies.

EPA does not acknowledge in its preamble discussions, the actual regulation, or under its review obligations relative to the National Technology Transfer and Advancement Act, that technically superior and far more practical PM monitoring approaches have been developed for cement plants that burn hazardous waste. Furthermore, the proposed PM monitoring provisions are inconsistent with the promulgated PM monitoring requirements for cement plants that burn hazardous waste (40 C.F.R. Part 63, Subpart EEE (2008)) thereby creating confusion and inconsistent requirements. EPA makes no mention of and includes no provisions to allow use of Particulate Matter Detectors (PMDs) as are allowed for both ESP and fabric filter controlled cement plants that burn hazardous waste under the promulgated requirements of Subpart EEE. By this omission, EPA eliminates options to use better PM monitoring practices that have already been promulgated for cement plants and demonstrated in practice.

Response: See preamble Section V. for the responses on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS) and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 87.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 88

Comment: PM CEMS Issues

1. EPA has not addressed nor resolved the primary technical issues limiting

the effective application of PM GEMS at cement plants.

Even though EPA proposing to have PM CEMS as an option monitoring method in the Proposed CISWI Rule, PCA believes that PM CEMS are not capable of being used for compliance purposes at cement kilns. PCA provides these comments to EPA so that EPA has the correct information in case it deliberates whether to require PM CEMS in the possible final rule. EPA has not addressed nor resolved the primary technical issues limiting the effective application of PM CEMS at cement plants including:

* inability to generate a sufficiently wide range of PM concentrations to establish an acceptable correlation (i.e., "calibration"),

* accuracy and precision limitations of reference method at PM levels necessary to generate valid correlation, and

* subsequent changes in effluent matrix and/or PM (i.e., particle size distribution, refractive index, particle density, etc.) that influence the stability of the correlation and hence, the relationship between the output of the inferential measurement device relative to actual PM concentration.

2. Valid PM GEMS correlations cannot be established for PM GEMS at

cement plants due to limitations of process operation and control equipment in conjunction with the proposed emission limitation.

EPA is well aware of the need to consider emissions variability over the full range of fuel, process, and APCD operation, including the maintenance periods required to maintain equipment performance at high levels, as well as the uncertainty associated with the compliance demonstration method in order to establish the appropriate emission limit, averaging period, and other components of an emission standard. Extensive efforts were undertaken to acquire data from CEMS over long periods of operation to establish the SO2 and NOx variability and emission standards in the original Subpart Da regulations. Similar efforts have been undertaken to develop other long term emission standards for other source categories. Even in the development of the proposed mercury standard for this rulemaking, EPA evaluated 30 days of data from 89 kiln systems. While 30 days of data cannot possibly characterize the full range of mercury emissions variability, it is at least a meager start. However, no such evaluation has ever been performed for PM standards.

EPA encountered the various technical difficulties in their field studies conducted to develop the PM CEMS performance specifications. Similarly, the electric utility industry has continued to encounter these problems for PM CEMS installed under consent decrees. Neither of these efforts has demonstrated sufficiently stable correlations to facilitate use of PM CEMS for direct compliance. None of the utility industry consent decrees for any operating units require that PM CEMS be used to determine compliance with emission standards. Each consent decree for operating units specifies periodic performance tests ("stack tests") to demonstrate compliance with emission limits.

The regression analysis required to establish the PM correlation (i.e., PM CEMS calibration) necessitates collecting data over a wide range of PM concentrations. Cement plants operate over a narrow range of operation and there is no way to vary emissions by varying the process rate. Many cement plants will need to install high efficiency fabric filters (membrane coated bags) to meet the applicable emission standard. There is no means to vary the collection efficiency of the fabric filter and hence, no way to vary the PM concentration. Measures such as creating a hole in a bag or other bypass of the fabric filter do not maintain the same PM characteristics. PM spiking is mentioned and allowed under PS 11, but as of yet no valid and representative means of spiking PM has been developed. The correlation of PM CEMS, as further demonstrated by work in the electric utility industry, demonstrates that the PM CEMS correlations do not pass through the origin (i.e., "zero-zero"). For these reasons, there is no appropriate procedure to develop the PM CEMS correlation at many cement plants. (These issues at fabric filter controlled electric utilities with PM CEMS requirements required by consent decrees have necessitated attempts to spike baghouse dust into the effluent stream, and comparison of the PM CEMS and reference test method while sampling ambient air, and other obviously extreme attempts to generate a correlation).

Even if an initial correlation is established through extensive testing, it is unknown for how long it will remain valid. Variations in limestone characteristics over the life of the quarry will certainly occur and will affect the PM emissions and characteristics. Variations in other feed components, fuels, process conditions and the air pollution control device will also affect the PM characteristics. Insufficient experience has been gained to determine the stability of PM CEMS correlations in the electric utility industry applications for coal-fired boilers. Variations in limestone characteristics and other parameters will pose even greater challenges to the stability of PM CEMS correlations at cement plants.

3. The requirements in Appendix A, Performance Specification 11 for the PM GEMS correlation and in Appendix F, Procedure 2 do not provide a sufficiently reliable means to determine compliance with emission limitations.

The basic PS 11 regression requirements are a correlation coefficient of ?0.85, a 95% confidence coefficient of ± 10% of the emission standard, and a tolerance interval of ±25% of the emission standard. In lay terms, the tolerance interval indicates that 75% of future PM measurements should be within ±25% of the emission standard. Rather than "bright line" compliance demonstrations, the variability associated with the correlation, renders the PM CEMS as only a general indicator of PM concentrations. Coupled with the uncertainties in measurement and quantification of the effluent volumetric flow rate and clinker production rate, the combined uncertainty of the PM measurements in units of lb/ton clinker is very substantial. Promulgation of a regulation requiring continuous demonstration of compliance using PM CEMS would be unfair to the cement industry due to the high levels of uncertainty, and would result in endless citizen suits even though emissions are maintained below the applicable emission limit.

4. The use of PM GEMS in Europe and other countries does not constitute a valid basis for application of PM GEMS at cement plants in the United States.

PM CEMS have been used in Germany and Europe for many years. There is no debate that the light scattering, light transmission, and extractive beta attenuation instruments have a proven record of operation and can reliably measure the parameters that these devices sense. However, since all of these devices are inferential measurement devices, and a correlation must be established to relate the output of the device to the actual PM concentration, then the accuracy and bias of the reference test method (especially at low concentrations corresponding to the proposed emission limitations) and the uncertainty of the statistical correlation, as well as the stability of the correlation must be considered. Under the long-standing program administered by the German TUV, and the current European monitoring standard (EN 14181) these uncertainties are explicitly considered. In contrast with the EPA approach, emissions are not considered to exceed the allowable limit until the lower bound of the confidence interval and/or tolerance interval exceed the emission limit. Furthermore, emission standards may contain different averaging periods requiring different levels of conformance. Finally, when a problem is encountered, the emphasis is on resolving the emission problem rather than direct enforcement and collection of financial penalties. All of these considerations place the European monitoring program in an entirely different regulatory context than the proposed PM monitoring in the United States.

5. Monitoring PM emission concentrations downstream of wet scrubbers is not possible at cement plants.

Monitoring locations downstream of wet scrubbers at cement plants are often observed to contain water droplets and during scrubber upsets will also contain gypsum slugs (very large particles often referred to as "mud balls.") Heated extractive systems (either Beta gage or light scattering are used at monitoring locations downstream of wet scrubbers at electric utilities.

However, none of these devices can operate reliably in the presence of gypsum spray or very large particles. They will simply provide erratic non-representative data or completely fail to operate. Monitoring in the presence of small changes in particle size distribution is challenging

enough, monitoring downstream of wet scrubbers used in the cement industry is not possible. During malfunctions, upsets of the PM APCD, or during period of bypass, the wet scrubber will collect a large portion of the PM. However, because PM monitoring downstream of the wet scrubber is not feasible, credit for these emission reductions cannot be obtained. Hence, monitoring upstream of the wet scrubber may overstate actual PM emissions.

Response: See preamble Section V. for the responses on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS) and Control Technology Assumptions for the Floor and Beyond-the-Floor. See also response to EPA-HQ-OAR-2003-0119-1951.1, excerpt 70.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 49

Comment: PM CEMS Should Not be Required

EPA has asked for comments on its determination that PM CEMS should be required and used for determining compliance with the emission standards on energy recovery units larger than 250 MMBtu/hr and for any other units. The installed PM CEMS will be required to meet Performance Specification 11 and also comply with Procedure 2 in Appendix F to 40 CFR 60. EPA's requirement that PM CEMS should be used to demonstrate continuous compliance on all energy recovery units larger than 250 MMBtu/hr [Footnote: 75 FR 31948.] (or on any type of unit) is arbitrary and not supported by any data. There is no published information documenting that PM CEMS installed on multi-fuel boilers or incinerators can measure PM emissions accurately and demonstrate compliance with PS 11. The bulk of experience with PM CEMS is on coal-fired utility boilers, which operate at a fairly constant load firing one low-moisture fuel.

In order for a CEMS to be suitable for demonstrating compliance, a CEMS must be accurate and precise under all operating conditions, and must have demonstrated the capability of sustained operations for long periods of time. However, as discussed below, these needs are not met when considering installation of PM CEMS on solid fuel energy recovery units. ACC is not aware that EPA has provided any technical information regarding the suitability of PM CEMS as compliance monitors.

An examination of the history of PS 11 and Procedure 2 would show that EPA promulgated PS 11 and Procedure 2 based on very limited data. [Footnote: http://www.epa.gov/ttn/emc/cem/pmcemsknowfinalrep.pdf.] When EPA initially proposed PS 11, it was based on EPA's view of what the capabilities of PM CEMS should be. However, the few PM CEMS installed on electric utility industry boilers could not meet the proposed limits. Consequently, PS 11 was extensively modified based upon utility industry data. At the time of the promulgation of PS 11, no information was provided by EPA regarding the capability of PM CEMS to satisfy PS 11 on sources other than coal-fired electric utility boilers, nor was the

industry provided an opportunity to comment on the suitability of implementing PS 11 and Procedure 2 on specific source types.

There are several significant issues relating to PM CEMS on units other than coal-fired utility boilers that need to be addressed before requiring the installation of such systems:

Among the instruments used to quantify PM emissions are light scattering, optical scintillation, electrostatic induction and beta gauge instruments. The responses of these instruments are expected to be affected by the size and nature of particles being emitted. Thus the calibration curve for such instruments would be expected to change as the fuel mix changes. Boilers, kilns, and incinerators may burn multiple types of fuels and wastes. Each of these fuels and wastes may be fired at different levels during an operating day depending upon process conditions and availability. EPA has not published the results of any study examining these issues and thus is not in a position to confirm that given the changing nature of PM emissions from these types of units, CEMS will accurately measure source PM emissions.

Although EPA has mentioned installation at utility industry boilers, it has not provided reference to any peer-reviewed publication documenting that PM CEMS are routinely capable of meeting the requirements of PS 11 and PS2 and accurately measure PM emissions.

Section 8.6(4)(i) of PS 11 specifies that simultaneous PM CEMS and reference method tests must be performed to obtain three levels of PM mass concentrations. Section 8.6(4)(ii) specifies that the three PM concentrations should be distributed over the complete operating range experienced by the source. Thus, if a source experiences high PM emissions for short periods of time due to process upsets or malfunctions, the facility would have to conduct the correlation tests at emission levels that exceed the emission standards. This raises the following issues:

Does EPA have the legal authority to require a source to operate above its permit

limit?

EPA has assumed that PM emissions from a source can be controlled within a narrow range through minor operating changes. Such changes in PM emissions are, however, not always easily accomplished. For example, the efficiency of a wet scrubber is affected by the particle size distribution, gas flow rate, pressure drop, and scrubbing solution flow rate. Thus a source cannot just dial a PM emission rate and continue their PS 11 test. Similarly, it is not clear how a facility equipped with a bag house will achieve targeted PM emission rates to satisfy the requirements of PS 11, other than purposefully punching a hole in one or more of its bags (certainly not a desirable action).

Some states ban facilities from operating their control devices below their maximum capability. What mechanism has EPA set up to allow facilities to operate in violation of state permit conditions?

EPA has failed to document that PM CEMS are sufficiently precise and accurate to determine compliance with the applicable standards. PM CEMS are required to meet the requirements of PS 11. PS 11 specifications include a correlation coefficient of ?0.85 between measured and predicted stack gas PM concentrations. A confidence interval (95%) mid-range value at the mean PM CEMS response of ±10% of the emission limit, and a tolerance interval mid-range 95% confidence interval value such that 75% of all possible values are within 25% of the PM emission limit. This suggests a very high probability that many PM CEMS measurements that show up as exceeding the standard would actually be below the emission standard. In this

situation, operators would be forced to make changes to a control device or even shut down the unit if these changes did not cause a response, even though PM emissions might be in compliance with the standard. If EPA is going to require the use of PM CEMS to demonstrate compliance, it must explain how compliance would be determined with devices with such a high error band.

We recommend that prior to requiring the installation of CEMS on units burning multiple types of fuels and wastes, EPA should sponsor field studies to determine the accuracy and precision of PM CEMS on these units.

Response: See preamble Section V. for the responses on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS) and Control Technology Assumptions for the Floor and Beyond-the-Floor. See also response to EPA-HQ-OAR-2003-0119-1951.1, excerpt 70.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 8

Comment: GPI — Macon Mill believes that PM CEMS technology is a relatively new technology and EPA should further investigate the ability of a PM CEMS to monitor emissions at the order of magnitude proposed in the CISWI NSPS and Boiler MACT without a significant error. Use of PM CEMS has generally been limited to utility boilers which typically operate at a fairly stable load and with one primary source of fuel, typically coal. GPI — Macon Mill is concerned about the viability of operating such a monitor on a multi-fuel, load-swinging energy recovery unit; particularly when combusting biomass and encourages further investigation by EPA prior to issuing a mandate for their use on such a wide-scale.

GPI — Macon Mill also expresses concern regarding sufficient availability of PM CEM monitoring devices should EPA promulgate this requirement. One vendor GPI — Macon Mill typically contracts with has indicated their PM CEMS are still in the research and development phase, and they are concerned about the ability to meet the proposed requirements. Beyond this one vendor, availability of PM CEMS for wet stacks is known to be limited to only a few equipment vendors. It is unlikely that these few vendors would be able to handle the manufacturing and installation requirements for all the necessary wet-stack installations that would be required as a result of the proposed CISWI and Boiler MACT rules.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 70.

Currently there are seven PM CEMS vendors that would be able to manufacture and install PM CEMS for wet or dry stack installations. Two of the larger companies would be able to manufacture and install the needed PM CEMS alone. Given the schedule for this rule, we fully expect that vendors and sources will have time sufficient for contracting for, installing, and certifying the instruments prior to compliance dates.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 66

Comment: However, CIBO supports EPA statements regarding use of PM CEMS where use of a PM CEMS results in discontinuing annual PM compliance testing, PM CEMS is considered a substitute for opacity testing or opacity monitoring, and use of a PM CEMS discontinues monitoring of minimum wet scrubber DP/HP/amperage. The proposed rule allows continuous compliance with the particulate matter emissions limit to be demonstrated using a particulate matter continuous emissions monitoring system according to the procedures in § 60.2165(n). 75 FR 31976.

Response: We agree that a PM CEMS installed and operated in accordance with Performance Specification 11 and the associated quality assurance procedures can provide assurance of ongoing compliance without the need for additional periodic compliance testing. The final rule reflects this provision for applying the optional PM CEMS.

10.6 PM CEMS: Size Threshold

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 16

Comment: NESCAUM supports the use of CO CEMS at CISWI facilities larger than 100 mmBtu/hr, and PM CEMS at facilities larger than 250 mmBtu/hr.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2149.1, excerpt 15.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 51

Comment: ACC Agrees with Proposed CEMS Data Availability Requirements and

Requests a Similar Approach for CPMS Data Availability

We agree with the CEMS data availability requirements in the proposed rule and do not believe that it is appropriate to require 100 percent data availability for these units (e.g., redundant CEMS). However, it appears that EPA did not include CO CEMS is this provision. We assume

that is an oversight as any CEMS would need some tolerance for missing data in the regulation. Facilities operate in a manner that ensures equipment is well maintained and strive to meet monitoring responsibilities. However, even top performers have equipment malfunctions, and the rule must accommodate occasional periods of missing data that are outside the owner or operator‘s control. In addition, ACC does not believe that EPA needs to prescribe redundant CEMS, since even redundant CEMS cannot guarantee perfection. Even with the proposed minimum data availability, some facilities may install redundant CEMS to ensure that degree of availability without EPA mandating it. ACC does not believe EPA should prescribe missing data procedures, owner/operator developed missing data, or parametric monitoring, especially since facilities have incentives to maintain monitoring systems without EPA prescribing how they should do it.

Response: The final rule includes revisions to the general requirements for operating continuous monitoring systems that addresses this concern. We have not included any specific minimum data availability requirement, nor do we require substitute data below some threshold as the proposed rule indicated in certain sections. We believe that numerical missing data allowances quickly become targets or excuses, not incentives to conduct monitoring in a manner consistent with good air pollution control practices. For all monitoring required or applied as an option under this rule, we have included provisions that would require you to operate the monitoring system and collect data at all required intervals at all times the affected source is operating except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Further, you may not use data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 65

Comment: PM CEMS. A PM CEMS is required for energy recovery units >250 MMBtu/hr, and also

required for units <= 250 MMBtu/hr without a wet scrubber with compliance on a 24 hour block average basis. 75 FR 31948. EPA requests comment on requiring a PM CEMS on energy recovery units of 100MMBtu/hr heat input or greater. CIBO opposes this requirement due to both the unreasonable cost and impracticality. 75 FR 31962.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2149.1, excerpt 15.

10.7 COMS (opacity)

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 8

Comment: Very low opacity standards will likely cause facility operators to spend a great deal of time tinkering with their COMS to keep it from drifting. All monitors can drift, so such a low standard may be impractical for the expected environmental benefit. The Maine DEP believes it is more beneficial for facility operators to focus on proper operation of their combustion units and pollution control equipment, rather than chasing opacity monitor drift.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 23

Comment: Any correlation of PM to opacity would require calibration of the continuous opacity monitoring system (COMS) to Method 5 for PM; 5) The proposed 1% opacity is less than the design, measurement and recording tolerances for the COMS as found in EPA PS 1 (and by reference ASTM D6216-98) of 40 CFR 60 Appendix B. The design, measurement and accuracy tolerances and daily calibration drift criterion required under PS 1 is + or - 2% opacity or double the proposed limit. Further accuracy criteria for quarterly audits using NIST certified optical density filter is 3% opacity. In absolute terms a facility would be out of compliance based solely on the inherent accuracy limitations of the COMS.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 56

Comment: Current regulation 40 CFR 60.2165(b), which is retained, requires a bag leak detection system to be installed if an energy recovery unit uses a fabric filter to comply. Table 6 requires a COMS unless the unit is equipped with a wet scrubber. Requiring a COMS when a fabric filter is used and a bag leak detection system is installed is unnecessary and redundant. Per

CCCC Table 6 and DDDD Table 7, PM CEMS is required for units burning >250 MMBtu/hr, and COMS is required unless the unit is equipped with a wet scrubber. COMS should not be required if a PM CEMS is installed. EPA's comments relative to relationship of opacity and PM emissions demonstrate that redundancy. 75 FR 31986, 32002.

Response: See preamble Section V. for the responses on opacity limits and Control Technology Assumptions for the Floor and Beyond-the-Floor. The final rule does not include the requirements identified in this comment.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 58

Comment: The requirement to use site specific minimum voltage and amperage operating limits for ESPs is redundant when COMS are used. The requirement should only be applied in those cases where wet scrubbers are used and opacity monitoring is not applicable. 75 FR 31974, 31990.

Response: See preamble Section V. for the response on opacity limits.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 86

Comment: EPA should conduct a legitimate analysis of all the applicability, installation, design, performance, certification, quality assurance and alarm level setting procedures for each PM monitoring approach. This evaluation must consider the use of BLDs, PMDs, COMS and any other viable approach. At an minimum, this evaluation must include specific consideration of the full range and variability of the effluent conditions, effluent matrix, and particle characteristics that can be expected to be encountered for kilns and kilns/in-line raw mills in order to address the applicability of particular instrument designs and the effects of cross-sensitivities and measurement interferences. Until the results of such evaluations are confirmed by actual field tests and experience, there is no valid basis to establish the performance of BLDs, PMDs or other monitoring technologies as installed on cement kilns or kilns/in-line raw mills. When such information becomes available, EPA should re-consider and re-propose its PM monitoring requirements. Until such information becomes available and legitimate technical evaluation is completed, all monitoring approaches including BLDs, PMDs and COMS must be allowed.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 70.

EPA believes that performance specifications and quality assurance and control procedures promulgated for PM CEMS and established guidance for bag leak detection systems has been promulgated and otherwise available for other standards and permit applications for several years. These requirements have undergone notice and comment rulemaking and are being used sucessfully by multiple sources and emissions characteristics.

10.8 CEMS: Alternate Initial Accuracy Determination Procedures

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 12

Comment: Performance Specifications for Multi-Metal CEMS: CES would like to point out that there is already a performance specification for multi-metal CEMS available on the EPA web site: Other Methods, OTM-16. [See submittal for appendices of these comments.] This performance specification is appropriate for the current commercially available multi-metal CEMS and uses one of several possible references to demonstrate accuracy and precision upon initial installation. One of these is dynamic spiking with a quantitative aerosol generator (QAG©). CES has over six years experience using this procedure for multi-metal CEMS initial installation and on-going quality assurance audits. CES recommends the continued use of OTM-16 and the QAG© for initial certification and on-going quality assurance audits.

CES does not recommend using draft Performance Specification 10 (PS-10) because it is not consistent with contemporary CEMS technology and requires relative accuracy test comparisons to a reference method (Method 29), which is generally less precise and less accurate than contemporary CEMS. In addition, the reference method (RM) is based on concentrations present in the typical stack gas, which may be at or near the reference methods detection limits and thus not be appropriate for comparison with a candidate method. However, PS-10 does specify the multi-metal CEMS must be capable of measuring the total concentrations of the metals including Hg. CES agrees with this aspect of PS-10 and encourages the EPA to require the same of all multi-metals CEMS.

Response: We recognize and agree that an integrating multiple metals CEMS operates in a manner fundamentally different than the instrumental metals CEMS for which draft Performance Specification 10 was developed. Since EPA does not have a published performance specification for metals CEMS, instrumental or integrating, the source owner must prepare a site-specific monitoring plan in order to apply the metals CEMS option. The monitoring plan need not imitate existing CEMS performance specifications (e.g., sampling frequency) but should be structured to address those characteristic operations of the CEMS relecting the operating principle and associated QA/QC procedures.

10.9 CEMS: Optional use of CEMS and Elimination of Parametric Monitoring

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 50

Comment: EPA Should Evaluate the Feasibility and Measurement Capabilities of Hg,

HCl, and Multimetals CEMS Before Proposing their Use in this Rule

EPA requests comment [Footnote: 75 FR 31962.] on whether Hg, HCl, and multi-metals CEMS should be required under this rule. ACC is not aware of any studies conducted by EPA to determine the feasibility and measurement capabilities of these CEMS at the control levels required by the proposed rule. ACC members have no experience with the use of these CEMS. We are also concerned that EPA acknowledges that final performance specifications are not available for these CEMS. [Footnote: 75 FR 31961.] Therefore, EPA should determine if these monitors are feasible for the types of units being regulated under this rule before proposing, let alone requiring, their use.

Response: See preamble Section V. for the response on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS).

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 3

Comment: Commercial biomass combustion power plants should be subject to CISWI

and required to have Continuous Emissions Monitoring for mercury, dioxin and other toxic and hazardous air pollutants.

The EPA should require biomass plants to use Continuous Emissions Monitoring Systems (CEMS) for toxic air pollutants, and to have the data released real time on websites that can be accessed by the public. Yearly stack tests do not give an accurate estimate of emissions during start-up, shut-down or upset conditions – which, for some pollutants, most notably dioxins – can be hundreds of times higher than during steady-state operation (which is when stack testing is typically done). [See submittal footnotes 7 and 8 for reference] CEMS equipment for many of these pollutants has been tested and verified by EPA's Environmental Technology Verification Program. [See submittal footnote 9 for reference]

An additional reason that annual and/or quarterly testing for mercury emissions will not provide accurate data about the actual day-to-day emissions is because emissions can vary by type of fuel used. According to the EPA, the formation of fuel-dependent HAP (hazardous air

pollutants), including mercury, is dependent upon the composition of the fuel. Biomass plants mix fuels day-to-day and over time, particularly those burning construction, demolition and

disaster debris and those co-firing different types of biomass fuels or wastes, where the fuel mix may vary depending on market conditions. [See submittal footnote 10 for reference] The fact that biomass facilities do not necessarily burn the same materials on a day-to-day basis is reflected in the EPA's definition of biomass that includes many types of materials. [See submittal footnote 11 for reference] Each fuel source (i.e. animal litter, trees, etc.) has different constituents. Some biomass plants burn poultry litter, which is included in the EPA's definition of biomass, and which contains mercury. [See submittal footnote 12 for reference] Mercury is expected to be present in wood in trace amounts attributable to root uptake from soil and deposition of airborne mercury to leaves, buds and bark. [See submittal footnote 13 for reference] Some waste wood may contain mercury or other metals in paints applied to their surfaces. Id. The same fuel can also vary by the treatment it has been given. For example, if pesticides and herbicides are used on the agricultural wastes, the emissions will be different than for agricultural wastes without herbicides and pesticides.

Response: See the preamble generally for the emission limits and monitoring requirements applicable for biomass units subject to this rule.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 5

Comment: Multi-Metal CEMS: CES agrees with the EPA that multi-metal CEMS should be an approved alternative for new and existing sources. However, the EPA should allow multi-metal CEMS to be used in place of PM and Hg CEMS. Contemporary commercial multi-metal CEMS are able to measure total Hg (vapor and PM) as well as all of the HAP metals for which PM is intended to be a surrogate [See submittal for appendices.] As such, a single CEMS (multi-metals) is capable of measuring total emissions of all HAP metals and would be the simpler, low cost option, replacing two CEMS with one CEMS.

Response: At this time, EPA does not have promulgated performance specifications for multi-metal CEMS and thus the final rule does not contemplate a requirement to use such monitoring or address these monitors directly. See preamble Section III.C. for a discussion on the testing and monitoring requirements in the final rule. See also response to EPA-HQ-OAR-2003-0119-1133.2, excerpt 12.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 9

Comment: Hg CEMS: CES also recommends that the EPA specify total mercury CEMS and reflect further on the real monitoring advances that have been made in the past decade with multi-metal CEMS that measure total mercury (PM and vapor phase) as well as the other HAP metals. In addition, CES contends that vapor phase Hg is not an appropriate surrogate for total

Hg, particularly now that the courts require the inclusion of SSM emissions, which could contain a significant fraction of Hg in the PM fraction.

Response: See response to EPA-HQ-OAR-2003-0119-1133.2, excerpt 5.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 11

Comment: Optional CEMS use: CES commends the EPA in clarifying that the rule allows for optional multi-metal CEMS. The EPA should require multi-metal CEMS or at least allow multi-metal CEMS to be used as an alternative to using two separate CEMS, one to monitor PM and one to monitor Hg.

Response: See response to EPA-HQ-OAR-2003-0119-1133.2, excerpt 12.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 16

Comment: Elimination of other parameter monitoring: CES feels that multi-metals CEMS monitoring would provide total HAP metal measurements including total Hg. As such, it would replace two CEMS with one CEMS and could provide results for SSM events as well as during typical operating conditions.

Response: See preamble Section III.C. for a discussion on the testing and monitoring requirements in the final rule.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 17

Comment: EPA needs to consider advances in multi-metals monitoring technology when using surrogates, setting standards and defining performance specifications.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 12.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2

Comment Excerpt Number: 22

Comment: Proven monitoring methodology now commercially available

In the past decade since the EPA first proposed the use of PM as a surrogate for HAP metals, a new monitoring methodology has been developed, proven and approved by the EPA for HAP metals compliance demonstration. This methodology is based on reel-to-reel sampling using chemically reactive filter tape that traps both particulate and vapor phases of all HAP metals including mercury. HAP metals in the resulting deposit are quantified using X-ray fluorescence analysis as defined in EPA Compendium of Inorganic Methods, Method IO 3.3. [Other Test Method 16 (OTM 16) - Specifications for X-Ray Fluorescence Based Multi-Metals CEMS at Stationary Sources], (Yanca et al 2006). (Note: Since Method IO 3.3 is non-destructive and is unable to measure beryllium, this element would need to be measured off line by other methods.)

This methodology has been approved by the EPA for compliance demonstration (EPA, 2006), received EPA's Clean Air Excellence Award (EPA 2007a) and has been operating downstream of a wet scrubber on a hazardous waste incinerator for over six years (Lilly, 2009a). It has demonstrated its applicability to monitor HAP metals including mercury downstream of a wet scrubber on an EPA coal-fired boiler (EPA 2007b), and has passed an independent RATA on a coal-fired utility boiler stack down stream of dry controls (Cooper 2009). The applicability of this methodology to other sources than those noted is discussed in material previously submitted to the EPA (Lilly 2005) and comments submitted to the EPA in response to its proposed rules for Portland Cement Manufacturing. [See EPA-HQ-OAR-2003-0119-1133.3 and EPA-HQ-OAR-2003-0119-1133.4 for attachments submitted by the commenter.]

EPA's cost argument no longer applicable

EPA suggested in National Lime that using PM as a surrogate would eliminate the cost of performance testing to comply with numerous standards for individual metals. National Lime Association v. EPA, 233 F. 3d 625, 637 (D.C. Cir. 2000). This is no longer relevant with the advent of this proven multi-metals methodology because by monitoring the metals directly in emissions, it would not be necessary to conduct performance tests mentioned by EPA. In fact, this proven multi-metals CEMS is the simpler, lower cost option when compared to the alternative of needing both PM and mercury CEMS. This proven, commercially available multi-metals CEMS simultaneously measures over 20 elements that have the potential to be used to assess effectiveness of emission reduction options, apportionment of ambient impacts, and process optimization.

Response: See response to EPA-HQ-OAR-2003-0119-1133.2, excerpts 5 and 12.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 12

Comment: The rule offers an SO2 CEM as an option to show compliance with the SO2 emission limitations. Some CISWI facilities may have SO2 CEMs installed by other permit

requirements and thus would use this option. However, we are not aware that an SO2 CEM can pass the performance specification and quality assurance requirements found in 40 CFR 60 Appendices B and F. Note that the Acid Rain regulations allow for an exemption for low SO2 emitting sources. We have experience with operating SO2 CEMs at low SO2 concentrations less than 10 ppm and they cannot meet quality assurance requirements. Specifically, the monitor must pass the Relative Accuracy Test Audit (RATA) at least once a year by the criteria listed in the performance specification (PS2) in 40 CFR 60 Appendix B. The accuracy required in PS2 for SO2 continuous emission monitors is 20% of the standard if actual emissions exceed 50% of the standard and 10% of the standard if actual emissions are less than 50% of the standard (see Section 13.2 of PS2). Using the proposed standard of 4.1 PPM for existing new energy recovery units would require a relative accuracy to less than 1 PPM. Consider also the calibration drift requirements which would be no more than about 0.15 PPM. This is well beyond the accuracy of this instrument. Additionally, calibration gases in the appropriate range may not be readily available since the proposed emission limits are so far out of the range of any other SO2 standard imposed on any source.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 65

Comment: Monitoring and compliance using CEMS in the proposed rule requires the installation and successful operation of a PM, HCl, multi-metal, and mercury CEMS. HCl has never been monitored using FTIR for 30-day compliance at a cement facility, or any other known operation. EPA's PS-15 for FTIR CEMS has numerous technical issues that have never been addressed or resolved by the EPA. PS-15 has also been dismissed by State agencies that have replaced FTIR CEMS with proven monitoring technologies such as IR for HCl. There is currently no mercury, PM, or multi-metal CEMS presently in operation at a cement facility for compliance purposes and reliability is known to be site specific based on experience of the utility boilers with some of

these technologies. NCCA cannot be certain that these technologies will be successful at a cement facility.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 50.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 71

Comment: EPA Should Evaluate the Feasibility and Measurement Capabilities of Hg, HCl, and Multimetals CEMS Before Proposing Their Use in This Rule

EPA requests comment in the preamble on whether Hg, HCl, and multimetals CEMS should be required under this rule. AF&PA is not aware that EPA has conducted studies to determine the feasibility and measurement capabilities of these CEMS at the control levels required by the proposed rule. AF&PA members have no experience with the use of these CEMS. In addition, EPA acknowledges that final performance specifications are not available for these CEMS. Therefore, EPA should determine if these monitors are feasible for the types of units being regulated under this rule before requiring their use.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 50.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 17

Comment: EPA proposes the optional use of NOx CEMS, SO2 CEMS, hydrochloric acid CEMS, multi-metals CEMS, mercury CEMS, integrated sorbent trap mercury monitoring, and integrated sorbent trap dioxin monitoring as alternatives to the existing monitoring methods for demonstrating compliance with the NOx, SO2, hydrochloric acid, metals (lead, cadmium and mercury), and dioxin/furans emissions limits. While we support the use of these monitoring methods, we do not believe it is appropriate to use CEMS data in lieu of an initial performance test. We further urge EPA not to remove any of the parametric monitoring requirements in lieu of CEMS.

Response: See preamble Section V. for the response on Monitoring alternatives (CEMS in lieu of testing or parametric monitoring, decisions on PM CEMS and CO CEMS).

Commenter Name: David J. Shaw
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2003-0119-2464
Comment Excerpt Number: 10

Comment: The use of multi-metals CEMS in lieu of initial performance testing: EPA requested comment on the use of multi-metals CEMS in lieu of initial performance testing coupled with PM CEMS and other surrogates (75 FR 31962). The DEC does not support this proposed method of establishing initial compliance. The DEC believes that multi-metals and PM CEMS are inadequate to indicate the complex nature of incinerator emissions.

Response: For the operations and facilities subject to the rule, we believe that the combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate for assuring ongoing compliance. The rule allows for the source owner or operator to install and operate continuous emissions monitoring systems in

lieu of some testing and parametric monitoring. This process requires source owners to propose site-specific monitoring plans for approval. These plans would include CEMS performance specifications and periodic quality assurance and quality control steps to assure the quality of the alternative monitoring data. Currently, EPA has the requisite CEMS performance specifications for mercury monitoring systems and not for multiple metals CEMS.

10.10 CEMS: Data Availability Requirements

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 71

Comment: Data Availability Standards. Minimum data availability standards should be established for CO CEMS and COMS similar to what is proposed for other CEMS. In proposed §60.2735, EPA establishes minimum data availability standards for SO2, NOx, and PM CEMS. Similar provisions are needed for CO CEMS and for continuous opacity monitoring systems.

EPA has proposed no minimum data availability standards for CPMS as it has for CEMS. The HON (40 CFR 63 Subpart G), for example, only defines a deviation (excursion) as an operating day where less than 75 percent of the parametric data is captured. It would be capricious of EPA to set a monitoring requirement that cannot possibly be complied with 100 percent of the time. EPA should revise the rule to allow for reasonable amounts of missing data.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 72

Comment: AF&PA agrees with proposed CEMS data availability requirements and requests a similar approach for CPMS data availability

We agree with the CEMS data availability requirements in the proposed rule and do not believe that it is appropriate to require 100 percent data availability for these units (e.g., redundant CEMS). Facilities operate in a manner that ensures equipment is well maintained and strive to meet monitoring responsibilities. However, even top performers have equipment malfunctions, and the rule must accommodate occasional periods of missing data that are outside the owner or operator's control. In addition, AF&PA does not believe that EPA needs to prescribe redundant CEMS, since even redundant CEMS cannot guarantee perfection. Even with the proposed minimum data availability, some facilities may install redundant CEMS to ensure that degree of

availability without EPA mandating it. AF&PA does not believe EPA should prescribe missing data procedures, owner/operator developed missing data, or parametric monitoring, especially since facilities have incentives to maintain monitoring systems without EPA prescribing how they should do it.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 13

Comment: Dow supports EPA's statement regarding minimum data availability for CEMS and requests the same approach for parameter monitoring

EPA requested comment on the proposal for minimum data availability (75 FR 31964). Dow believes EPA's statement is reasonable and recognizes that monitoring systems are not perfect, even by the best performers. EPA also requested comment if they should require valid CEMS data at all times when the facility is operated. Dow does not agree with that approach and believes EPA should not adopt that approach, again since monitoring systems are not perfect and cannot guarantee perfect validity, and EPA has not shown that such perfection is being demonstrated by the best performers.

Dow does not believe that EPA needs to prescribe redundant CEMS, since even redundant CEMS cannot guarantee perfection. Even with the proposed minimum data availability, some facilities may install redundant CEMS to ensure that degree of availability without EPA mandating it.

Dow does not believe EPA should prescribe missing data procedures, owner/operator developed missing data, or parametric monitoring, especially since facilities have incentives to maintain monitoring systems without EPA prescribing how they should do it.

In addition, Dow requests that EPA adopt a similar approach for parameter monitoring since those devices can have similar issues with respect to perfection.

In summary:

* Dow requests that EPA adopt the proposed approach for a minimum of 85% of the hours per day, 90% of the hours per calendar quarter, and 95% of the hours per calendar year.

* Dow believes that the current subparagraphs (a) and (b) in both §60.2170 and §60.2735 need to include clarifications, since they seem to contradict this approach. Dow believes language needs to be added, "…except as allowed under subparagraphs (c), (d), (e), and (f)."

* Dow requests that this approach for CEMS data also be used for data for parameter monitoring. Dow requests that a new subparagraph, "(f)" be added to §60.2170 and §60.2735 for parameter monitoring.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 28

Comment: Minimum data availability standards should be established for CO CEMS and COMS similar to what is proposed for other CEMS.

In proposed §60.2735, EPA establishes minimum data availability standards for SO2, NOx, and PM CEMS. Similar provisions are needed for CO CEMS and for continuous opacity monitoring systems.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 29

Comment: Minimum data availability standards should be established for continuous parametric monitoring systems (CPMS).

EPA has proposed no minimum data availability standards for CPMS as it has for CEMS. The HON (40 CFR 63 Subpart G), for example, only defines a deviation (excursion) as an operating day where less than 75 percent of the parametric data is captured. It would be capricious of EPA to set a monitoring requirement that cannot possibly be complied with 100 percent of the time. EPA should revise the rule to allow for reasonable amounts of missing data.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 67

Comment: CEMS General. CEMS general data requirements include valid data for a minimum of 85% hours/day, 90% hours/quarter, and 95% hours/year if the affected facility is operating and combusting solid waste. EPA is seeking comment on requiring valid emissions data at all times and approaches to provide that data, such as redundant CEMS, prescribed missing data procedures, or parametric monitoring. The general valid data requirements are more than adequate and requiring valid data at all times has not been shown by EPA to be necessary or justified. 75 FR 31964.

Response: See response to EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

10.11 Measurement Methodology Impractical

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 15

Comment: EPA inappropriately proposes the EPA methods 26A or 26 for HCI testing. These two methods are inappropriate for cement industry and were previously forbidden by EPA. EPA should allow methods 320, 321 or ASTM D6348 which is consistent with the NESHAP rule.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 57.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 11

Comment: Dow believes EPA has proposed CO emission limits in the above described instances that are challenging to measure even given the few adjustments that EPA made to PS-4A and the test methods in the respective Tables for Subparts CCCC and DDDD. Dow believes that making more adjustments to the PS or the test methods is not a solution. In fact, Dow is not certain that EPA followed proper procedure by making the PS and test method adjustments that they have already proposed to do. Dow believes those adjustments should have been part of a separate rulemaking activity and not buried in this proposal. In any event, EPA needs to recognize that the proposed emission limits are simply too low to be reliably measured in such a manner that a unit can perform the requisite QA/QC. Dow suggests that the emissions limits be upwardly adjusted (three subcategories in Subpart CCCC and one subcategory in Subpart DDDD) so that the existing PS and test methods work.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 82

Comment: EPA is proposing that annual testing be conducted for HCl using EPA Method 26A, as opposed to the continuous monitoring requirement for HCl contained in the PC NESHAP. The

proposed limit is 1.5 ppm (v) dry at 7% O2. EPA is inconsistent in proposing that EPA Method 26A be used for compliance as they have forbid its use in this industry for the last 10 years. Furthermore, it is expected that most data used in the MACT Floor analyses were collected using infrared based methods such as 320, 321 or ASTM D6348. Therefore, compliance demonstrations using Method 26A is totally inconsistent with past regulations and data collection activities involving HCl and the cement industry.

It is unclear why EPA has chosen to regulate the same industry with two completely different standards for the same pollutant. EPA's proposed a compliance limit of 1.5 ppm HCl dry at 7% O2 will be difficult to demonstrate compliance with using FTIR based methods since the analytical detection limit is about 0.2 ppm (v) wet and calibration gases are only available down to 5 ppm. Compliance demonstrations at 1.5 ppm (v) dry at 7% O2 using EPA Method 26A would be possible as the method is naturally biased low by EPA's own acknowledgement, and the sampling rate and time can be adjusted to collect enough volume.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 57.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 4

Comment: If EPA continues to believe that this category requires regulation, INVISTA requests that EPA identify alternative compliance demonstration methods for burn-off ovens including a method based on knowledge of the burn-off material. For example, INVISTA burns off polymers, both nylon and PET, which have extremely low level of the impurities that are the CISWI regulated compounds. INVISTA recommends that EPA develop a compliance alternative that is based on testing the material to be burned off.

Completing annual performance testing of each individual burn-off oven would be extremely burdensome. When responding to the EPA's Section 114 request to complete emissions testing of the burn-off ovens, INVISTA worked with EPA to eliminate the actual stack testing of the metals and dioxin/furan, based on the composition of the polymer to be burned off. EPA, however, requested that INVISTA substantiate this premise by sending polymer samples to a certified analytical

laboratory for mercury, lead and cadmium analysis. The cost of analyzing the polymer is estimated at approximately $6,000 per year. The resulting test for PM, CO, NOx, and SO2, and the certified laboratory metals analysis cost over $51,000 at a single site for a single burn-off oven with a rated heat input of less than 0.5 MMBTU/hr. Had a single site been required to stack test for the metals and dioxin/furans (rather than rely on laboratory results) the source testing costs would have been $56,000 for each burn-off oven. The current annual cost projection for one of INVISTA's site is that the annual testing will cost more than $150,000 for each year that testing is required. Note that, at this site, the three burn-off ovens have a combined heat input of less than 1.5 MMBTU/hr.

Therefore, INVISTA recommends that EPA consider developing a compliance demonstration alternative for all burn off ovens or, alternatively one for small facilities (i.e., less than 10

MMBTU/hr or less than 100,000 MMBTU/yr). This alternative should involve the following steps:

Complete the full initial performance testing for each site, allowing a single test for similar units (as defined by EPA's Clean Air Act National Stack Testing Guidance (dated April 27, 2009) and to be approved by EPA).

Complete a composition analysis of the polymer burned off concurrent with the initial performance test.

Develop an emissions factor that correlates the performance test results and the polymer composition analysis. This will establish the maximum compound composition that can be present in the burn-off polymer.

Complete annual sampling of the polymer to be burned.

Compare this annual sampling with the maximum compound concentrations to ensure that the composition of the polymer has not changed and is still less than the maximum composition.

Require retesting only upon major modification of the unit or introduction of new feed or fuel.

This approach would ensure that EPA's objectives of compliance with the emission limits are achieved, while reducing the burden and cost of the annual compliance demonstration for sources.

The above approach could be used for those compounds that are related to the composition of the burn-off material, namely, cadmium, dioxin/furan, hydrochloric acid, lead, and mercury. The emissions of the criteria pollutants, namely, CO, NOx, PM, SO2, opacity, and fugitive ash, would be evaluated as proposed by the EPA, i.e., initial test, collect three years of test data, if results are less than 75% of the limit then reduced testing frequency for these compounds.

The following text would allow an alternative compliance demonstration method for the composition-driven compounds.

Recommended Text in Subpart CCCC:

60.2105(d) Burn-off ovens must meet either (i) the emission limitations in Table 8 for each unit or (ii) develop compound-specific composition limits as provided in §60.2110(g) by the applicable date in §60.2140.

60.2110(g) If a source uses composition limits to comply with the emission limits for a burn-off oven (applicable to only cadmium, dioxin/furan, hydrochloric acid, lead and mercury), the composition limits must be developed from a composition analysis completed at the time of the initial performance test. The composition limits shall be identified by developing a ratio between the compound-specific initial performance test results and the initial composition analysis. After the initial performance testing, additional performance testing requirements are triggered by either a major modification of the burn-off oven, or the introduction of a burn-off material with a different composition. Such additional performance testing shall be completed within 180 days after startup following the major modification or after introduction of the new feed or fuel.

60.2125(o) Material compositions must be analyzed using appropriate ASTM methods, or their equivalent, to determine polymer composition.

60.2130(b) You must use the material composition analysis results to demonstrate compliance with the burn-off oven emission limits following the method described in §60.2110(g).

60.2135(b) To demonstrate compliance with the burn-off oven emission limits in Table 8, you must analyze the material composition as required under §60.2105(d) and §60.2125(o).

60.2145(u) For burn-off ovens using the material composition analysis described in §60.2110(g), you must complete an annual composition analysis of the material to be burned off. Results of the annual composition analysis must be compared to the most recent composition limits developed under §60.2110(g).

(1) If there is a known change in composition of the burn-off material, a new composition analysis must be completed.

(2) If the most recent composition analysis required in (1) exceeds the composition limit determined following (§60.2110(g)) then a new performance test (§60.2125) and composition analysis (§60.2110(g)) must be completed for each compound that exceeds the previous composition limit. For each compound where the performance test result is less than the emission limits of Table 8, a new composition limit can be determined. If the performance test result exceeds the emission limit for a compound, a different compliance demonstration method must be used for that compound.

60.2150(b) If you elect to use §60.2110(g) to demonstrate compliance with the burn-off oven emission limits through the composition analysis, the composition analysis must be completed annually within 12 months following the previous composition analysis.

Similar text could be developed for burn-off ovens regulated under Subpart DDDD.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 7

Comment: The standard recovery in a Method 5 (40 CFR 60 Appendix A) particulate testing is approximately 1 milligram (mg). The CISWI particulate standard, translated into Method 5 terminology, limits capture to just over 1 milligram at typical stack concentrations. If the Method 5 filter did not capture significant amounts of particulate during the test protocol, test firms are required by Method 5 to assign a 0.050 mg default particulate capture value to the filter, a full 5% of the 1 mg design value for the method at the CISWI heat recovery existing source particulate limit. These emissions limits could be inappropriately influenced by small changes and default values inherent in the test method. EPA should not promulgate emissions standards where compliance may depend on the variability of the test method, but should restrict its standards setting to only where a competent test firm can clearly and consistently distinguish between compliance and noncompliance outside known test variability.

Please see the ACC comments for further details on this issue. EPA should not promulgate emissions standards where owners and operators cannot demonstrate compliance using the required test methods.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 83.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 10

Comment: CO Method 10 is prescribed for existing units under Subpart DDDD, and the emission limit of 2.2 ppmv creates particular difficulty for the incinerator subcategory.

Comments on Reference Method Testing - EPA Method 10: Demonstrating compliance with a 2.2 ppmv CO limit by conducting testing via EPA Reference Method 10 will be very difficult, if not impossible, to demonstrate, as noted by the comments below:

Dow's interpretation of Methods 10 and 7E is that the span of the CO analyzer cannot be greater than 5 ppmv, as Section 3.4 of Method 10 notes that the measured emissions should be between 20-100 percent of the calibration span. EPA makes some allowance for this requirement by allowing a 10 ppmv span gas. So, even if measured emissions were 2.2 ppmv, the span could not exceed 10 ppmv. Section 9.0 of EPA Method 7E has a QA/QC table that states that the analyzer and calibration gas performance must be within 2% of the calibration span of the analyzer (2% of 10 ppmv = 0.2 ppmv) or alternatively 0.5 ppmv. Using the 2% criteria means that the acceptable result of the span calibration verification would have to be within 2% or within 0.2 ppmv of the calibration gas, which borders on the reasonable detection capabilities of a CO emission analyzer.

Thus, one would be forced to use the alternative 0.5 ppmv for QA/QC purposes. This level is troubling in that the uncertainty of the measurement is 23% of the proposed emission limit in this case (2.2 ppmv), thus further contributing to the challenges of meeting a 2.2 ppmv standard on a consistent basis.

In addition, EPA Method 7E requires the use of three calibration gases between the 0-5 ppmv level (or alternatively 0-10 ppmv level as per Table 6 of Subpart DDDD) in order to meet the QA/QC requirements for the analysis. Obtaining and using three different calibration gas standards in this range is excessive in this case, and the QA/QC requirements should be modified to require only a single point calibration at these low concentrations.

Similar to the calibration concerns, Dow also notes that allowable drift would also have to meet the same alternative criteria of 0.5 ppmv (or 0.2 ppmv as per Table 6), which again is 50% (or alternatively 10%) of the allowable CO concentration.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 33.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 18

Comment: It will be infeasible to conduct performance tests to demonstrate compliance with the proposed standards in many cases.

Burn-out ovens are batch type units with run times as short as 2-4 hours. It will not be possible in many cases to conduct three runs and collect enough sample volume as required in Table 9 of the proposed rule and demonstrate compliance with pollutants

such as cadmium and dioxins/furans. A source should not be barred from demonstrating compliance just because it's operating practices do not fit the prescriptive demands of the proposed regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 2

Comment: From a practical perspective we believe, at this time, it is technically infeasible to demonstrate compliance with the proposed emissions limits on a typical cyclonic burn barrel as prescribed by the proposed rule. Cyclonic burn barrels are very small (typically 55 gallons) and the duration of a normal burn cycle is relatively brief (normally less than one hour). For example, a Dioxin/Furan sample typically requires several hours to collect the mass needed to achieve detection limits. This length of sampling is simply infeasible on a typical cyclonic burn barrel operation since it does not have the capacity to burn enough waste during a longer burn cycle.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Edward E. Quick
Commenter Affiliation: Celanese International Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2189.1
Comment Excerpt Number: 4

Comment: It is not feasible to conduct performance tests to demonstrate compliance with the proposed emissions standards for burn-off ovens used to clean metal dies in polymer processes.

Burn-off ovens are batch type units with run times as short as 2 to 4 hours. It is not technically feasible in all cases to conduct 3 test runs and collect the required sample volume as required in

Table 12 of the proposed rule. Demonstration of compliance with emission standards for pollutants such as cadmium and dioxins/furans is impracticable for burn-off ovens due to its short operation cycles. Sources should not be barred from demonstrating compliance because standard operating practices that do not meet the prescriptive requirements in the proposed regulation.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 8

Comment: * EPA HCI emissions database contains data obtained by using disapproved analytical test methods 26 A vs. 320/321

* EPA has used PM emissions data based on Method 201A that measure PM10 concentrations instead of total filterable PM.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 57.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 30

Comment: It should also be pointed out that the cycle time for many burn-off ovens may only be 6-7 hours (including start-up, hold time, and cool down). The time at the desired temperature may only be 1-3 hours. With an operating period of only

one hour, it would be impossible to sample for three hours without extending the testing for three separate runs. In reality, the actual time the operator has to keep the unit at a constant operating level during the test is often longer than just the desired sampling time. Facilities will usually try to keep operations steady for a short period of time before they start sampling as well as a short time period after sampling is finished. This adds to time needed to take a single sample. If the sampling period requires 51 hours, that becomes even more absurd.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

10.12 Reduced Testing Allowance

Commenter Name: Robert D. Bessette

Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 64

Comment: Emissions Test Frequency. EPA proposes at §63.2710(b) that all units conduct performance

tests for PM, HCl, fugitive emissions, and opacity on an annual basis. EPA further requires for energy recovery units that annual performance tests be conducted for PM, HCl, cadmium, lead, mercury, dioxins/furans (D/Fs), opacity, fugitive emissions, NOx, and SO2 (unless a CEMS is used for either PM, HCl, Hg, NOx and/or SO2). Thereafter, EPA proposes to reduce the frequency to three years if there have been three tests in a row that have results of less than 75 percent of the emission standard.

This frequency of testing is unreasonable and out of character with other MACT and NSPS standards and other state performance testing requirements. The Hazardous Waste Combustor MACT (Subpart EEE), for example requires a Comprehensive Performance Test (CPT) only once every 5 years (and, for some units, a confirmatory test for D/Fs in between CPTs). Many MACT standards and NSPS standards only require one initial performance test unless there is a physical change to the control device. In Tennessee for example, Eastman has for years performed particulate matter performance tests on coal-fired boilers on a 4 year frequency, and this only applies to boilers over 250 mmBtu/hr rated capacity.

Taking the Eastman plant in Tennessee as an example, they have three coal-fired boilers that may be subject to CISWI. This would mean they would be conducting stack tests at the facility once every four months for the first three years of compliance, and this is just for this one regulation. This is clearly an unreasonable requirement.

We recognize EPA has included a provision to skip to a three year frequency, but a source must pass three tests in a row with at least a 25 percent margin. Given the very stringent limits EPA has proposed, very few units are likely to qualify for this provision, so we are not sure of its value.

We fail to see the justification for annual testing. While we understand EPA has already promulgated this requirement for the original relatively narrow set of CISWI sources, it is now expanding it to potentially hundreds of units and adding several pollutants to the list. The testing for D/Fs in particularly costly and takes two test days to accomplish. We estimate that one of these comprehensive performance tests for all the pollutants would cost about $60,000. The continuous parametric monitoring requirements proposed in required by the proposed rule provide ample assurance the control equipment are not deteriorating and are operated properly.

Response: See preamble Section V. for the response on reduced testing provisions.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 90

Comment: EPA proposes to require annual testing all non-D/F constituents, which is excessive. In discussing energy recovery units, EPA indicates that a reduction in the testing frequency is available, but it is not clear whether this applies to kilns. This reduction option should be made available to any unit demonstrating an adequate margin of compliance.

EPA is also proposing to allow annual PM, HCl and opacity testing requirements to be relaxed to every 3 years if the source shows that they are less than or equal to 75% of the applicable standard. Annual testing is unnecessarily burdensome and once every 3 years is adequate. However, if EPA were to require annual testing, PCA would support EPA's proposed testing reduction option.

Response: See preamble Section V. for the response on reduced testing provisions.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 5

Comment: At one of INVISTA's sites we have three burn-off ovens that have the same identical design, age and burn-off materials processed. Completing the test on a single oven should be an adequate characterization of the emissions from each oven. INVISTA requests that EPA allow facilities with more than one "identical" burn-off oven to submit a request to test a single burn-off oven during each required test. EPA's criteria for acceptance of "identical" units would be based upon the EPA's Clean Air Act National Stack Testing Guidance (dated April 27, 2009) as found in Section VII.2. (Stack Test Waivers), Pages 8-10. As these units generally are not equipped with CEMS and have not been previously tested, substantially similar design (i.e., same model number and capacity), same age, same burn-off materials processed and same fuels would be adequate for the granting of the initial waiver. EPA may also consider making testing of alternating units a condition of granting the waiver.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 6

Comment: EPA's proposed requirements for annual performance testing represent an unnecessary burden to regulated facilities with little environmental benefit. For other MACT and NSPS regulations, EPA has typically required an initial performance test which then establishes continuous monitoring requirements for demonstrating ongoing compliance. The proposed CISWI NSPS requires annual perfoimance testing, continuous emission monitors for some pollutants, and continuous parametric monitoring. GPI - Macon Mill has obtained a preliminary estimate of $65,000 for performance testing of several of the required pollutants for the existing

biomass boiler at the Macon Mill. This represents cost for just one boiler and one fuel operating scenario (which may not be sufficient for multi-fuel boilers). GPI - Macon Mill requests that EPA reconsider the proposed requirements for annual compliance testing and rely on the previous methodology of an initial compliance test with ongoing compliance monitoring.

Response: See preamble Section V. for the response on reduced testing provisions.

Commenter Name: Walter Tyler
Commenter Affiliation: INVISTA S.à r.l. ("INVISTA")
Document Control Number: EPA-HQ-OAR-2003-0119-1904.1
Comment Excerpt Number: 7

Comment: In the preamble, EPA provides justification for allowing the reduced testing frequency. Based on EPA's rationale (see below), INVISTA strongly submits that the reduced frequency should not be limited to PM, HCl, fugitive ash and/or opacity. We recommend that EPA extend the same reduced testing frequency opportunity to the other regulated compounds, i.e., cadmium, CO, dioxin/furan, lead, mercury, NOx, and SO2. In addition, INVISTA submits that the retesting frequency, absent introduction of a burn-off material with a different composition, should be no more frequent for burn-off ovens than for hazardous waste combustors regulated under MACT EEE, which is a 5-year frequency.

The proposed amendments also would allow for reduced testing of PM, HCl, and opacity as

were allowed in the rule promulgated in 2000, but we are proposing amending these reduced testing allowances to provide a compliance margin of 75 percent of the standard to be able to qualify for testing for these pollutants once every three years. The reduced testing allowance and compliance margin provides flexibility and incentive to sources that operate well within the emissions standard, and to provide more timely follow-through, on assuring that sources that are marginally in compliance, will remain in compliance. (75 FR 31961)

The 75% criterion requires a source to read opacity to a level of precision not contemplated by Method 9. INVISTA would recommend that the testing of opacity be at the same frequency as the particulate matter frequency.

The following language would implement these recommendations in Parts CCCC and DDDD.

Recommended Text in 60.2155:

You can test less often for each emission limit particulate matter, hydrogen chloride, fugitive ash, or opacity, provided:

[no changes suggested]

The test data results for each emission limit particulate matter, hydrogen chloride, fugitive ash, or opacity is less than 75 percent of the emissions or opacity limit.

[no changes suggested]

If your CISWI unit continues to emit less than 75 percent of the emission limitation for particulate matter, hydrogen chloride, fugitive ash, or opacity, and there are no changes in the operation of the affected facility or air pollution control equipment that could increase emissions,

you may choose to conduct performance tests for these pollutants every fifth year, but each test must be within 60 months of the previous performance test.

If a performance test shows emissions exceeding 75 percent or greater of the emission or opacity limitation for particulate matter, hydrogen chloride, fugitive ash, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 5-year period are within 75 percent of the applicable emission limitation.

For the purposes of this paragraph, the opacity testing frequency will be the same as for particulate matter.

Recommended Text in 60.2270:

You can test less often for each emission limit particulate matter, hydrogen chloride, fugitive ash, or opacity, provided:

[no changes suggested]

The test data results for each emission limit particulate matter, hydrogen chloride, fugitive ash, or opacity is less than 75 percent of the emissions or opacity limit.

[no changes suggested]

If your CISWI unit continues to emit less than 75 percent of the emission limitation for particulate matter, hydrogen chloride, fugitive ash, or opacity, and there are no changes in the operation of the affected facility or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for these pollutants every fifth year, but each test must be within 60

months of the previous performance test.

If a performance test shows emissions exceeded 75 percent or greater of the emission or opacity limitation for particulate matter, hydrogen chloride, fugitive ash, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 5-year period are within 75 percent of the applicable emission limitation.

For the purposes of this paragraph, the opacity testing frequency will be the same as for particulate matter.

Response: See preamble Section V. for the response on reduced testing provisions. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 11

Comment: The Boiler and CISWI standards regulate a variety of pollutants, some of which may not be present in the combustion stream nor emitted from the products of combustion. For instance, many CISWI units combust organic streams or organic and aqueous mixtures that do not contain halogen concentrations beyond trace salt chlorides. The potential of such a unit to emit HCl, chlorine, or dioxins and furans ("D/F") is insignificant. These same streams often do

not contain detectible amounts of metal HAP or metallic CISWI constituents. The potential of such units to emit cadmium, lead, and mercury, among other metals, is minimal. In these situations, EPA should allow affected sources to combine a one-time compliance stack test with process knowledge of the material being combusted to streamline the compliance demonstration for certain parameters. We understand that EPA has far less flexibility in streamlining compliance demonstrations for common products of combustion, such as particulate matter, oxides of nitrogen ("NOx"), and sulfur dioxide ("SO2"). But when feasible, EPA should allow owners and operators to use process knowledge and chemistry to show that some regulated emissions are not of concern from certain regulated units.

Response: EPA has not included any specific "process knowledge" variance into the specific testing requirements of the final rule. See response to comments EPA-HQ-OAR-2003-0119-1133.2, excerpt 15, for a discussion of stack test waivers. In addition, the reduced testing frequency provided for in the rule should reduce testing required where the specific process considerations at a facility provide for significant compliance margins for specific pollutants.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 12

Comment: EPA proposed to require Method 22 (40 CFR 60 Appendix A) monitoring of CISWI ash removal activities. However, some CISWI units may not generate enough ash to remove from the combustion chamber. EPA should allow CISWI owners and operators to certify, on an annual basis as part of the required periodic reporting process, that no ash management activities occurred during a reporting year in lieu of any Method 22 monitoring of nonexistent ash removal activities.

Response: This issue is best identified and agreed to as part of conducting and documenting the initial and annual performance test (when the Method 22 test is scheduled to occur). Appropriate steps can be taken on a site-specific basis to address this issue.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 26

Comment: The proposed performance testing requirements are excessive and should be reduced to a reasonable and appropriate level.

EPA proposes at §63.2710(b) that all units conduct performance tests for PM, HCl, fugitive emissions, and opacity on an annual basis. EPA further requires for energy recovery units that annual performance tests be conducted for PM, HCl, cadmium, lead, mercury, dioxins/furans (D/Fs), opacity, fugitive emissions, NOx, and SO2 (unless a CEMS is used for either PM, HCl,

Hg, NOx and/or SO2). Thereafter, EPA proposes to reduce the frequency to three years if there have been three tests in a row that have results of less than 75 percent of the emission standard.

This frequency of testing is unreasonable and out of character with other MACT and NSPS standards and other state performance testing requirements. The Hazardous Waste Combustor MACT (Subpart EEE), for example requires a Comprehensive Performance Test (CPT) only once every 5 years (and, for some units, a confirmatory test for D/Fs in between CPTs). Many MACT standards and NSPS standards only require one initial performance test unless there is a physical change to the control device. In Tennessee for example, Eastman has for years performed particulate matter performance tests on coal-fired boilers on a 4 year frequency, and this only applies to boilers over 250 mmBtu/hr rated capacity.

Taking the Eastman plant in Tennessee as an example, we have three coal-fired boilers that may be subject to CISWI. This would mean we would be conducting stack tests at the facility once every four months for the first three years of compliance, and this is just for this one regulation. We believe this is clearly an unreasonable requirement.

We recognize EPA has included a provision to skip to a three year frequency, but a source must pass three tests in a row with at least a 25 percent margin. Given the very stringent limits EPA has proposed, very few units are likely to qualify for this provision, so we are not sure of its value.

We fail to see the justification for annual testing. While we understand EPA has already promulgated this requirement for the original relatively narrow set of CISWI sources, it is now expanding it to potentially hundreds of units and adding several pollutants to the list. The testing for D/Fs in particularly costly and takes two test days to accomplish. We estimate that one of these comprehensive performance tests for all the pollutants would cost about $60,000. The continuous parametric monitoring requirements proposed in required by the proposed rule provide ample assurance the control equipment are not deteriorating and are operated properly.

Response: See preamble Section V. for the response on reduced testing provisions.

Commenter Name: Kim A. Wolf
Commenter Affiliation: Savannah River Site (SRS), Savannah River Nuclear Solutions, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2384.1
Comment Excerpt Number: 5

Comment: Annual performance tests must be completed between 10 and 12 months after the previous test (proposed 40 CFR 63.7517(a)). We are requesting that EPA recognize the prevalence of electronic scheduling of performance tests as part of a facility's environmental compliance program. Most environmental management programs are set up for "annual" testing based on a 12-month year. Therefore, a 12 to13 month window will allow time to address any shortages of qualified personnel and operational maintenance issues, while not resulting in the performance test falling outside the facility's annual environmental compliance program schedule. It is recommended that EPA reconsider the annual testing schedule for performance tests. (Performance tests, page 32051)

Response: The final rule requires testing to occur between 11 and 13 months after the prior test.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 8

Comment: We request that EPA consider work practice alternatives to testing. For example, for burnoff ovens that are removing paint, if the paint does not contain any of the heavy metals, no testing for those pollutants should be required.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 10

Comment: We request that EPA maintain the 2000 rule language for reducing the frequency of stack testing. In the 2000 rule, if all test results were compliant, less frequent stack testing was allowed. The proposed rule requires that all results be within 75%.

Response: See preamble Section V. for the response on reduced testing provisions.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 62

Comment: An annual opacity performance test should not be required where COMS are installed (energy recovery units unless with wet scrubber) 75 FR 31976, 31992.

An annual opacity performance test should not be required where PM CEMS are installed (energy recovery units >250 MMBtu/hr). 75 FR 31976, 31992.

Response: See preamble Section V. for the response on opacity limits.

10.13 Averaging Times for Monitored Pollutants

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 35

Comment: EPA Should Incorporate Longer Averaging Times in the CISWI Rule

It is inappropriate for EPA to set limits that cannot be met consistently by a top performing unit over all operating conditions. One way to consider a unit‘s variability in emissions is to set a longer averaging time for compliance with an emission limit.

If not exempted in the final rule, batch incinerators and burn-off ovens should have an averaging period of the length of the batch to cover the range of operation of the unit, and periods of SSM. A burn-off oven may not operate for a 3-hour time period, so the averaging time should be the batch cycle time. Averaging times of longer than 3 hours are needed for energy recovery units, especially those that burn multiple fuels and have varying emissions characteristics, in order to preserve operational flexibility and ensure cost-efficient operation of the boiler. The facility must be able to operate the boiler in a manner that is responsive to process needs, which may not be at full load all the time. Longer averaging periods are necessary if the emission limits are going to apply at all times, including periods of startup, shutdown, and malfunction. ACC supports the use of at least daily block averages for both emissions and operating parameters, regardless of whether SSM periods are included, or as we believe, are handled under a work practice. A 24-hour block averaging period acknowledges process variability, lessens the effect of short process upsets on compliance, and captures the variable emissions and operating characteristics of a unit over an operating day. EPA has used 24-hour block averages for control device parametric monitoring in other MACT rules such as the HON (Subpart G) and the MON (Subpart FFFF) and 30-day rolling averages for continuous emission monitoring systems are the norm in boiler related NSPS standards.

There are factors beyond the operator‘s control that can cause emissions to vary over a period of days, not just hours. For example, the weather will impact moisture content of solid fuels, which will affect how the fuels combust over a period of days, not hours. For all types of units, the pollutant content of the fuel may vary over a period of days, as evidenced by the range of results obtained during the fuel sampling required by EPA for many ICR respondents. Where CEMS are the compliance method (e.g., PM and CO), we support a 30-day rolling averaging period to account for operational and emissions variability. At a minimum, averaging periods for energy recovery units should be consistent with those under Boiler MACT, as the same issues apply when burning solid waste or burning only fuel, especially for solid-fueled boilers.

Response: In the final rule, a 30-day rolling average is used where a CEMS is used to determine compliance. For parameter monitoring, the final rule uses a 3-hour block average. We based the operating parameter 3-hour block average on the estimated sampling time required to perform a three run performance test under this rule.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 13

Comment: 24-Hour block averages: CES believes that 24-hour block averages for reporting multi-metal emissions is too long considering the highly variable nature of the process. The need for CEMS and shorter averaging times was recently emphasized with short term (2-hour) ambient monitoring data. On April 13, 2009 a continuous ambient metals monitor in the vicinity of schools recorded a two hour period in which the average arsenic concentration recorded was 2,300 ng/m3. For perspective, OSHA suggests that no worker should be exposed to arsenic concentrations greater than 2,000 ng/m3 for longer than 15 minutes. Clearly, a nearby source emitted arsenic at much higher concentrations than those measured in the community. These emissions went unrecorded because there was no requirement for the possible source to continuously measure metals in its emissions. Because the winds were changing during this monitoring period, it is uncertain how long the emissions lasted, but if a multi-metals CEMS or fence line monitor had been in place, the problem might have been identified early enough such that the emissions could have been minimized. In addition, had the emissions been more significant, the nearby population could have been alerted had there been a multi-metals CEMS or fence line monitor in place. Clearly, requiring enhanced monitoring is a real and significant issue that the EPA should consider seriously in its comment review.

Response: See response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 12. The averaging period and similar monitor performance issues would be part of the monitoring plan submitted for this type of CEMS.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 14

Comment: CEMS definition and cycle time: Currently, cycle times for CEMS are required to be equal to or less than fifteen minutes to meet EPA's definition of CEMS. CES believes that this is no longer relevant and recommends EPA's proposed rules allow for cycle times up to its defined averaging times as long as there is continuous measurement/sampling of emissions. Shorter cycle times should not be required to meet either EPA's health or regulatory objectives.

Response: See response to comment EPA-HQ-OAR-2003-0119-1133.2, excerpt 13.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 66

Comment: EPA Should Incorporate Longer Averaging Times into the Rule It is inappropriate for EPA to set limits under the revised CISWI rule that cannot be met consistently by a top performing unit over all operating conditions. One way to consider a unit's variability in emissions is to set a longer averaging time for compliance with an emission limit.

For batch incinerators and burn-off ovens, the averaging period should be the length of the batch, as this will cover the range of operation of the unit, and EPA has stated that the emission limits will apply at all times, including periods of SSM. A burn-off oven may not operate for a 3-hour time period, so the averaging time should be the batch cycle time.

Averaging times of longer than 3 hours are needed for industrial boilers, especially those in the forest products industry that burn multiple fuels and have varying emissions characteristics, in order to preserve operational flexibility and ensure cost-efficient operation of the boiler. The facility must be able to operate the boiler in a manner that is responsive to process needs, not at full load all the time. Longer averaging periods are also desirable if the CISWI emission limits are going to apply at all times, including periods of startup, shutdown, and malfunction. We support daily block averages for COMS and CPMS. A 24-hour averaging period acknowledges process variability, lessens the effect of short process upsets on compliance, and captures the variable emissions and operating characteristics of a unit over an operating day. EPA has used 24-hour block averages for control device parametric monitoring in other MACT rules such as the HON (Subpart G) and the MON (Subpart FFFF) and 30-day averages for continuous emission monitoring systems are the norm in boiler related NSPS standards.

There are factors beyond the boiler operator's control that can cause emissions to vary over a period of days and not hours. For example, the weather will impact moisture content of solid fuels, which will affect how the fuels combust over a period of days, not hours. For a biomass boiler, the fuel supply and fuel characteristics could also vary over a period of days because mills have multiple biomass fuel suppliers providing both green and dry wood. For all types of boilers, the pollutant content of the fuel will vary over a period of days, as evidenced by the range of results obtained during the fuel sampling required by EPA for many Boiler MACT and CISWI ICR Phase 2 participants. Where CEMS are the compliance method (e.g., PM and CO), we support a 30-day averaging period to account for operational and emissions variability. At a minimum, averaging periods for energy recovery units should be consistent with those under Boiler MACT, as the same issues apply when burning solid waste as when burning only fuel, especially for solid-fueled boilers.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 35.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 78

Comment: EPA is proposing that kilns burning waste continuously monitor mercury. The proposed limit is 24ug/dscm at 7% oxygen for new and existing kilns. The units of the standard are not consistent with the PC NESHAP (40 CFR part 63 Subpart LLL) which are in units of lb

Hg/Mton clinker. Furthermore, EPA has proposed a 24-hr block average as compared to a 30 day rolling average in the PC NESHAP.

Having the two standards in different units with different averaging periods is cumbersome for the data handling system and reporting. It will also require in addition to the Hg CEMS input into the DAS, oxygen CEM system data (for correcting to 7%), flow monitor (for calculating lb/hr and thus lb/ton), and data from the clinker scale.

In the PC NESHAP, EPA promulgated a 30-day rolling average to account for the inherent variability of the stone, the fact that there were no continuous Hg emissions data, and the effects of the raw mill operation on Hg emissions. Obviously a 24-hour block average does not take these factors into account. EPA should be consistent in its units of the standard for Portland cement plants that also burn alternate waste fuels. A 30-day rolling average should be used as the averaging period not 24-hour blocks.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 35.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 3

Comment: On page 31960 of the Federal Register, EPA indicates the intent to establish similar monitoring requirements (on a pollutant-by-pollutant basis) in both the proposed CISWI NSPS and the Boiler MACT. However, with respect to units requiring a CO continuous emission monitor (CEM), this is untrue. Per the proposed requirements of the Boiler MACT, units with a CO CEM are subject to a 30-day averaging period emission limitation. For purposes of the CISWI NSPS, EPA has proposed a 24-hour block averaging period. This averaging period is far too short to address inherent variability, particularly for energy recovery units that will be regulated by the CISWI NSPS for combusting a solid waste material which most likely makes up just a small fraction of the heat input capacity to the unit.

EPA specifically indicates the arbitrary selection of the 24-hour averaging period on page 31961 of the Federal Register, stating the proposed CO emission limits are based on data from infrequent (normally annual) stack tests and compliance would be demonstrated by stack tests. The change to use of CO CEMS for measurement and enforcement of the same emission limits must be carefully considered in relation to an appropriate averaging period for data reduction. In past EPA rulemakings for incineration units, EPA has selected averaging times between four hours and 24 hours based on statistical analysis of long-term CEMS data for a particular subcategory. Because sufficient CO CEMS data are unavailable for CISWI to perform such an analysis and determine an emission level that would correspond to a shorter averaging period, EPA concluded that the use of a 24-hour block average was appropriate to address potential changes in CO emissions.

GPI — Macon Mill contends that the averaging period for CO, if a CEM is required, should be established as a minimum 30-day average, similar to the proposed Boiler MACT averaging period. GPI — Macon Mill does not believe that a shorter averaging period appropriately accounts for substantial variability in CO emissions that can be realized during load fluctuations,

particularly from energy recovery units. Load variability impact on CO emissions is well-known and a 24-hour averaging period simply is not sufficient given the level of the CO emission limitations being proposed within the CISWI NSPS, especially given the removal of the exemption for startup and shutdown emissions (addressed in greater detail later in this letter).

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 35.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 9

Comment: Consistent with the CO monitoring proposal, EPA again indicates the arbitrary selection of the proposed 24-hour averaging period on page 31962 of the Federal Register, stating the proposed PM emission limits are based on data from infrequent (normally annual) stack tests and compliance would be demonstrated by stack tests. The use of PM CEMS for measurement and enforcement of the same emission limits must be carefully considered in relation to an appropriate averaging period for data reduction. Because PM GEMS data are unavailable for CISWI, EPA concluded that the use of a 24-hour block average was appropriate to address potential changes in PM emissions that cannot be accounted for with short term stack test data.

Proposed emission limitations for PM are based on data from infrequent (typically annual) stack testing. Extrapolation of such limited short-term testing into a 24-hour continuously monitored requirement is not sufficiently supported. For energy recovery units, a 24-hour block average does not allow for variability in the emissions profile that could arise from load variability, fuel variability, or start-up and shutdown events (events where use of controls is not always feasible, depending on the boiler configuration).

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 35.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Petroleum Company LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2225.1
Comment Excerpt Number: 2

Comment: It is recommended that deviations resulting from EPA's proposed 30-day rolling averages be determined from the daily number of events causing a deviation instead of each value above a standard on the 30-day rolling average. While these rolling averages make it more likely that a given standard be feasible, just one event (with a large peak concentration) can cause a series of rolling daily deviations. This is a misleading metric. It is more appropriate to report one deviation for the event that resulted in possibly several days of rolling average emissions to be over the standard.

Response: Generally for EPA standards, each failure to meet a 30-day rolling average is a separate deviation.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 14

Comment: EPA is not consistent on the mercury emission compliance unit in NESHAP and CISWI: 30-day rolling average vs. 24 hr block average. A 30-day rolling average should be used to take into account the emission variability.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 35.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 60

Comment: Averaging Times. There is a need for longer averaging times for parameters and emissions given that 24 hours is not sufficient for CO, especially for boilers- a 30 day rolling average is recommended.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1959.1, excerpt 3.

10.14 Compliance Flexibility for Small Entities

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 3

Comment: Other considerations for small sources, such as reducing the testing frequency from the annual requirement in the proposed rule or the requirement for continuous emission monitors, should be a part of this rule, in order to relieve small sources of some of the compliance costs that may make continued operation of these units impractical under the current proposal.

Response: See preamble Section VI. for a discussion on the impacts of the rule on small entities.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 6

Comment: The expected emission levels for any individual burn-off oven for the several contaminants considered in the regulation are very small, and certainly within the HAPs area source range. Considering this, it would seem more appropriate that this source category be regulated in a simpler manner than setting emission limits and requiring the extensive initial emission testing and annual retesting for certain contaminants as proposed in the CISWI regulation. The EPA cost estimates for the testing are quite high: approximately $55,000 for the initial performance testing and $14,000 for the annual retesting for each regulated oven (March 29, 2010 Eastern Research Group, Inc. (ERG) memo "DRAFT Compliance Cost Analyses for Existing USW! Units," Table 2A). As the preamble and docket material indicate, these compliance expenses will likely cause most of the existing burn-off ovens to shut down rather than comply with the regulation.

Federal regulations promulgated by the EPA for other source categories have been adopted that regulate area sources using simpler, less expensive approaches that do not rely on emission limits and extensive emission testing. For instance, the Part 63, Subpart HHHHHH regulation applies to certain spray coating operations and relies on use of specified types of control equipment, operator training, and operational practices to reduce emissions of six specified heavy metals or "target HAPs." This regulation specifies neither emission limits nor emission testing requirements to achieve the intended reductions in emissions.

Michigan believes a regulation should be written for burn-off ovens in a similar manner to Subpart HHHHHH. This approach could specify certain alternative control measures to achieve the desired emission reductions (e.g., afterburner and ceramic filter with lime injection; afterburner with ceramic filter with activated carbon injection; wet suppression for ash removal from parts and ash handling; etc.). The regulation could also specify operational practices, maintenance practices, and associated recordkeeping representing proper operation specific to each alternative type of control measure or device.

Stack testing is neither feasible nor necessary to determine the impact on human health and the environment from these small sources. In the rules for boilers proposed at the same time as this CISWI rule, the EPA considers the feasibility of designing sampling ports for boiler stacks with small diameters (less than 12 inches) because larger stack diameters are required in many of the required test methods. Stack diameters less than 12 inches are also typical for burn-off ovens. This may be one reason for the limited number of stack test results used by the EPA to develop the emission limitations in the proposed rule. We consider stack testing to be

unnecessary due to the minimally expected impact on air quality from burn-off ovens that operate with small diameter stacks. Current practice in Michigan is to issue a general permit for natural gas-fired burn-off ovens up to 1 million British thermal units (MMBtu) heat input which use secondary combustion (afterburner) for emission control. The operating parameters, minimum temperature and retention time, for the afterburner, if established as work practice

standards, will provide adequate emission control for small burn-off ovens without the addition of a testing requirement. We encourage the EPA to establish work practice criteria similar to those in Michigan's General Permit for these small recycling operations. For comparison, in a parallel rulemaking for industrial boilers, the EPA has established a de minimus size of 10 MMBtu/hr heat input and as mentioned above requested comment on the feasibility of stack testing.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 12

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

The recommendations from the SBAR report to reduce monitoring and reporting frequencies.

Response: See preamble Section VI. for a discussion on the impacts of the rule on small entities.

10.15 Operating Parameter Monitoring

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 46

Comment: Operating Limits and Monitoring Requirements Need to Incorporate

Operating Flexibility

Proposed sections 60.2110, 2115, 2165, and 2265 of Subpart CCCC and sections 60.2675, 2680, 2730, and 2875 of Subpart DDDD impose limitations on operating limits and monitoring of those limits that do not recognize the need for operating flexibility over firing rate ranges and unit throughput. In particular, these sections require maintaining the operating limits at the average value or within a certain percent of the values established during performance testing. However, many incinerators and especially energy recovery units must operate over a firing rate and feed rate range during normal operation. For example, reagent flow rate using SNCR or SCR for NOx control necessarily must vary in rate based on total firing rate or excessive reagent will be injected at lower loads and increased ammonia slip will occur; activated carbon injection is typically injected on the basis of lb/million acf, and the acf of flue gas varies with firing rate so that retaining constant lb/hr over full range based on maximum load conditions will result in excessive injection at lower firing rates that might negatively impact other emissions controls and emission rates and result in unnecessarily increased costs with no additional emissions

control; scrubber flow rates, pressure drop, and sorbent injection rates need to vary with firing rate/throughput to maintain operating efficiency and to prevent excessive solids injection and deposition in equipment that can plug flue gas passages, thus creating unsafe operating

conditions and tremendous maintenance problems to clean out the equipment. These are just a few examples. Maintaining those operating parameters at levels achieved during high rate steady state operation will result in non-optimum system operation, wasted energy, operational problems such as equipment pluggage, and potential safety issues. It is imperative that latitude be provided to allow optimum operation of combustion and emissions control equipment over the full range of operation. EPA should not impose ill-fitting limitations that do not necessarily result in better emissions control, and may actually diminish equipment performance. All of the referenced sections above need to be revised to allow for variations in operating parameters and limits over normal operating ranges.

Response: See preamble for a summary of significant changes since proposal and for responses to major comments.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 43

Comment: In several instances, EPA offers the regulatory alternative to install a CEMS in lieu of performance testing (e.g., see the proposed 40 CFR 60.2165(g), (h), and (i) on page 31979). However, it appears that there is no relief from setting a wide variety testing-based operating limits on processes and controls when applying a CEMS. A regulatory construct that maintains operational restrictions is simply unnecessary when using a CEMS to demonstrate compliance as it does not achieve material additional emission reduction or further enhance compliance assurance. For example, if a CISWI subject kiln were to use SNCR for NOx control and utilize a CEMS for NOx, the requirement to monitor and reset limits reagent flow values is unnecessary.

Response: Under 60.2145(b), performance tests are not required if you determine compliance with a CEMS. Because parameter limits are only established during performance tests, this means that likewise operating parameter monitoring and associated limits are not required. The same approach applies under Subpart DDDD.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 67

Comment: CPMS QA Requirements Should be Site Specific

Quality Assurance (QA) procedures for Continuous Parameter Monitoring Systems (CPMS) are best defined and implemented by the owner/operator of each CPMS. Preventative maintenance and sensor calibration for both process and control device monitoring is oftentimes accomplished during an annual outage, with some sensors only needing calibration once every 5 years. We believe that a more appropriate requirement is for sources to develop site-specific CPMS QA plans that are self implemented and maintained on site for inspections and audits. Utilizing facility specific information to develop a QA Plan will ensure that unnecessary and arbitrary calibration frequencies do not result in either a potential safety incident or environmental releases during the accuracy audits.

Today's state of the art sensors and electronic transmitters, power supplies, etc do not require the repeated checks and inspections proposed. In addition, newer digital communications technologies, such as Foundation Fieldbus and HART technologies, can incorporate advanced sensor diagnostics, reducing the need for labor intensive field inspections. Facilities have learned through experience what sensors and CPMS system components perform best in their environment. Although we do not believe that this information should drive EPA to require state of the art equipment, we do believe that the range of equipment in use by industry necessitates a site-specific approach to a QA/QC program.

The establishment of fixed calibration intervals, as EPA proposes, is contrary to standard metrology practice. NCSL International, an ANSI-accredited consensus standards developer for metrology standards, has a long-established Recommended Practice for determination of appropriate calibration intervals for measurement systems [Footnote: http://www.ncsli.org/NCSLI/Publications/NCSL/Publications/NCSLI_Publications.aspx?hkey=34268861-

056c-45ae-a825-9830c0670656]

This Practice recognizes that calibration intervals need not (in fact, must not) be set at arbitrary, fixed intervals to achieve acceptable data quality. The National Institute of Standards and Technology, the U.S. government agency concerned with the quality and reliability of measurement data, does not require fixed calibration intervals. Other U.S. government agencies such as NASA also do not require fixed calibration intervals. Acceptable calibration intervals are based on past experience and failure rates. Using this approach, calibration intervals can be determined that provide the required data quality at the least cost. This reliance on fixed interval QA/QC checks seems to be a remnant of the Agency's initial promulgation of Appendix F about a quarter century ago. At that time, Appendix F applied to CEMS – a fairly new technology at that time. Many of these early instruments suffered from drift, non-linearity, and other performance issues that required frequent checks. Computerized control was virtually unknown. Today's instruments are generations away from those early CEMS. They are stable, rugged, and reliable. EPA should develop a QA/QC rule that acknowledges the complex instruments in use today.

The QA/QC process is not intended to detect failures. In most cases, failure of a sensor or other measurement system component is immediately recognizable in the data itself. One knows that a thermocouple has failed if the thermal oxidizer is operating and the temperature is reported as -20 °F. One does not need a QA/QC check to detect the failure. The QA/QC process is designed to correct drift, biases, and other more subtle data quality issues. Most of the reliability issues

that the QA/QC process is designed to correct are known and predictable and therefore can be taken into account when establishing calibration intervals.

A flexible calibration interval does not imply an arbitrary calibration interval. Proper calibration intervals are established by experience. This experience may come from other systems installed at the source, from known failure rates of system components, from vendors, or from installations at similar facilities. Also, initial calibration intervals are not fixed, they are adjusted based (again) on experience. If a system on a yearly check cycle is failing, that cycle should be pushed back to once every six months (for example). If a system is consistently passing a six-month QA/QC check, that check may be pushed to annual.

This checking cycle can be fluid depending on improvements to maintenance and instrument technology, and facilities need to have flexibility to adjust to these changes without following a prescriptive EPA approach that has no flexibility. The need for such flexibility was the basis for many of the comments that AF&PA made in response to EPA's October 9, 2008 proposal for "Performance Specification and Quality Assurance Requirements for Continuous Parameter Monitoring Systems and Amendments to Standards of Performance for New Stationary Sources; National Emission Standards for Hazardous Air Pollutants; and National Emission Standards for Hazardous Air Pollutants for Source Categories" or the "CPMS Rule." Those comments outline issues that are similar to this proposal which are equally valid for a prescriptive onesize-fits-all approach.

Semi-annual flow sensor calibration is not always necessary

Some flow sensors only need calibration once every 5 years and some flow meters are calibrated by the manufacturer and cannot be calibrated in the field. For Emerson Micro Motion flow tubes, there is nothing to wear or break, so frequent calibration is not needed. Calibration is only accomplished by removing the flow tube and sending it offsite, so this can only be done during a scheduled shutdown of a unit, which does not typically happen on a semi-annual basis. Recalibrations should be done at the unit's normal maintenance shutdown frequency since electronic flow sensors do not drift and it may not be possible to take devices out of service for calibration without adversely affecting operation.

Historical calibration data has proven that the manufacturer's recommended frequencies for calibration are more than adequate to ensure accuracy. For example, many facilities have flow meters manufactured by Rosemount, a recognized global leader in manufacturing process instrumentation. Per Rosemount's documentation the annual stability of those flow meters are +/- 0.2% per year. Rosemount recommends that these instruments be calibrated at least once every 5 years. Facilities should be allowed to determine calibration frequency on a site-specific basis using their maintenance history and manufacturer's recommendations as factors to consider.

Checking pressure tap pluggage daily, pressure gauge calibration quarterly and transducer calibration monthly are onerous requirements.

These are extremely onerous requirements and do not reflect common practice or experience in industrial applications. Electronic devices experience very little drift, and calibrations at least annually would be more than adequate unless specific applications are shown to experience problems. Some pressure sensors only need calibration once every 5 years. OSHA considers annual testing of instrumentation to be adequate for most critical safety interlock applications.

There is no reason to calibrate (audit and inspect) CPMS systems 4-12 times as often. Even the CEM performance specifications do not require inspections and calibrations as often as the proposed rule. Facilities should be allowed to determine checking and calibration frequencies on a site-specific basis using their maintenance history and manufacturer's recommendations as factors to consider.

Proposed requirement to conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor is not justified.

We believe that this requirement is not justified. Calibration or replacement should only be required if the instrument's reading is suspect.

It is not always necessary to check a pH meter's calibration on at least two points every 8 hours of process operation.

The length of time to check the calibration of a pH meter is entirely site specific. The proposed frequency is excessive, as most facilities calibrate pH meters weekly, monthly, or quarterly, depending on the application and the maintenance history, especially if they are not exposed to a corrosive environment. One set frequency for all instruments regardless of the sophistication of the instrument and regardless of the

service environment for the instrument is not appropriate. In other words, one size does not fit all. Autocalibration systems are available for around $30,000 per application, which adds to the already significant control, testing, and monitoring costs for this rule if this requirement is retained.

EPA should allow facilities to establish site-specific QA/QC plans for CPMS that take their specific operating conditions into account and establish the appropriate inspection and calibration intervals for each type of monitoring device. Facilities should be allowed to determine calibration frequency on a site-specific basis using their maintenance history and manufacturer's recommendations as factors to consider.

Response: In the final rule, the source must prepare a site-specific monitoring plan which identifies the QA/QC procedures the source will follow, and the rule calls generally for a daily performance evaluation of some form for most monitoring devices as a basic QC check. For example, the method for checking for pressure obstructions is not prescribed in the rule. This is a basic quality control check that can be fulfilled in many of the ways that commenters have described (such as by looking for lack of changes in the data). The specific method that the source will use to fulfill this QC check can be developed in conjunction with the site's monitoring plan. Calibrating with a manometer is not necessary as part of this basic check. In addition, the pH meter check language has been modified to call for a daily performance evaluation, and not a two point calibration. EPA believes that, as finalized, the monitoring, recordkeeping, and reporting requirements of the rule are the minimum necessary to determine continuous compliance and are not overly burdensome. The requirements are generally consistent with the NESHAP general provisions and are reasonably consistent with other NESHAPs. The monitoring systems require periodic inspection, maintenance, and calibration to ensure continued accuracy. The EPA believes the proposed requirements for ensuring data quality and for site-specific monitoring plans (where applicable) are reasonable and contends that the information required in the site-specific monitoring plans is necessary for regulators to

ensure that the monitoring equipment are properly installed and maintained. The required information provides a written record of the calibration, maintenance, data quality, and recordkeeping and reporting procedures to be followed by the facility. EPA also notes that owners / operators can always seek approval for site-specific monitoring. This could include, as some commenters noted, requesting alternative calibration frequencies using consensus-based approaches that can require fairly sophisticated analyses of past experience and failure rates. The Agency also believes that owners / operators can develop procedures to calibrate parameter measurements without causing safety or environmental release incidents.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 68

Comment: AF&PA is concerned about continual ratcheting down of operating parameter ranges

The existing sections 60.2145(b) and 60.2710(b) include a sentence "operating limits do not apply during performance tests." EPA's proposed changes eliminated this sentence. Therefore, we are concerned that the ongoing testing requirements will result in a continual ratcheting down of operating limits if facilities have to reset the operating limits every time a stack test is done. Facilities typically operate with a "safety margin" with respect to operating limits. Therefore, if the operating limits are reset with each performance test, they will continue to change, requiring a continual increase in energy and operating costs. Other combustion-related MACT rules, for example, Subpart EEE for Hazardous Waste Combustors, allow for this waiver (see 63.1207(h)) and we believe it should be maintained under the CISWI rule.

Response: EPA has revised the rule to waive the operating limits during source testing so that sources may adjust their operating limits to provide increased operating flexibility provided the emission limits are met. The intention behind reassessing operating limits with new performance testing is to ensure that the limits remain appropriate for the source. By allowing the source to conduct performance tests with less stringent operating levels than may have been initially determined, the source will be able to set the limits at levels appropriate for their operations while ensuring emission limits are met.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 73

Comment: AF&PA also believes that similar consideration for data availability should be given for CPMS as well, as these devices, like CEMS, are also susceptible to unexpected failures and facilities should not be expected to meet 100 percent data availability for parameter monitoring.

AF&PA believes that the current subparagraphs (a) and (b) in both §60.2170 and §60.2735 might need to include clarifications, since they seem to contradict this approach. AF&PA believes language needs to be added, "...except as allowed under subparagraphs (c), (d), (e), and (f)."

AF&PA requests that this approach for CEMS data also be used for data for parameter monitoring. AF&PA requests that a new subparagraph, "(f)" be added to §60.2170 and §60.2735 for parameter monitoring.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 51.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 6

Comment: Operating Limits Established during Performance Testing need to respond to normal operating variations.

The CISWI rule requires maintaining operating limits within a given percent (typically 90%) of the level established during compliance testing, which is generally conducted at or near maximum operating rate. This approach fails to recognize the inherent variations in firing rate due to load response in relation to site demands or process operating rates. As firing rates vary, flue gas flow rates vary as well, and by necessity, operating parameters need to respond. DuPont has operated a CISWI unit under the current rule that utilizes a packed-bed scrubber rather than a venturi scrubber which was the premise, but not required, for operating limit ranges provided in the existing rule. While differential pressure is a critical performance metric for venturi scrubber technology, it is a less critical indicator for the packed-bed scrubber design. In order to comply with the inappropriate operating range limitation, DuPont had to install a recirculation loop for the scrubbed gases to allow compliance with the differential pressure limits. This additional constraint on operating parameters provides no improvement in the performance of the scrubber; indeed, it places operation of the unit in jeopardy since it forces operation near inherent stability limits.

The need to allow for a better means of setting operating limits is especially true for energy recovery units and incinerators. For example, activated carbon injection is typically injected at a certain lb/million acf rate, and maintaining a lb/hr injection rate based on full load operation results in excessive injection at lower operating rates, thereby increasing costs for no environmental gain, and in some cases creating operating problems or increases in other emissions. Scrubber slurry injection for a SDA must decrease with firing rate or excessive injection will drop flue gas temperature to below saturation and inject excessive solids that will plug equipment causing safety problems due to flow restriction as well as major maintenance clean up costs. Similar issues occur with other scrubber types. For SNCR, requiring minimum reagent flow rate determined during performance testing as an ongoing operating limit does not recognize the need to modulate feed rate for optimum NOx control and minimum ammonia slip. This needs to allow for modulation over firing rate range or charge rate range, and to allow flow modulation based on a NOx CEMS feedback signal.

Therefore, it is imperative that EPA allow for variations in operating limits with combustion unit operating rates rather than imposing arbitrary requirements to maintain limits at all times that are not based on basic technology operating requirements.

While the proposed petition process for alternative operating parameter limits appears intended to provide a degree of latitude, EPA should further prescribe the petition process to allow for flexibility and collaboration between the regulated entity and the permitting authority. For example, relative to the packed-bed scrubber noted above, DuPont submitted a petition to EPA to request a more appropriate operating limit, but it was denied without discussion or questions. Such a petition process would be more effective if it allowed for questions and responses rather than only a simple Yes/No response from EPA.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 46.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 12

Comment: EPA is inappropriately prescribing requirements for continuous monitoring systems

Dow requests that EPA remove the prescriptive requirements related to continuous monitoring systems.

Since EPA is still working on a performance specification for continuous monitoring systems, there is no reason to promulgate competing, prescriptive, and confusing requirements in individual air regulations.

On October 9, 2008, EPA proposed "Performance Specification and Quality Assurance Requirements for Continuous Parameter Monitoring Systems and Amendments to Standards of Performance for New Stationary Sources; National Emission Standards for Hazardous Air Pollutants; and National Emission Standards for Hazardous Air Pollutants for Source Categories" or the "CPMS Rule." Dow and a number of others commented on the prescriptive nature of these requirements and the erroneous cost estimates that were made for implementation of these requirements. Please refer to Dow's comments on this proposal entered into the docket, EPA-HQ-OAR-2006-0640. Ultimately, EPA removed the CPMS Rule for further study and modification. Currently, this rulemaking procedure is still included in the regulatory agenda. It would seem useless to propose continuous monitoring system requirements in this CISWI proposal (§60.2145 of Subpart CCCC and §60.2710 of Subpart DDDD) that are much the same as those that were the source of negative comments for the 2008 CPMS proposal, especially while continuing to work on a new CPMS proposal. Of particular concern are:

* the prescriptive general requirements for instruments [subparagraph (j) of both (§60.2145 and §60.2710], and

* the prescriptive specific requirements for

o a flow measurement device [subparagraph (k) of both (§60.2145 and §60.2710],

o a pressure measurement device [subparagraph (l) of both (§60.2145 and §60.2710], and

o a pH measurement device [subparagraph (m) of both (§60.2145 and §60.2710].

As Dow commented in the 2008 CPMS proposal, Dow still believes that these prescriptive requirements are well in excess of what might be needed to ensure that CPMS devices are maintained and calibrated and do not recognize the advancements made in recent years in instrument technology. As Dow commented in the 2008 CPMS proposal, any QA should be performance-based (based on unit-specific operations history or manufacturer recommendations) and not prescriptive.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 67.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 17

Comment: Dow requests that language remain that operating limits do not apply during a performance test to remove concern over a potential deviation during the test itself.

The existing Sections 60.2145(b) and 60.2710(b) include the sentence, "Operating limits do not apply during performance tests." The proposed change to sections 60.2145(b) and 60.2710(b) eliminated this sentence.

It is important to retain this sentence as a practical matter when repeating tests. Similar provision is allowed in other places such as Part 63 Subpart EEE because you cannot repeat a test at the exact same condition as previously demonstrated without accidentally exceeding an earlier operating limit. As long as an emission standard is not exceeded, it should not matter. Without such an allowance, each successive test will gradually result in more stringent operating limits in order to avoid deviations. Otherwise, a unit can easily experience a deviation each time a performance test is conducted. Dow requests that this sentence be retained. Facilities need some assurance that they can complete a performance test and not be threatened with the potential for deviations during the test itself.

Response: EPA has revised the rule to waive the operating limits during source testing so that sources may adjust their operating limits to provide increased operating flexibility provided the emission limits are met. The intention behind reassessing operating limits with new performance testing is to ensure that the limits remain appropriate for the source. By allowing the source to conduct performance tests with less stringent operating levels than may have been initially determined, the source will be able to set the limits at levels appropriate for their operations while ensuring emission limits are met

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Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 24

Comment: Setting operating limits solely on data gathered during performance tests is impractical. EPA should allow use of supplemental information to set operating limits.

§60.2675 requires that operating parameters (including minimum pressure drop and liquid flow-rate for wet scrubbers, minimum voltage and secondary power or total power input for electrostatic precipitators, minimum wet scrubber pH, minimum sorbent for dry scrubbers, minimum carbon injection rate) limits be set exclusively (using a preset fraction of the level demonstrated during the test) on operating levels for the parameters measured during the most recent performance test.

It is inappropriate and in many cases not technically feasible to use operating conditions during a performance test, which are typically conducted at or near the unit's maximum firing rate, to establish a minimum requirement for all possible load ranges.

With many pollution control technologies, this approach to establishing operating limits would result in needless over-consumption of sorbents at great cost to the facility with little or no commensurate reductions in emissions. As an example, the sorbent injection rate of activated carbon for the control of mercury varies with the volume of flue gas generated during combustion. To establish a minimum sorbent injection rate at or near the unit's maximum continuous rating (MCR) would result in nearly double the sorbent injection rate `during turndown to 50% load. Because institutional, commercial and industrial boilers vary loads widely based on site conditions, business conditions, season and time of day, this would result in pointless expense to the facility with no benefit to the environment or to human health.

Other pollution control technologies cannot practically maintain operating conditions established at or near full load during turndown conditions. For example, a Spray Dryer Absorber (SDA) slurry injection rate is limited by the ability of the flue gas to evaporate the liquid portion of the slurry. At or near full load, with high flue gas flowrates and high flue gas temperatures, the flowrate of slurry will be relatively high. If this were established as a site-specific minimum sorbent injection rate, the unit would inject more slurry than the flue gas could accommodate at low loads. Eastman has solid-fuel fired boilers equipped with SDA's and we have experienced catastrophic failures due to operation where more slurry was injected than the flue gas could evaporate. This operating mode caused a total shutdown of the unit that lasted several days and imposed considerable economic hardship (see submittal for Figures submitted by commenter).

Other MACT standards recognize that it is not always possible to establish these operating

ranges solely on performance test data. The HON (40 CFR 63 Subpart G) for example has the following relevant provision:

40 CFR 63.152(b)(2)(ii)(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

This type of provision allows each source to use the performance test data to then extrapolate operating limits based on equipment specific considerations. This is done in an operating plan that is submitted to the air permitting authority for review. A similar provision is needed in the final rule to accommodate situations such as those we have described above.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 46.

Commenter Name: Stephen R. Gossett

Commenter Affiliation: Eastman Chemical Company

Document Control Number: EPA-HQ-OAR-2003-0119-2115

Comment Excerpt Number: 25

Comment: Charge rate is not a necessary or practical operating limit for an energy recovery unit.

§60.2675(a)(1) would require any unit using a wet scrubber to comply with the emission limitations to establish maximum charge rate as an operating limit. The limit is set at 110 percent of the charge rate during the performance test. Up until now, this provision only applies to incinerators. Now that EPA is including energy recovery units in CISWI, it needs to re-think this provision. We see no need for maximum charge rate of fossil fuel for a steam generating unit such as a boiler. This is not part of the compliance requirements for a solid-fuel boiler burning hazardous waste and subject to 40 CFR 63 Subpart EEE (Hazardous Waste Combustor MACT). EPA should clarify that only the maximum charge rate of solid waste in needed as an operating limit.

Response: Disagree. As commenter points out earlier, operating conditions affect parameter range. Process operation outside conditions established during emissions testing can and will cause changes in emissions control device operation and in emissions. Source owners and operators, who best understand the operating characteristics of their processes, need to conduct emissions testing so that parameter ranges established reflect actual operating conditions.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 27

Comment: A source should not have to petition to establish operating parameters for fabric filters, electrostatic precipitators (ESPs), activated carbon injection, selective noncatalytic reduction (SNCR), duct sorbent injection, or spray dryer absorbers.

§60.2680 requires a source to petition the Administrator for specific operating limits if you use an air pollution control device other than a wet scrubber. However, in proposed §60.2675(d), (e), and (f), EPA's proposes operating limits for fabric filters, ESPs, activated carbon injection, and SNCR. Therefore, no petition should be required in these cases.

Also, since spray dryer absorbers or duct sorbent injection are likely control technologies for coal-fired boilers, EPA should determine appropriate operating parameters and include them in the final rule.

Response: EPA disagrees because the rule recognizes common types of emissions control devices and names appropriate operating parameters for each. The rule allows source owners or operators flexibility to use other emissions control devices, subject to approval by the

Administrator. The commenter is incorrect concerning types of control devices for which operating parameters are specified In the rule; for example, the rule addresses SNCR and ESPs, like wet scrubbers, so these controls do not need the Administrator's approval to select appropriate parameters.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 27

Comment: In several instances, EPA offers the regulatory alternative to install a CEMS in lieu of performance testing (e.g.,, see the proposed 40 CFR 60.2165(g), (h), and (i) on

page 31979). However, it appears that there is no relief from setting a wide variety testing-based operating limits on processes and controls when applying a CEMS. A regulatory construct that maintains operational restrictions is simply unnecessary when using a CEMS to demonstrate compliance, as it does not achieve material additional emission reduction or further enhance compliance assurance. For example, if a CISWI

subject kiln were to use SNCR for NOx control and utilize a CEMS for NOx, the requirement to monitor reagent flow values is unnecessary.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 43.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 45

Comment: Comments On Monitoring Requirements

CPMS QA Requirements Should be Site Specific and Flexible

QA procedures for CPMS are best defined and implemented by the owner/operator of each CPMS. Preventative maintenance and sensor calibration for both process and control device monitoring is often accomplished during an annual outage, with some sensors only needing calibration once every 5 years. We believe that a more appropriate requirement is for sources to develop site-specific CPMS QA plans that are self-implemented and maintained on site for inspections and audits. Utilizing facility specific information to develop a QA Plan will ensure that calibration frequencies do not result in either a potential safety incident or environmental releases during the accuracy audits.

Today’s state of the art sensors and electronic transmitters, power supplies, etc., do not require the repeated checks and inspections proposed. In addition, newer digital communications

technologies can incorporate advanced sensor diagnostics, reducing the need for labor intensive field inspections. Facilities have learned through experience what sensors and CPMS system components perform best in their environment. We, therefore, believe that the range of equipment in use by industry necessitates a site-specific approach to a QA/QC program.

The establishment of fixed calibration intervals, as EPA proposes, is contrary to standard metrology practice. NCSL International, an ANSI-accredited consensus standards developer for metrology standards, has a long-established Recommended Practice for determination of appropriate calibration intervals for measurement systems. [Footnote: http://www.ncsli.org/NCSLI/Publications/NCSL/Publications/NCSLI_Publications.aspx?hkey=34268861-056c45ae-a825-9830c0670656.] This Practice recognizes that calibration intervals need not (in fact, must not) be set at arbitrary, fixed intervals to achieve acceptable data quality. The National Institute of Standards and Technology, the U.S. government agency tasked with the quality and reliability of measurement data, does not require fixed calibration intervals. Other U.S. government agencies such as NASA also do not require fixed calibration intervals. Acceptable calibration intervals are based on past experience and failure rates. Using this approach, calibration intervals can be determined that provide the required data quality at the least cost. This reliance on fixed interval QA/QC checks seems to be a remnant of the Agency's initial promulgation of Appendix F about a quarter century ago. At that time, Appendix F applied to CEMS – a fairly new technology at that time. Many of these early instruments suffered from drift, non-linearity, and other performance issues that required frequent checks. Computerized control was virtually unknown. Today's instruments are generations away from those early CEMS. They are stable, rugged, and reliable. EPA should develop a QA/QC rule that acknowledges the complex instruments in use today.

The QA/QC process is not intended to detect failures. In most cases, failure of a sensor or other measurement system component is immediately recognizable in the data itself. One knows that a thermocouple has failed if the thermal oxidizer is operating and the temperature is reported as -20 °F. One does not need a QA/QC check to detect the failure. The QA/QC process is designed to correct drift, biases, and other more subtle data quality issues. Most of the reliability issues that the QA/QC process is designed to correct are known and predictable and therefore can be taken into account when establishing calibration intervals.

A flexible calibration interval does not imply an arbitrary calibration interval. Proper calibration intervals are established by experience. This experience may come from other systems installed at the source, from known failure rates of system components, from vendors, or from installations at similar facilities. Also, initial calibration intervals are not fixed, they are adjusted based on experience. For example, if a system on a yearly check cycle is failing, that cycle should be shortened to once every six months. If a system is consistently passing a six-month QA/QC check, that check may be extended to annual.

This checking cycle should be fluid depending on improvements to maintenance and instrument technology, and facilities need to have flexibility to adjust to these changes without following a prescriptive EPA approach. The need for such flexibility was the basis for many of the comments that ACC made in response to EPA's October 9, 2008 proposal for "Performance Specification and Quality Assurance Requirements for Continuous Parameter Monitoring Systems and Amendments to Standards of Performance for New Stationary Sources; National Emission Standards for Hazardous Air Pollutants; and National Emission Standards for Hazardous Air Pollutants for Source Categories" or the "CPMS Rule." [Footnote: 73 FR 59956.] Those

comments address issues that are similar to this proposal which are equally valid for a prescriptive one-sizefits-all approach.

Semi-annual flow sensor calibration is not always necessary

Some flow sensors only need calibration once every 5 years and some flow meters are calibrated by the manufacturer and cannot be calibrated in the field. For some, calibration is only

accomplished by removing the flow tube and sending it offsite, which can only be done during a scheduled shutdown of a unit. Shutdowns do not typically happen on a semi-annual basis. Recalibrations should be done at the unit‘s normal maintenance shutdown frequency since electronic flow sensors do not drift and it may not be possible to take devices out of service for calibration without adversely affecting operation. Lastly, historical calibration data has proven that the manufacturer’s recommended frequencies for calibration are more than adequate to ensure accuracy. Facilities should be allowed to determine calibration frequency on a site-specific basis based on factors including their maintenance history and manufacturer‘s recommendations.

Checking pressure tap pluggage daily, pressure gauge calibration quarterly and transducer calibration monthly are onerous requirements.

These are extremely onerous requirements and do not reflect common practice or experience in industrial applications. Electronic devices experience very little drift, and calibrations at least annually would be more than adequate unless specific applications are shown to experience problems. Some pressure sensors only need calibration once every 5 years. It is common industry practice to test instrumentation for most critical safety interlock applications on an annual basis. There is no reason to calibrate (audit and inspect) CPMS systems 4-12 times as often. Even the CEMS performance specifications do not require inspections and calibrations as often as the proposed rule. Facilities should be allowed to determine checking and calibration

frequencies on a site-specific basis using their maintenance history and manufacturer‘s recommendations as factors to consider.

Proposed requirement to conduct calibration checks any time the sensor exceeds the manufacturer’s specified maximum operating pressure range, or install a new pressure sensor is not justified.

We believe that this requirement is not justified. Calibration or replacement should only be required if the instrument‘s reading is suspect.

It is not always necessary to check a pH meter’s calibration on at least two points every 8 hours of process operation.

The appropriate length of time to check the calibration of a pH meter is entirely site specific. The proposed frequency is excessive, as most facilities calibrate pH meters weekly, monthly, or quarterly, depending on the application and the maintenance history, especially if they are not exposed to a corrosive environment. One set frequency for all instruments regardless of the sophistication of the instrument and regardless of the service environment for the instrument is not appropriate. In other words, one size does not fit all. Autocalibration systems are available for around $30,000 per application, a cost not considered by EPA and which would add to the already significant control, testing, and monitoring costs for this rule if this requirement is

retained. Facilities should be allowed to determine calibration frequency on a site-specific basis using their maintenance history and manufacturer‘s recommendations as factors to consider.

EPA should allow facilities to establish site-specific QA/QC plans for CPMS that take their specific operating conditions into account and establish the appropriate inspection and calibration intervals for each type of monitoring device.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 67.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 46

Comment: CRWI suggests EPA remove the prescriptive requirements related, to continuous monitoring systems.

On October 9, 2008, EPA proposed "Performance Specification and Quality Assurance Requirements for Continuous Parameter Monitoring Systems and Amendments to Standards of Performance for New Stationary Sources; National Emission Standards for Hazardous Air Pollutants; and National Emission Standards for Hazardous Air Pollutants for Source Categories" or the "CPMS Rule." CRWI and a number of others commented on the prescriptive nature of these requirements and the erroneous cost estimates that were made for implementation of these requirements. Please refer to CRWI’s comments on this proposal entered into the docket, EPA-HQ-OAR-2006-0640. Ultimately, EPA withdrew this proposed rule for further study and modification. It would seem redundant to propose continuous monitoring system requirements in the CISWI proposal (§60.2145 of Subpart CCCC and §60.2710 of Subpart DDDD) while continuing to work on a new CPMS proposal. Of particular concern are the prescriptive general requirements for instruments [subparagraph, (j) of both (§60.2145 and §60.2710] and the prescriptive specific requirements for a flow measurement device [subparagraph (k) of both (§60.2145 and §60.2710], a pressure measurement device [subparagraph (I) of both (§60.2145 and §60.2710], and a pH measurement device [subparagraph (m) of both (§60.2145 and §60.2710]. As CRWI commented in the 2008 CPMS proposal, we still believe that these prescriptive requirements are well in excess of what might be needed to ensure that CPMS devices are maintained and calibrated and do not recognize the advancements made in recent years in instrument technology. As CRWI commented in the 2008 CPMS proposal, any QA should be performance-based and not prescriptive.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1951.1, excerpt 67.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 47

Comment: ACC is Concerned about Continual Reduction of Operating Parameter Ranges

Sections 60.2145(b) and 60.2710(b) of the existing rule state that “operating limits do not apply during performance tests.” EPA‘s proposed changes would eliminate this sentence. We are concerned that the ongoing testing requirements will result in a continual reduction of operating limits if facilities have to reset the operating limits every time a stack test is done. Facilities typically operate with a “safety margin” with respect to operating limits. Therefore, if the operating limits are reset with each performance test, they will continue to change, requiring a continual increase in energy and operating costs. Other combustion-related MACT rules, for example, Subpart EEE for Hazardous Waste Combustors, allow for this waiver (see 63.1207(h)) and we believe it should be maintained under the CISWI rule.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1766.1, excerpt 17.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 48

Comment: EPA should retain the sentence "Operating limits do not apply during performance tests" in Sections 60.2145(b) and 60.2710(b).

It is important to retain this sentence as a practical matter when repeating tests. Similar provision is allowed in other places such as 63 Subpart EEE because you cannot repeat a test at the exact same condition as previously demonstrated without accidentally exceeding an earlier operating limit. As long as an emission standard is not exceeded, it should not matter that the operating limits from the previous test are exceeded. Without such an allowance, each successive test will gradually result in more stringent operating limits in order to avoid deviations. Otherwise, a unit can easily experience a deviation each time a performance test is conducted. CRWI requests that this sentence be retained. Facilities need some assurance that they can complete a performance test and not be threatened with the potential for deviations during the test itself.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1766.1, excerpt 17.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 52

Comment: ACC also believes that similar consideration for data availability should be given for CPMS as well, as these devices, like CEMS, are also susceptible to unexpected failures and facilities should not be expected to meet 100 percent data availability for parameter monitoring. The HON (40 CFR 63 Subpart G), for example, only defines a deviation (excursion) as an operating day where less than 75 percent of the parametric data is captured.

ACC believes that the current subparagraphs (a) and (b) in proposed §60.2170 and §60.2735 need to include clarifications, since they seem to contradict this approach. ACC believes language needs to be added, "...except as allowed under subparagraphs (c), (d), (e), and (f)."

ACC requests that this approach for CEMS data also be used for data for parameter monitoring. ACC requests that a new subparagraph, "(f)" be added to proposed §60.2170 and §60.2735 for parameter monitoring.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092, excerpt 51.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 54

Comment: Setting Operating Limits based solely on Data Gathered during Performance

Tests is Impractical. EPA should Allow Use of Supplemental Information to Set Operating Limits.

Proposed section 60.2675 requires that operating parameters (including minimum pressure drop and liquid flow-rate for wet scrubbers, minimum voltage and secondary power or total power input for electrostatic precipitators, minimum wet scrubber pH, minimum sorbent for dry scrubbers, minimum carbon injection rate) limits be set based exclusively (using a preset fraction of the level demonstrated during the test) on operating levels for the parameters measured during the most recent performance test.

It is inappropriate and in many cases not technically feasible to use operating conditions during a performance test, which is typically conducted at or near the unit's maximum firing rate to establish a minimum requirement for all possible load ranges. Other MACT standards recognize that it is not always possible to establish these operating ranges solely on performance test data. For example, the HON requires:

40 CFR 63.152(b)(2)(ii)(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

This type of provision allows each source to use the performance test data to then extrapolate operating limits based on equipment specific considerations. This is done in an operating plan

that is submitted to the air permitting authority for review. A similar provision is needed in the final CISWI rule to accommodate situations such as those we have described above.

Charge Rate is not a Necessary or Practical Operating Limit for an Energy Recovery Unit.

Proposed section 60.2675(a)(1) requires any unit using a wet scrubber to comply with the emission limitations to establish maximum charge rate as an operating limit. The limit is set at 110%of the charge rate during the performance test. Until now, this provision only applied to incinerators. Now that EPA is including energy recovery units in CISWI, it needs to re-think this

provision. We see no need for maximum charge rate of fossil fuel for a steam generating unit such as a boiler burning solid waste. This is not part of the compliance requirements for a solid-fuel boiler burning hazardous waste under the HWC MACT. EPA should clarify that only the maximum charge rate of solid waste is needed as an operating limit.

A Source should not Have to Petition to Establish Operating Parameters for Air Pollution Devices.

Proposed section 60.2680 requires a source to petition the Administrator for specific operating limits for using an air pollution control device other than a wet scrubber. However, in proposed sections 60.2675(d), (e), and (f), EPA proposes operating limits for fabric filters, electrostatic precipitators (ESPs), activated carbon injection, and selective noncatalytic reduction (SNCR). Therefore, no petition should be required if using one of these devices. Also, because spray dryer absorbers or duct sorbent injection are likely control technologies for coal-fired boilers, EPA should determine appropriate operating parameters and include them in the final rule.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 46. Also see the response to comments EPA-HQ-OAR-2003-0119-2115, excerpts 25 and 27.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 59

Comment: For ACI use, imposing a minimum sorbent flow rate based on the initial performance test does not allow for modulation of injection rate with operating rate or charge rate. Modulation is needed for optimum performance and to allow the use of Hg CEMS (where installed) with feedback control. 75 FR 31974, 31990.

For SNCR, requiring minimum reagent flow rate during performance testing, as an ongoing operating limit, does not recognize the need to modulate feed rate for optimum NOx control and minimum slip. Performance testing requirements need to allow for modulation over firing rate range or charge rate range, and to allow flow modulation based on NOx CEMS feedback signal. 75 FR 31974-75, 31990. 11

Petitioning the Administrator for specific operating limits for cases not using wet scrubber, ACI, SNCR, or ESP is overly burdensome when typical conventional equipment is used. Paragraph (a) should note that in cases where (b) applies, that petitioning for operating limits relative to PM emissions controls is not required since COMS will be used. Spray dry scrubbing or other typical common emissions controls should have minimal required operating parameters noted in the rule. 75 FR 31975, 31990-91.

Response: Where CEMS are used, the operating limits do not apply for the applicable control devices. See the response to comments for EPA-HQ-OAR-2003-0119-1972.1, excerpt 43.F For control devices not listed, EPA disagrees that the rule should not require a site-specific monitoring plan demonstrating the parameters to be monitored and operating limits that will apply. This is a standard approach for EPA rules on this issue and provides flexibility to establish the appropriate approach when the rule does not provide for the specific control method.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 63

Comment: Requiring flow sensor calibration semi-annually is too frequent and not justified.

Recalibrations should be done no more frequently than normal unit overhaul frequency since electronic flow sensors have minimal drift and do not require frequent recalibration. Furthermore, it may not be possible to remove some devices from service for calibration without adversely affecting operation. 75 FR 31977, 31993. The reasons for and importance of this are described in [see DCN: EPA-HQ-OAR-2003-0119-1834.2 for CIBO Boiler MACT comments.]

It is extremely onerous and not justified to have to check pressure tap pluggage daily. Gauge calibration with manometer should be more flexible given that the requirements do not reflect common practice. 75 FR 31977, 31993. The reasons for and importance of this are described in [see DCN: EPA-HQ-OAR-2003-0119-1834.2 for CIBO Boiler MACT comments.]

The typical industrial application of pH meter calibration is daily or weekly. Thus, to require this on at least 2 points every 8 hours of process operation is extremely frequent and not justified. Also, auto calibration requires about $30,000 in capital. 75 FR 31977, 31993. The reasons for and importance of this are described in [see DCN: EPA-HQ-OAR-2003-0119-1834.2 for CIBO Boiler MACT comments.]

Response: See the response to EPA-HQ-OAR-2003-0119-1957.1, excerpt 67.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 69

Comment: Operating Limits for Air Pollution Control Devices. A source should not have to petition to establish operating parameters for fabric filters, electrostatic precipitators (ESPs), activated carbon injection, selective noncatalytic reduction (SNCR), duct sorbent injection, or spray dryer absorbers.

§60.2680 requires a source to petition the Administrator for specific operating limits if you use an air pollution control device other than a wet scrubber. However, in the Proposed Rule §60.2675(d), (e), and (f), EPA proposes operating limits for fabric filters, ESPs, activated carbon injection, and SNCR. Therefore, no petition should be required in these cases.

Response: We believe that the commenter has misinterpreted the rule. There is no need to petition the Adminstrator for applying monioring that is prescribed in the rule, including

monitoring for wet scrubbers, ACI, SNCR, and ESPs. Only for monitoring of control measures not prescribed in the rule will sources need to apply for alternative monitoring procedures.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 70

Comment: Since spray dryer absorbers or duct sorbent injection are likely control technologies for coal-fired boilers, EPA should determine appropriate operating parameters and include them in the final rule.

Response: We understand that the rule may not address monitoring for all possible types of control measures. For situations not addressed directly by the rule, the source will petition the Administrator for alternative monitoring and include the 5 items identified in 60.2680(a). If CEMS are used, there will be no need to establish operating parameter monitoring and limits for the applicable pollutant.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 72

Comment: Charge Rate. A charge rate is not a necessary or practical operating limit for an energy recovery

unit. §60.2675(a)(1) would require any unit using a wet scrubber to comply with the emission

limitations to establish maximum charge rate as an operating limit. The limit is set at 110 percent of the charge rate during the performance test. Up until now, this provision only applied to incinerators. While EPA has included energy recovery units in the Proposed Rule, it needs to re-think this provision. There is no need for maximum charge rate of fossil fuel for a steam generating unit such as a boiler. This is not part of the compliance requirements for a solid-fuel boiler burning hazardous waste and subject to 40 CFR 63 Subpart EEE (Hazardous Waste Combustor MACT). EPA should clarify that only the maximum charge rate of solid waste in needed as an operating limit.

Response: See the response to EPA-HQ-OAR-2003-0119-2115, excerpt 25.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 73

Comment: Setting of Operating Limits. Setting operating limits solely on data gathered during performance tests is impractical. EPA should allow use of supplemental information to set operating limits. §60.2675 of the Proposed Rule requires that operating parameters (including minimum pressure drop and liquid flow-rate for wet scrubbers, minimum voltage and secondary power or total power input for electrostatic precipitators, minimum wet scrubber pH, minimum sorbent for dry scrubbers, minimum carbon injection rate) limits be set exclusively (using a preset fraction of the level demonstrated during the test) on operating levels for the parameters measured during the most recent performance test.

It is inappropriate, and in many cases not technically feasible, to use operating conditions during a performance test, which are typically conducted at or near the unit's maximum firing rate, to establish a minimum requirement for all possible load ranges.

With many pollution control technologies, this approach to establishing operating limits would result in needless over-consumption of sorbents at great cost to the facility with little or no commensurate reductions in emissions. As an example, the sorbent injection rate of activated carbon for the control of mercury varies with the volume of flue gas generated during combustion. To establish a minimum sorbent injection rate at or near the unit's maximum continuous rating (MCR) would result in nearly double the sorbent injection rate during turndown to 50% load. Because institutional, commercial and industrial boilers vary loads widely based on site conditions, business conditions, season and time of day, this would result in unjustified expense to the facility with no benefit to the environment or to human health.

Other pollution control technologies cannot practically maintain operating conditions established at or near full load during turndown conditions. For example, a Spray Dryer Absorber (SDA) slurry injection rate is limited by the ability of the flue gas to evaporate the liquid portion of the slurry. At or near full load, with high flue gas flow rates and high flue gas temperatures, the flow rate of slurry will be relatively high. If this were established as a site-specific minimum sorbent injection rate, the unit would inject more slurry than the flue gas could accommodate at low loads. One CIBO member with solid-fuel fired boilers equipped with SDA's has experienced catastrophic failures due to operation where more slurry was injected than the flue gas could evaporate. This operating mode caused a total shutdown of the unit that lasted several days and imposed considerable economic hardship.

Other MACT standards recognize that it is not always possible to establish these operating ranges solely on performance test data. The HON (40 CFR 63 Subpart G) for example has the following relevant provision:

If a performance test is required by this subpart for a control device, the range shall be based on the parameter values during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

40 CFR 63.152(b)(2)(ii)(A). This type of provision allows each source to use the performance test data to then extrapolate operating limits based on equipment specific considerations. This is done in an operating plan that is submitted to the air permitting authority for review. A similar provision is needed in the final rule to accommodate situations such as those we have described above. Similar issues arise with use of other types of emissions control equipment as well, such as wet scrubbers of different types.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2092.1, excerpt 46.

10.16 Common Stack Provision

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 85

Comment: EPA included emissions averaging as a compliance option in the proposed Boiler Rule, and this should be a compliance option for CISWI units as well. This provision will be even more important if EPA adopts the Alternative Approach in this rule to defining secondary materials that are non-hazardous solid waste. That approach will result in many more boilers being redefined as CISWI units(from roughly 40 to 400 boilers for example according to EPA) and there will be more opportunities to apply emissions averaging, as facilities will be more likely to have more than one unit regulated under CISWI.

EPA Should Adopt an Emissions Averaging Compliance Alternative for CISWI Units.

In the Boiler Rule, EPA is considering a provision for emissions averaging with respect to the proposed emissions limitations for industrial, commercial and institutional boilers and process heaters. National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Proposed Rule, 75 FR 32006, 32034 (Jun. 4, 2010) ("Boiler Rule"). Use of emissions averaging would allow owners and operators of an affected source to demonstrate that the source complies with the proposed emission limits by averaging the emissions from an individual affected unit that is emitting above the proposed emission limits with other affected units at the same facility that are emitting below the proposed emission limits. Id. EPA further acknowledges that "emissions averaging represents an equivalent, more flexible and less costly alternative to controlling certain emission points to MACT levels" and its application "would not lessen the stringency of the MACT floor limits and would provide flexibility in compliance, cost and energy savings to owners and operators." Id.

In the Boiler Rule, EPA has proposed that owners and operators of existing – but not new – affected sources be permitted to demonstrate compliance with the proposed emissions limitations by emissions averaging for units at the affected source that are within a single subcategory. Id. Under this proposal, emissions averaging could only be used between boilers and process heaters in the same subcategory at a particular affected source. Id.

Averaging Should be Allowed Across All Subcategories/Fuels with Emission Limits for the Pollutant to be Averaged.

As proposed in the Boiler Rule, emission averaging is explained as allowing averaging only within a subcategory (75 FR 32024) although it is not clear from the proposed rule language if this is what EPA intended. See § 63.7522(a), 75 FR 32053. See also Equation 6, 75 FR 32055. EPA provides no justification for restricting averaging to a given subcategory nor is it rational to impose such a restriction. If EPA applies CIBO's recommendation

to develop additional subcategories of energy recovery units based on combustor design and fuel type, the ability to emissions average across subcategories becomes more critical.

Some affected units involve multiple boilers operating in different subcategories (e.g. stokers and pulverized coal). These boilers may be located in separate powerhouses. The goal of emissions averaging is to allow facilities to over-control some emissions points while under-controlling others, thus achieving the required reductions in the most cost-effective manner possible. This could be best achieved by EPA removing the restriction (or clarifying its intent) to permit averaging for all affected units, regardless of whether the boilers emit through separate or "common stacks." The rule should allow for averaging across all units regardless of category of pollutants to be averaged so long as emissions from a single unit can be quantified with testing either in the breeching or in the stack when other units aren't operating.

Allowing averaging across subcategories within the rule is consistent with the four averaging criteria EPA described in the Boiler Rule preamble:

(1) No averaging between different types of pollutants,

(2) No averaging between sources that are not part of the same affected source,

(3) No averaging between individual sources within a single major source if the individual sources are not subject to the same NESHAP, and

(4) No averaging between existing sources and new sources. 75 FR 32035. These criteria for emissions averaging could be adapted to the CISWI Rule as well.

Emissions averaging generally allows a facility to avoid otherwise cost-prohibitive compliance options by over-controlling some other emission unit in a more cost-effective combination. It also has corresponding environmental benefits, by creating an incentive to burn more natural gas or renewable fuels such as biomass as a strategy to average out emissions from a coal-fired unit. As EPA explained in the Boiler Rule, emissions averaging does not result in any higher total HAP emissions than those permitted under the Rule, and therefore there is no additional risk to human health or the environment.

The legal precursor to introducing emissions averaging is Chevron U.S.A., Inc. v. NRDC, 467 U.S. 837 (1984). In Chevron, the Supreme Court held that EPA regulations allowing states to treat all of the pollution-emitting devices within the same industrial grouping as though they were encased within a single "bubble" were based on a reasonable construction by EPA. This case opened the door to more specific emissions averaging efforts, such as those implemented in the 1994 Hazardous Organic NESHAP, 59 FR 19425 (April 22, 1994)(HON Rule). Several rules have followed the HON Rule in authorizing emissions averaging, and the D.C. Circuit has never invalidated the approach. The proposed emissions averaging provisions in the Boiler Rule are directly based on the emissions averaging provisions in the HON.

In the HON Rule, EPA thoroughly examined the legal basis for emissions averaging, and explored the degree of averaging permitted under §112(d) of the Clean Air Act. At the end of its review, EPA concluded that the Clean Air Act "does not define source category, nor does it impose precise limits on the Administrator's discretion to define source." Id. EPA further acknowledged that the Clean Air Act does not limit how standards are to be set for a category or subcategory beyond requiring that it be applicable to all sources in a category, be written as a numerical limit wherever feasible, and be at least as stringent as the floor. Id.

In promulgating the HON emissions averaging rules, on which the Boiler Rule relies, EPA thus concluded that "the relevant statutory language is broad enough to permit the Administrator to allow sources to meet the MACT through the use of emissions averaging provided the standard applies to every source in the category, averaging does not cross source boundaries, and the standard is no less stringent than the floor." Id. Allowing emissions averaging across subcategories within the Boiler Rule is consistent with the parameters established in the HON rule, and reiterated in the Boiler Rule preamble. See 75 FR 32035. Namely, allowing averaging across subcategories will not result in averaging between (a) different types of pollutants, (b) sources that are not part of the same affected source, (c) individual sources within a single major source if the individual sources are not subject to the same NESHAP, and (d) existing sources and new sources. Id.

There is precedent in MACT standards for allowing averaging across different types of units of a single source. For example, the HON rule allows process vents, storage vessels, transfer racks, and wastewater streams to all be included in an emission average across an affected source. 40 CFR Subpart G. EPA reasoned that averaging needed to be allowed across all emission points (except equipment leaks) in order to provide as much flexibility as possible while maintaining an enforceable emission limitation. 59 FR 19425. Similar mechanisms have been adopted in other MACT standards. See, e.g. Petroleum Refinery NESHAP, 60 FR 43244, 43254 (Aug. 18, 1995)(allowing wide range of emission sources to be averaged, noting that "EPA has the flexibility to allow trading within a facility that includes units in different source categories"); Boat Manufacturing NESHAP, 66 FR 44218, 44232 (Aug. 22, 2001).

As in the HON, the compliance methodology can easily accommodate subcategories with different emission limits for a given pollutant. This is done basically by calculating a weighted average allowable mass emission and a weighted average actual mass emission each month using heat inputs or steam production for each unit.

EPA Should not Include a 10% Discount Factor as it did in the Boiler Rule.

In the Boiler Rule, EPA proposed a restriction on emissions averaging that requires facilities using that option to meet a standard that is 10% stricter than the otherwise applicable limits. 75 FR 32035. EPA should not include this 10% penalty for using emissions averaging because it is arbitrary, unnecessary for environmental protection and reduces the flexibility that averaging provides. In the Boiler Rule, EPA asserts that its inclusion further ensures the allowable emissions are at least as stringent as the MACT floor limits without using averaging. However, EPA offers no demonstration of this in the proposal. Given the accuracy of heat input weighted emission calculations, there is no uncertainty that the average emission rates will be any less stringent than when not using averaging. Because EPA has already determined that the standards in the rule achieve the maximum emission reduction achievable for health and environmental protection, to require an additional 10% reduction of emissions has no basis in the environmental underpinnings of the rule. Because emissions averaging is a compliance alternative, the 10% discount factor would constitute a beyond-the-floor requirement. Although the 10% discount may be perceived as a fair trade-off for the flexibility of emissions averaging, it still lacks a legal basis and creates a disincentive for sources to use this compliance method. Where, as here, proposed emission limits are very tight, sources will not be able to ensure an additional 10% reduction in emissions below the limits and imposing this penalty effectively would deprive many sources of the availability of the emissions averaging compliance alternative.

Response: Based on the limited number of comments received on this option, the concerns raised by state regulators on potential for increased emissions, and a review of the overall approach to the rule and its requirements, EPA elected not to incorporate an emissions averaging compliance option into the final rule. See the preamble generally for a discussion of the final approach on the units covered by this rule and the emission limits that apply.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 57

Comment: EPA Should Incorporate Emissions Averaging Provisions into the CISWI Rule

EPA has included emissions averaging as a compliance option in other regulations and has proposed emissions averaging as a compliance option in the proposed Industrial Boiler and Process Heater MACT. AF&PA believes that emissions averaging should be a compliance option for CISWI units. This provision will be even more important if EPA opts for its Alternative Approach to the definition of secondary materials that are nonhazardous solid waste as many more units (from roughly 40 to 400 boilers for example according to EPA) would be regulated under CISWI and there will be more opportunities to apply emissions averaging, as facilities will be more likely to have more than one unit regulated under CISWI.

Emissions averaging is a well demonstrated technique for meeting or exceeding environmental objectives at lower cost and with greater flexibility tailored to individual affected facilities. Several MACT standards include emissions averaging provisions, including: 40 CFR Part 63, Subpart MM (Pulp and Paper Chemical Recovery Combustion Sources); 40 CFR Part 63, Subpart JJJ (Group IV Polymers and Resins); 40 CFR Part 63, Subpart U (Group I Polymers and Resins); 40 CFR Part 63, Subpart G (Synthetic Organic Chemical Manufacturing Industry: Process Vents, Storage Vessels, Transfer Operations and Wastewater); 40 CFR Part 63, Subpart LL (Primary Aluminum Reduction Plants); 40 CFR Part 63, Subpart CC (Petroleum Refineries); 40 CFR Part 63, Subpart EEE (Hazardous Waste Combustors). Provisions such as these allow plants to optimize their investments by installing controls on units where the lowest emission rates can be achieved in the most cost-effective manner possible.

However, we believe that flexibility is required under any emissions averaging provisions in order to ensure facilities have options to reduce the cost of compliance. The emissions averaging or bubble provision should be based on actual operating time and emissions and not capacity. Adding the element of time ensures equivalent control regardless of boiler operating schedules and provides flexibility with respect to the control strategy for limited use units. Some boilers are only used during maintenance outages, and incorporating flexibility into the emissions averaging provisions to accommodate limited use units will greatly reduce the compliance cost for these units. Units sharing common stacks should also be eligible for inclusion in the emissions averaging approach, especially if emissions can be measured from each unit prior to the common stack.

AF&PA believes that, at a minimum, facilities should be allowed to average emissions from each type of unit regulated under the rule to afford maximum flexibility to facilities with units in more

than one subcategory. For example, the Pulp and Paper Chemical Recovery Combustion MACT and the HON allow emissions averaging across different types of units. Inclusion of emissions averaging in the CISWI rule would provide additional flexibility and may reduce the cost of complying with this rule; therefore, EPA should incorporated emissions averaging provisions into the final rule.

Response: See the response to EPA-HQ-OAR-2003-0119-1834.1, excerpt 85.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 12

Comment: An emissions averaging provision should be provided:.

For the same reasons EPA has included emissions averaging in other regulations and has proposed one for the Boiler and Process Heater MACT, one should be provided for CISWIs. Eastman references comments it is submitting for the Boiler and Process Heater MACT proposed rule as to particular improvements that should be made to the proposed rule and requests EPA include a similar provision in the CISWI rule. This provision will be even more likely to be needed if EPA opts for its Alternative Approach to the definition of solid waste as many more units (from roughly 40 to 400 boilers for example according to EPA) would be brought under CISWI and there will be more opportunities to apply emissions averaging.

Response: See the response to EPA-HQ-OAR-2003-0119-1834.1, excerpt 85.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 14

Comment: Emission averaging within a source can be an effective means of reducing compliance costs to the source without adversely impacting public health. NACAA generally supports the concept of emission averaging as set out in the proposal provided: (1) there is clear authority to do so under section 112 and (2) the benefits of averaging are fairly apportioned between the regulated community and the public. While emission averaging is helpful to sources on the margin, it should not be adopted if it will cause significant risk that the final rule will be overturned. Where a source is able to achieve more cost-effective emission reductions at one unit, emission averaging offers a “win-win” opportunity that should be embraced without penalty to the source. However, at times, compliance costs are reduced, at least in part, because sources are able to emit more of the regulated pollutant than without emission averaging because they can operate with smaller compliance margins. EPA has solicited comment on whether a 10-percent reduction in the overall emission limit would be appropriate if averaging were allowed, but has offered no estimate on how much of an emissions increase would result from averaging.

If the units at issue indeed have the 300-percent to 1000-percent variability that EPA's MACT floor analysis suggests, a 10-percent penalty would seem to allow a fairly significant increase in overall emissions at the source. The increase in emissions could be evaluated by calculating how much the variability is decreased [Footnote: Presumably, this calculation would be a variation of EPA's determination of the Upper Probability Limit, given the variability of the units and the number of tests needed to show compliance.] when paired compliance demonstrations are to be made. It may be that this issue can also be addressed by appropriate corrections to the MACT variability analysis and compliance demonstration provisions.

Response: See the response to EPA-HQ-OAR-2003-0119-1834.1, excerpt 85.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 7

Comment: We request clarification for sources with more than one stack. The proposed rules states that you must meet the emission limitation for each unit, including bypass stack or vent. At least one of our units has two identical burners, two identical afterburners and two identical stacks. Does this mean that monitoring stack testing needs to be performed on both stacks?

Response: Yes, the rule applies on a per unit basis, so testing of each unit would be required.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 11

Comment: EPA Should Fix Errors in the Discounting Formulas for Emissions Averaging

For the Major Source Rule, EPA is proposing to allow emissions averaging within a regulated source over its existing individual boilers in the same category. This is being proposed as a flexibility mechanism because emissions reductions may be cheaper at a particular unit. This proposal is subject to several conditions including an "emissions averaging plan" and a cap on the overall emissions level. [Footnote: 75 Fed. Reg. at 32,034-35.] In addition to these other safeguards, EPA is proposing a discount factor of ten percent to "ensure that averaging will be at least as stringent."[Footnote: Id. at 32,035.] The agency is requesting comment on "use of a discount factor and whether ten percent is the appropriate discount factor."[Footnote: Id.]

While the practical effect of this is not clear from the preamble, it is possible to discern its impact from the proposed regulatory language. Section 63.7522(d) of the proposed rule states that the "The averaged emissions rate from the existing boilers and process heaters participating

in the emissions averaging option must be in compliance with the limits in Table 2 [emissions limits for existing sources] to this subpart at all times following the compliance date. . . .” [Footnote: 75 Fed. Reg. at 32,053]

Section 63.7522(e) then gives two alternative formulas to demonstrate initial compliance. According to these formulas, the average emissions rate used to determine compliance is only 90% of the actual weighted average emissions rate (in this case, weighted by the maximum rated heat input capacity). Subsequent to this, each entity must demonstrate compliance on a monthly basis according the formulas laid out in Section 63.7522(f). [Footnote: Id. at 32,053-54.]Similarly to the formulas for initial compliance, the average emissions rate here is also only 90% of the actual weighted average emissions rate (weighted here by actual heat input).

These formulas appear to be mistaken and, instead of multiplying by 0.9, they should be multiplying by 1.1 (or dividing by 0.9). To see the error in the formulas, the simplest case can be considered. If there are two boilers at the same facility with identical heat input capacity and actual monthly heat input, then instead of a weighted average the formulas reduce to a simple average. Thus, if both actual emission rates for a given pollutant are 1, then the simple average emission rate is 1. This figure is then multiplied by 90%, giving an emissions rate of 0.9 for the purposes of regulatory compliance. Obviously, the result of the formula is a lower emissions rate than the actual correct weighted average. This seems directly contrary to the stated purpose of the discounting provision and should be fixed by EPA.

If the formulas are corrected to be in accord with the stated purpose of the discounting provision, there will be several effects from discounting. By penalizing averaging, it disincentivizes sources from using this option. This will lead to fewer cost savings, which is the goal of allowing averaging in the first place. However, averaging may lead to fewer reductions in emissions and thus fewer benefits to the general public. The net effect of this is ultimately an empirical one. If the agency is under-regulating (as seems likely, see supra pp. 8-9), then the decrease in emissions reductions is unwarranted and not worth the reduced costs. However, if the standards are set efficiently (as we argue they should be), this should be unnecessary unless it is motivated by other concerns (such as measurement error).

EPA should have an independent justification for any discounting provision that explains why it should be implemented and not just what its effects are. It is impossible to determine what the proper discount factor should be without knowing the provision’s purpose. The justification of ensuring stringency could equally well justify a discount factor of 5%, 10%, or 20%.

Response: See the response to EPA-HQ-OAR-2003-0119-1834.1, excerpt 85.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 34

Comment: EPA Should Incorporate Emissions Averaging Provisions Into The CISWI Rule

EPA has included emissions averaging as a compliance option in other regulations and has proposed emissions averaging as a compliance option in the proposed Boiler MACT. ACC

believes that emissions averaging should be included in the final rule as a compliance option for CISWI units. This provision will be even more important if EPA opts for its Alternative Approach (to the definition of secondary materials that are non-hazardous solid waste), as many more units (from 40 to 400 boilers) would be regulated under CISWI and there will be more opportunities to apply emissions averaging, as facilities likely will have more than one unit regulated under CISWI.

Emissions averaging is a well demonstrated technique for meeting or exceeding environmental objectives at lower cost and with greater flexibility tailored to individual affected facilities. Several MACT standards include emissions averaging provisions, including: 40 CFR Part 63, Subpart MM (Pulp and Paper Chemical Recovery Combustion Sources); 40 CFR Part 63, Subpart JJJ (Group IV Polymers and Resins); 40 CFR Part 63, Subpart U (Group I Polymers and Resins); 40 CFR Part 63, Subpart G (Synthetic Organic Chemical Manufacturing Industry: Process Vents, Storage Vessels, Transfer Operations and Wastewater); 40 CFR Part 63, Subpart LL (Primary Aluminum Reduction Plants); 40 CFR Part 63, Subpart CC (Petroleum Refineries); 40 CFR Part 63, Subpart EEE (Hazardous Waste Combustors). Provisions such as these allow plants to optimize their investments by installing controls on units where the lowest emission rates can be achieved in the most cost-effective manner possible.

However, we believe that flexibility is required under any emissions averaging provisions in order to ensure facilities have options to reduce the overall cost of compliance. The emissions averaging or bubble provision should be based on actual operating time and emissions, and not capacity. Adding the element of time ensures equivalent control regardless of unit operating schedules and provides flexibility with respect to the control strategy for limited use units. Some units are only used during maintenance outages, and incorporating flexibility into the emissions averaging provisions to accommodate limited use units will greatly reduce the compliance cost for these units. Units sharing common stacks should also be eligible for inclusion in the

emissions averaging approach, especially if emissions can be measured from each unit prior to the common stack.

ACC believes that, at a minimum, facilities should be allowed to average emissions from each type of unit regulated under the rule to afford maximum flexibility to facilities with units in more than one subcategory. For example, the Pulp and Paper Chemical Recovery Combustion MACT and the HON allow emissions averaging across different types of units. Inclusion of emissions averaging in the CISWI rule would provide additional flexibility and may reduce the cost of complying with this rule. We encourage EPA to incorporate emissions averaging provisions into the final rule.

Response: See the response to EPA-HQ-OAR-2003-0119-1834.1, excerpt 85.

10.17 Other - Testing and Monitoring

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1

Comment Excerpt Number: 25

Comment: Alkali Bypass Issues

In what can only be characterized as a major oversight in the proposed rulemaking, EPA omits any discussion on how CISWI kilns that vent small amounts of kiln gas directly to the atmosphere through an alkali bypass stack or other process vents (other than a kiln's main stack) are expected to comply with the proposed rule from those emission points. This omission translates to significant questions on all elements of the proposed rule as to how a CISWI kiln operator would comply. Given the technical and regulatory complexity in trying to address the nature of these sources and issues, Lafarge does believe EPA can properly remedy these significant omissions directly in a final rulemaking and, therefore, we believe EPA must re-propose the CISWI rule for kilns in its entirety.

Response: Use of a bypass stack is a deviation under the final rule, but the source may qualify for an affirmative defense for the use of a bypass under the malfunction provisions in the final rule. See Section V. of the preamble for discussion on malfunctions.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 10

Comment: Fugitive ash monitoring for metals: CES would like to point out to the EPA that a fence line monitor for fugitive metal emissions is now commercially available.

Response: EPA thanks the commenter for this information; however, the rule does not require fugitive ash monitoring for metals. EPA would welcome alternative monitoring requests from owners / operators who choose to measure fugitive ash metals on a voluntary basis.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 13

Comment: The Proposed Monitoring Requirements Violate § 129(c) of the Clean Air Act in Failing to Require Actual Emissions Monitoring of Pollutants.

EPA fails to meet the requirements of the Act because it fails to require monitoring of emissions of pollutants for all pollutants and subcategories covered in the proposed rule. Section 129(c) addresses monitoring of pollutants from solid waste combustion. Under this section, the Administrator is required to promulgate regulations "requiring the owner or operator of each solid waste incineration unit" to:

... monitor emissions from the unit at the point at which such emissions are emitted into the ambient air (or within the stack, combustion chamber or pollution control equipment, as appropriate) and at such other points as necessary to protect public health and the environment.

42 U.S.C. § 7429(c)(1).

Additionally, the Administrator has discretion to "monitor such other parameters relating to the operation of the unit and its pollution control technology as the Administrator determines are appropriate." 42 U.S.C. § 7429(c)(2). Section 129(c)(2) is additive to the actual emissions monitoring requirements found in § 129(c)(1), and is not a substitute for the requirements of § 129(c)(1). As such, the monitoring requirements for both new and existing units in the proposed CISWI rule are incomplete, and violate the plain language of the statute.

EPA's proposed rule fails to require actual emissions monitoring for all covered pollutants at all the CISWI subcategories. For incinerators, burn-off ovens, and small, remote incinerators, there are no actual emissions monitoring requirements for CO, NOx, SO2, dioxins, or furans. Waste-burning kilns are also not required to monitor emissions of dioxins or furans. Both new and existing subcategories of CISWI are subject to piecemeal and limited pollution monitoring requirements which fail to provide a full picture of the emissions profiles of these units. The proposed rule does require annual inspections of pollution control devices, installation of bag leak detection systems ("BLDs"), and parametric monitoring of all CISWI. 75 Fed. Reg. at 31,948. However, these requirements do not "monitor emissions from the unit at the point at which such emissions are emitted into the ambient air." 42 U.S.C. § 7429(c)(1). Rather, these requirements fall under §129(c)(2), since they address monitoring pollution controls instead of pollution.

This conspicuous lack of actual emissions controls in the proposed rule would fail under a judicial Chevron step 1 test. Under Chevron, when the statute reflects "the unambiguously

expressed intent of Congress," the court must give effect to this statement of intent. Chevron U.S.A. Inc. v. NRDC, Inc., 467 U.S. 837 (1984). As § 129 (c)(1) requires the administrator to require that CISWI operators monitor emissions from the unit, EPA has no discretion to pick and choose the pollutants for which it will require actual emissions monitoring from CISWI. The clear language of the statute provides for actual emissions monitoring, as distinct from § 129(c)(2)'s parametric monitoring options. EPA cannot attempt to mask its violation of § 129(c)(1) by incorporating inspections of pollution control devices under § 129(c)(2). Though these additional monitoring requirements are beneficial, they are no substitute for monitoring the actual emissions themselves. EPA must require actual emissions monitoring of all pollutants emitted by CISWI, regardless of subcategory, under the plain language of § 129(c) of the Clean Air Act.

Response: The final rule requires monitoring of emissions through a combination of periodic testing and operating parameter monitoring, or use of CEMS where appropriate. These requirements are consistent with section 129 of the Act.

The term "monitoring" encompasses not only emissions measurement via instruments, but also manual measurements, stack testing, reporting, and recordkeeping. The rule requires annual stack testing for each section 129 pollutant as well as ongoing emissions or parameter monitoring for each pollutant. Such an approach is allowed, if not endorsed, under section 114(a)(1)(E) of

the Act ("...keep records on control equipment parameters...when direct monitoring of emissions is impractical...") and section 129(a)(4) of the Act ("...The Administrator may...provide for the monitoring of...parameters...").

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 41

Comment: Alkali Bypass Issues

In what can only be characterized as a major oversight in the Proposed CISWI Rule, EPA omits any discussion on how CISWI kilns that vent small amounts of kiln gas directly to the atmosphere through an alkali bypass stack or other process vents (other than a kiln's main stack) are expected to comply with the proposed rule from those emission points. This omission translates to significant questions on all elements of the proposed rule as to how a CISWI kiln operator would comply. Given the technical and regulatory complexity in trying to address the nature of these sources and issues, PCA does not believe EPA can properly remedy these significant omissions directly in a final rulemaking and, therefore, we believe EPA must repropose the CISWI rule for kilns in its entirety.

Response: See the response to comments EPA-HQ-OAR-2003-0119-2021.1, excerpt 25.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 79

Comment: EPA has proposed that CEMS would be installed and operated according to either PS-12A or the vacated Part 75 procedures for adsorbent tube systems. EPA should allow also PS- 12B (as amended below) for use with sorbent tube based monitors (as Part 75 for Hg CEMS is vacated).

Response: EPA agrees with the use of PS-12B and QA Performance Specification 5. The rule already allows this (see 63.1350(k)).

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 80

Comment: Establishing the span value at twice the concentration corresponding to the emission limitation is acceptable for cement plants provided that reasonable provisions are included for certification and quality assurance of the Hg CEMS when emissions exceeding the span value are periodically encountered (such as for plants with in-line raw mills during mill off operation). Selection of the span value is a critical element in the CEMS certification and quality assurance.

EPA recognizes that the emissions will sometimes exceed the span value for some kiln systems and configurations. Yet the proposed PS 12A and Procedure 5 make no mention of what is to be done when concentrations exceed the span value, nor how varied emission levels are to be addressed during the initial certification or during ongoing quality assurance of the Hg CEMS. Without further guidance, plant-specific determinations will need to be made by EPA or the delegated authority for each of the following issues:

a. Need for and/or use of dual range Hg CEMS, or (even worse) duplicate low and high range Hg CEMS,

b. Need to re-span or re-calibrate Hg CEMS at elevated Hg concentrations to accommodate temporary high levels during "mill off" operation which will result in the substantial reduction in monitoring accuracy during "mill on" operation which represent a far greater portion of the plant operating time,

c. Potential invalidation of Hg monitoring data when emissions exceed the span value, and

d. Widely varying and inconsistent interpretations of how best to conduct the relative accuracy test at facilities with varying and unstable Hg emissions.

The result is that the regulations are ambiguous and subject to wide interpretation by each control agency for each affected source..

The following amendments to the Hg CEMS requirements for cement plants are provided as an example of reasonable provisions: (Something similar should be validated by field trials and then re-proposed by EPA for inclusion in the Subpart LLL monitoring provisions.)

* For kiln systems with in-line raw mills (or other kilns with fluctuating emission levels) the span value should be specified as the Hg concentration corresponding to two times the emission limit.

* The normal clinker production rate and the corresponding effluent gas flow rate (wet basis) should be used to calculate the wet basis Hg concentration that is equivalent to the emission standard for the operational conditions representing greater than 85% of the kiln operating time (i.e., in-line mill on).

The definition of "span value" in PS 12A and Procedure 5 must be changed to reflect the addition of underlined phrase "Span value means the upper limit of intended measurement range during normal mill on operation which may be exceeded during mill off operation or other short-term conditions lasting less than 24 consecutive kiln operating hours."

* The span value will be used as prescribed in PS 12A and Procedure 5 for the selection of the calibration gas concentrations used for daily upscale calibration gas checks, linearity checks for elemental and oxidized Hg calibrations, as well as quarterly gas audits and system integrity tests. The span value will also be used for determining the acceptable tolerance for all calibration error and linearity specifications expressed as "percentage of span" and similar requirements.

* PS12A and Procedure 5 should explicitly state that the relative accuracy test for the initial certification and annual verification of accuracy will be performed while the in-line raw mill is operating or while emissions are within the range bounded by the span value. (A relative accuracy test cannot be completed during the relatively short mill off period and emissions are not stable during such periods. Furthermore, effluent gas temperatures during mill off conditions may exceed the demonstrated operating range for EPA Method 30B at some facilities.)

* If emissions exceed the span value for more than 5% of the kiln operating time, the CEMS operator shall conduct "direct calibrations" of the Hg analyzer bypassing the dilution module. (Because the Thermo and Tekran Hg CEMS operate on a dilution ratio of 30 or 40 to 1, the calibrated range of the Hg analyzer will be 30 or 40 times the upscale calibration value. Hence, for a system calibrated to measure 0-10 µg/m3 through the entire measurement system, the analyzer would be calibrated accurate to between 0 and 300 to 400 µg/m3.

[Note: This "direct calibration adds little or no burden to the CEMS operator because (1) these direct calibrations are automatically performed for the Tekran system to facilitate comparisons with the internal Hg permeation source (performed weekly as a "lamp intensity check"), and (2) are required to be performed for both Thermo and Tekran systems to verify periodically the performance of the elemental Hg calibration gas generator. See also EPA Interim Traceability Protocols for Elemental and Oxidized Hg Calibration Gas Generators.])

* The ability of the CEMS to quantitatively transport high concentration levels of oxidized Hg through the probe, filter, filter cake, sample lines, and the ability of the CEMS converter to reduce the oxidized Hg to elemental Hg should be confirmed initially and quarterly by injecting a high level HgCl2 calibration gas standard at the sample probe, upstream of the PM filter. This high level system integrity test should be performed at a concentration approximating the maximum hourly average emission concentration during the preceding month, or other representative high level concentration. The high level system integrity check is acceptable if:

o The stable Hg CEMS response is within ± XX% (to be determined) of the reference value, and the system returns to the normal operating level within 30 minutes of ceasing the calibration gas injection, or

o The time integrated Hg CEMS response is equivalent to the total mass of HgCl2 injected within ± ZZ% (to be determined). (Note: This allows for temporary adsorption/desorption on the filter cake or other CEMS transport components which may affect the short –term response but which will not affect the 30-day averages measured by the CEMS system and calculated by the DAS. This specification would be implemented by timing the duration of the HgCl2 injection and calculating the mass injected as the product of: the calibration concentration (µg/m3) x injection rate (m3/min) x duration (min). The CEMS response would be determined by integrating the area under the response curve and multiplying by the CEMS sampling rate. The uncertainty in the calibration gas injection rate and CEMS sampling rate would need to be considered in establishing an appropriate specification tolerance.)

As an alternative to the high level system integrity checks, the CEMS operator may elect to demonstrate the accuracy of Hg CEMS measurements exceeding the span level by conducting a three-run relative accuracy audit (RAA) on a quarterly basis, where site-specific sampling conditions permit the use of this approach. The three-run RAA would be performed using Method 30B as the reference method following the procedures described in Procedure 5.

The definition of "span value" must be changed, explicit procedures for its calculation should be added, and the value should be rounded to established ranges. PS12A, states, "3.5 Span Value means the upper limit of the intended Hg concentration range. The span value is a value equal to two times the emission standard."

EPA states in the preamble, (as discussed above) that it is aware the Hg concentrations at cement plants will exceed the span value, so the stated definition obviously does not work. It could be modified as described in 1 above, by addition of underlined phrase "Span value means the upper limit of intended measurement range during normal "mill on" operation which may be exceeded during "mill off" operation or other short-term conditions lasting less than 24 consecutive kiln operating hours." Alternatively, the first sentence in the EPA proposed definition could be eliminated. Perhaps a better solution is to state that the span value is specified in the applicable Subpart (Subpart LLL) where the specific requirements are more appropriately addressed.

Specific procedures should be provided in Subpart LLL for the calculation of the emission concentration equivalent to the 43 lb/million ton clinker (existing sources) or 14 lb/million ton clinker (new sources). The calculated span value should be rounded to the nearest 10 µg/m3 level as has been the practice for Hg CEMS because of technical limitations associated with the elemental Hg gas generators and specific requirements to establish NIST traceability. (See also EPA Interim Traceability Protocols for Elemental and Oxidized Hg Calibration Gas Generators.) An infinite-number of site-specific ranges is neither practical nor possible.

The PS 12A requirements at "6.1.1 Data Recorded Scale" are misleading, ambiguous and obsolete and should be replaced by a relevant specification for data recording and an appropriate definition, (consistent with Span Value) for the "high level value." The only thing 6.1.1 says relative to the data recorder is: "The Hg CEMS data recorder output range must include zero and a high level value." This is an obsolete requirement from long past era of analog instrument outputs and chart recorders. It provides no useful direction relative for contemporary systems. If EPA requires specifications for the range, resolution, or other data recording parameters they should be specified explicitly. The remainder of this paragraph discusses the "high level value" selected as a function of the emission standard. This raises the same questions as selection of the span value. More importantly, it contradicts the explicit statements in section 7.1 that prescribe selection of each reference gas level as a function of the span value.

The PS 12A requirements at "6.2 Reference Gas Delivery System" are ambiguous, subject to interpretation, unlikely to be achieved exactly in practice, and without means of verification." The section states, "The reference gas delivery system must be designed so that the flowrate (sic: flow rate) of reference gases introduced to the CEMS is the same at all three challenge levels specified in Section 7.1, and, at all times exceeds the flow requirements of the CEMS." The last phrase is not needed because the CEMS would fail all calibrations if the reference gas generator flow does not exceed the CEMS sampling rate.

EPA is well aware that saturated headspace elemental Hg generators produce different flow rates to generate different Hg concentrations by varying either the dilution gas flow rate or the saturated head space flow rate. The later results in small differences in the generated gas flow rate, but the EPA requirement allows no tolerance in the phrase "is the same." Furthermore, certain quenching effects due to varying residual oxygen concentration for nitrogen dilution extractive CEMS have driven one equipment supplier to change its approach so that only the

head space flow rate is varied (for a particular measurement range). However, this does not justify the proposed EPA requirements as the same issue would not affect air dilution systems and/or other analytical techniques. If specifications to limit the effects of background oxygen quenching are needed they should be specific to that issue.

EPA is well aware that the maintenance of the same flow rate for each challenge level for oxidized Hg (i.e., HgCl2) generators is inconsistent with the procedures and requirements of the "Interim EPA Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators" for both evaporative gas generators and generators that convert elemental Hg to HgCl2. Achieving the same flow rate at each gas level is unnecessary and complicates the procedures. The subject requirement includes no tolerance that defines what is meant by "gas flow rate is the same at all three challenge levels," and it includes no test to verify that the specification is met. The specification should be changed from "must" to "should be designed" ... so that the referenced gas flow rate is approximately the same (i.e., ± 20%) at each challenge level."

PS 12A Section 7.1 requires the use of NIST certified or NIST Traceable standards for both elemental Hg and oxidized Hg (HgCl2), which are not currently available, and may not be available in the future at the specified levels, depending on EPA's resolution of the "span value." Section 7.1 requires zero level (0-20% of span), mid-level (50-60% of span), and high-level (80-100% of span) calibration standards for both elemental Hg and oxidized Hg. Hg CEMS

designed to meet EPA's technical requirements must include elemental and oxidized gas generators. (Note: Elemental Hg calibration gas standards are not yet available as stable compressed gas standards, and even if available at some future date as compressed gases their use would be unaffordable as a cylinder costing $2,500 would be exhausted in a few days due to the high sampling rate of Hg CEMS (e.g., 40-50 liters per minute) and the long equilibration times that are needed. Oxidized mercury compressed gas standards cannot be produced.) For more than three years, EPA, NIST, EPRI and others have worked to develop and validate through a field demonstration project, protocols to ensure the NIST traceability of the calibration gas standards. Interim EPA Traceability Protocols are available, but final protocols will not likely be available for several years due to unresolved technical issues, such as:

a. "Interim EPA Traceability Protocol for Qualification and Certification of Elemental Mercury Gas Generators" dated July 1, 2009, as well as statistical procedures for calculation of uncertainty and standardized spreadsheet packages are available from EPA. This protocol is explicitly limited to CEMS with spans of 5 µg/m3 or greater. It establishes the NIST traceability of elemental gas generators via direct Hg concentration measurements made at NIST by isotope dilution ICP-MS, to certify the NIST Prime Generator, subsequently used by NIST to certify Vendor Prime Generators, subsequently used by Vendors to certify Reference Generators, that are ultimately used to certify User generators in the field. (Only Thermo and Tekran have certified Vendor Prime generators.) The entire NIST traceability is constrained by the exact concentration points established by NIST for the ID-ICP-MS which are from 0.5 to 38 µg/m3. Based on the flexibility included in the Interim Protocol procedures, User generators having spans of 50 µg/m3 could be certified. It is anticipated that Hg CEMS will need to measure concentrations exceeding 50 µg/m3 and that some plants will have short term periods necessitating quantification of 1-minute Hg concentrations between 50 and 150 µg/m3. Generation and certification of higher elemental Hg concentrations is considered technically feasible by knowledgeable experts from both Tekran and Thermo. However, certification of the

NIST Prime Generator at NIST will require modification of the ID-ICP-MS interface and/or development and validation of a new reference measurement. This work has not yet begun and will likely require at least several years to complete.

b. "Interim EPA Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators" dated July 1, 2009 is available from EPA. Strict NIST traceability is not possible because NIST has no fundamental measurement method for oxidized Hg. EPA's traceability protocol relies on (a) certification of the inputs for evaporative generators that create gas standards from certified HgCl2 solutions, and (b) use of certified elemental Hg generators for those that convert elemental Hg to HgCl2. For the later type of generator, the effective range is again limited to 50 µg/m3 because of the concentration limitations for NIST certification of elemental generators. For evaporative generators, the concentration is not limited by the protocol. However a major discrepancy between elemental Hg and oxidized Hg measurements of 9% has been observed and is acknowledged by EPA. Until this issue is resolved, evaporative generator manufacturers are allowed to apply a software correction to account for bias. The work to resolve this issue has been discussed for several years, but at least several additional years will be required to resolve the issue after the work actually begins.

c. CEMS operators would not be able to comply with the proposed specifications until higher level NIST traceable standards are available (at least several years) if EPA (a) changes its position on setting the span value at the concentration equivalent to twice the emission limit, (b)requires dual range instruments, or (c) requires NIST traceable materials used for the high level system integrity checks (suggested in 1 above) for kilns with in-,inline raw mills.),

d. If EPA makes further substantive changes to the Interim Traceability Protocols or changes in the Final Traceability Protocols, all issues regarding the certification and use of the calibration standards must be revisited. Such changes should be subject to rulemaking including formal proposal and comment.

PS12A Section 8.1.1 includes a vague requirement to "use a sampling location that has been shown to be free of stratification for Hg or alternatively, SO2 and NOx through concentration measurement traverses for those gases." This requirement should be changed to a suggestion or guidance. We agree that SO2 and NOx (as well as CO_2) traverses are sufficient to indicate potential stratification, especially because the severe practical limitations of Method 30A prohibit its use for conducting stratification tests. However, since PS12A contains no specific procedures for conducting stratification tests and no criteria for what might constitute stratification, this is merely a suggestion, and subject to different interpretations. The three-point traverse required for the relative accuracy tests is sufficient to ensure that the reference measurements are representative of emissions and therefore stratification would adversely affect the RATA result and thereby, be detected. No further stratification testing is necessary and it should not be required.

The PS12A criteria for the linearity test procedures are more restrictive than the Part 75, Appendix A criteria, are inconsistent with the uncertainty of calibration materials defined by Interim EPA Traceability Protocols, and should be relaxed. PS12A, Section "8.3 Linearity Test Procedure" requires challenging the entire CEMS measurement system by injecting calibration standards in the sample probe upstream of the PM filter. The linearity tests must be performed using both elemental Hg standards and HgCl2 standards. At least three injections at each of three

levels must be performed. For each reference gas, the absolute value of the difference between the CEMS response and reference value shall not exceed 5% of the span value. (See also Section 13.1.)

The Part 75 Appendix A criteria (revised January 2008) for linearity checks specified that the measurement error be less than 10% of span at any level. These regulations also included an absolute specification which stated the results were acceptable if the difference between the average monitor response and the average reference value does not exceed 0.8 µg/m3. The Part 75 Appendix A and B requirements for Hg CEMS are certainly the most comprehensive and up-to-date set of specifications for Hg CEMS and are consistent with current measurement technology as reflected by their revision and publication in the Federal Register in January 2008. EPA offers no explanation or justification in proposing linearity test specifications that are twice as restrictive.

The "Interim EPA Traceability Protocol for Qualification and Certification of Elemental Mercury Gas Generators" states:

a. At each concentration level, the results of the bracketing certification procedure are acceptable if the expanded uncertainty of the elemental mercury generator concentration, calculated in accordance with Section 6.3 above, does not exceed 5.0 percent of the certified value, or is not more than 2.0 percent above the Vendor Prime uncertainty at the closest set point, whichever is less restrictive.

For the high-level elemental reference gas, the uncertainty is 5% of the certified value and (because the high-level value is 80-100% of the span value) the uncertainty can approach 5% of span. Clearly, a standard having an uncertainty of 5% of span is not sufficient to be used to determine conformance with a linearity specification having an acceptable tolerance of 5% of span. Because better standards are not yet available, the linearity specification must be relaxed to be no more restrictive than 10% of span.

b. "Interim EPA Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators" does not contain an uncertainty specification, and instead states that an uncertainty target of 10% is believed to be achievable. In addition, the Interim EPA Traceability Protocol also allows a software adjustment to compensate for an unresolved discrepancy between elemental and oxidized Hg measurements. (Tekran currently applies a 9% correction factor and this is not reflected in the calculated uncertainty. Hence, the oxidized Hg calibration standards are less certain than the elemental Hg standards. These standards are not of adequate quality to determine conformance with the 5% of span linearity specification for oxidized Hg measurements.

The PS12A criteria for the calibration drift (CD) test procedure omit the absolute CD specification included in the Part 75, Appendix A criteria, are inconsistent with the uncertainty of calibration materials defined by EPA draft interim traceability protocols, and should be relaxed. PS12A, Section 8.4 requires challenging the entire CEMS measurement system by injecting calibration standards in the sample probe upstream of the PM filter for seven days using either elemental Hg standards or HgCl2 standards. Again, the difference between the CEMS response and reference value shall not exceed 5% of the span value. (See also Section 13.2.)

The Part 75 Appendix A criteria (revised January 2008) for linearity checks specified that the calibration error be less than 10% of span, but for CEMS with spans of 0-10 µg/m3, an absolute

tolerance of ± 1 µg/m3 was also applied. The Part 75 Appendix A and B requirements for Hg CEMS are certainly the most comprehensive and up-to-date set of specifications for Hg CEMS and are consistent with current measurement technology as reflected by their revision and publication in the Federal Register in January 2008. EPA offers no explanation or justification for omitting the absolute specification from the CD criterion or for reducing the tolerance from 10% to 5%.

The selection of a 5% of span criteria for the CD tests is inconsistent with the uncertainty of the high-level calibration gas (5% of the certified value) which is approximately the same as 5% of the span value.

The proposed revisions to Subpart LLL and PS12A fail to specify the conditions under which the relative accuracy test is performed which will lead to inconsistent interpretations and implementation requirements. Subpart LLL should specify that the CEMS relative accuracy test be performed at the most prevalent operating condition (i.e., "mill on" for plants with in-line raw mills). PS12A, 8.5.1 states, "Conduct the RA test ... while the affected facility is operating at normal full load, or as specified in an applicable subpart." Full load would apply to power plants and industrial boilers but does not apply to cement plants. Subpart LLL says nothing about this matter. In Comment 1 above, recommendations are provided to ensure the accuracy of data at levels exceeding the span value. A relative accuracy test cannot be performed during mill off operation because the mill off period is not of sufficient duration (tests over multiple weeks would be required), emissions are changing with time and are not in equilibrium, and for some sources the effluent temperature is incompatible with Method 30B. If EPA takes a course other than that recommended above, the new requirements should be re-proposed for comment.

When completed, EPA should re-propose PS12A for public comment. §9.0 Quality Control [Reserved] 10.0 Calibration and Standardization [Reserved] Quality Control procedures and Calibration and Standardization procedures must be considered to determine the overall validity and reasonableness of the performance specification. Without these integral sections, an evaluation of the acceptability of this specification cannot be made.

The PS12A proposes to make the relative accuracy specification stricter for certain CEMS than is required by Part 75, Appendix A and B. Section 13.3 proposes a three-level relative accuracy specification. Two of the specifications are the same as Part 75, Appendix A. For CEMS where the mean reference measurement (RM) is less than 10 µg/m3, the relative accuracy must be no greater than 20%. Alternatively, if the mean RM is less than 5 µg/m3, the results are acceptable if the absolute value of the mean difference between the RM and CEMS is less than 1 µg/m3. However, EPA has added an additional specification that the relative accuracy must be no greater than 10%. This specification applies when the RM is greater than 10 µg/m3and is twice as restrictive as the Part 75 Appendix A and B specification at levels above 10 µg/m3 The Part 75 Appendix A and B requirements for Hg CEMS are certainly the most comprehensive and up-to-date set of specifications for Hg CEMS and are consistent with current measurement technology as reflected by their revision and publication in the Federal Register in January 2008. EPA offers no explanation or justification in proposing a more restrictive relative accuracy specification for sources with Hg concentrations above 10 µg/m3.

Response: These comments are replicates of comments submitted for the National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants. Responses to these comments were

prepared and posted in NESHAP Response to Comments (available at the following web address <http://epa.gov/ttn/atw/pcem/pcempg.html#TECH>). A copy of those responses is provided below.

We have modified the definition of span in PS-12A to provide additional flexibility and have adopted the commenter's suggestion to include source category-specific provisions regarding the span in paragraph 63.1350(n) of Subpart LLL. We agree that the quality of measurements outside the calibration range should be assessed and could be further documented by extending the calibration range or other appropriate means. The commenter provided the following three approaches that EPA would consider appropriate:

 If emissions exceed the span value for more than 5 percent of the kiln operating time, the CEMS operator could conduct "direct calibrations" of the Hg analyzer bypassing the dilution module. Because the Thermo and Tekran Hg CEMS operate on a dilution ratio of 30 or 50 to 1, the calibrated range of the Hg analyzer will be 30 or 40 times the upscale calibration value. Hence, for a system calibrated to measure 0-10 µg/m3 through the entire measurement system, the analyzer would be calibrated accurate to between 0 and 300 µg/m3.

 The ability of the CEMS to quantitatively transport high concentration levels of oxidized Hg through the probe, filter, filter cake, sample lines, and the ability of the CEMS converter to reduce the oxidized Hg to elemental Hg should be confirmed initially and quarterly by injecting a high level HgC12 calibration gas standard at the sample probe, upstream of the PM filter. This high level system integrity test should be performed at a concentration approximating the maximum hourly emission concentration during the preceding three months or other representative high level concentration. The high level system integrity check is acceptable if: the stable Hg CEMS response is within ± (some percentage to be determined based on future field evaluations) of the reference value, and the system returns to normal operating level within 30 minutes of ceasing the calibration gas injection, or the time integrated Hg CEMS response is equivalent to the total mass of HgC12 injected within ± (some percentage to be determined based on future field evaluations).

 As an alternative to the high level system integrity checks, the CEMS operator could elect to demonstrate the accuracy of Hg CEMS measurements exceeding the span level by conducting a three-run relative accuracy audit (RAA), preferably when mercury levels are outside the calibrated range of the CEMS . The three-run RAA would be performed using Method 30B as the reference method following the procedures described in Procedure 5.

Facilities can rearrange Equation 3 of Subpart LLL in order to calculate these quantities using their production rates and volumetric flow rates.

We have modified the definition of span in Section 3.5 PS-12A to allow for additional flexibility in setting the span and have used commenter's recommendations and added a provision in paragraph 63.1350(n) of Subpart LLL to allow for rounding of the span value to the nearest multiple of 10 µg/m3 of total mercury.

Subsection 6.1.1 of PS-12A regarding the data recorder scale has been revised to respond to comments received. We have simplified the specification to clarify that the scale must at a minimum include zero through the span value, but the scale is not limited to that range.

We have revised the language of section 6.2 of PS-12A to specify that the reference gas delivery system must be designed so that the flow rate exceeds the sampling system flow rate of the CEMS and that the gas is delivered to the CEMS is at atmospheric pressure.

NIST has recently completed certification of a 'NIST Prime' elemental mercury gas generator at concentrations of 41, 68, 85, 105, 140, 185, 230, 287, and 353 µg/m3 and mercury gas generator vendors may now submit elemental mercury gas generators for certification to serve as 'Vendor Primes'. Therefore, as previously stated, NIST traceable mercury gas standards can now be made available in concentrations that exceed the equivalent mass standards for both existing and new kilns by between one and two orders of magnitude, thus providing the capability to accurately report excursions well beyond either standard.

We have revised language in Section 8.1.1 to specify that the sampling location must be representative of the stack gas concentration of mercury and, as the commenter suggested, have modified the requirement to use a location shown to be free of stratification to be a recommendation.

By specifying the linearity test procedure measurement error criterion as a function of span, this criterion is generally less restrictive at the lower gas concentrations than were the prior Part 75, Appendix A criteria. We have, however, reconsidered the linearity test procedure specifications and, given the current quality of the available oxidized mercury gas standards, we have decided to increase the allowed measurement error for the oxidized mercury standards to + 10 percent to be consistent with the target criteria in the EPA Interim Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators.

With the exception of the alternative specification for a span value of 10 µg/m3 or less, the PS-12A criterion for calibration drift is essentially identical to the Part 75, Appendix A criteria for calibration error.

These section headings are a result of using a standardized method format originally specified by EPA's Environmental Monitoring Management Council [see http://www.epa.gov/ttn/emc/guidlnd/gd-045.pdf]. The substance of these reserved sections are covered elsewhere in PS-12A, Procedure 5, and the Interim Traceability Protocols for Elemental and Oxidized Mercury Gas Generators.

After consideration of the potential variability between the learning curves for CEMS operators that new users of Hg CEMS may experience, we have revised the relative accuracy specification in PS-12A from 10 percent to 20 percent. We believe, however, that the implication of this change is minor and short-lived because most facilities that install Hg CEMS will find that they readily achieve relative accuracies far better than 20 percent.

We recognize that the commenter is recommending that all quality assurance (QA) procedures related to sorbent trap-based mercury monitoring systems in PS-12B be moved to a separate procedure in 40 CFR 60, Appendix F; we agree that this approach is more consistent with our prior performance specifications and we have revised PS-12B to remove the on-going quality assurance procedures and have incorporated them into Procedure 5. The three-section trap required by PS-12B provides a routine quantitative indication of measurement performance analogous to the daily span check performed on gaseous mercury CEMS.

We do not allow the use of liquid standard spikes in PS-12B as they are not representative of gaseous emissions of mercury.

We agree with the commenter and have removed Section 1.2.2 from PS-12B.

We agree with the commenter and have revised Section 8.1.1 of PS-12B so that it is consistent with the corresponding section of PS-12A.

It is Agency policy to conduct relative accuracy testing of mercury monitoring systems. These RATAs are used to confirm the continuing accuracy and representativeness of compliance monitoring system measurements.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 81

Comment: Performance Specification 12B (PS 12B) Comments

PS 12B is used to evaluate the acceptability of sorbent trap monitoring systems (STMS) used to monitor total vapor-phase Hg emissions. STMS involve continuous repetitive in-stack sampling using paired sorbent media traps with periodic analysis of the time-integrated samples.

Method 30B is a reference method used over a period of 1/2 hour to 2-3 hours, and PS12- B is specifying its use as the STMS. A continuous monitoring system is not the same as a test method even though they consist of similar components. The STMS will need to have additional components data handling components (among other things) that will differentiate it from Method 30B. Therefore a declaration that the STMS is simply 30B is greatly oversimplified. PS-12B differs from other performance specifications in that it specifies the equipment and

procedures to be used in the sorbent trap monitoring system (STMS). EPA has mixed a Performance Specification with on-going quality assurance procedures making this procedure unnecessarily complicated. EPA should develop an Appendix F type procedure for on-going QA and eliminate the three section spike trap requirement for daily use.

Section 6.1.1. The substitution of three-section traps in place of two-section traps is totally unnecessary. The addition of the third section is used for quality assurance (QA) purposes.

As is stated in section 6.1.2, "Section 3 is designated for QA/QC purposes where this section shall be spiked with a known amount of gaseous Hg0 prior to sampling and later analyzed to determine recovery efficiency." This added requirement adds unnecessary complexity of spiking Section 3 (see section 6.1.3) and the inherent problems with analytical variations.

This requirement should be moved to the Appendix F procedure that EPA needs to develop for sorbent trap systems.

The third section spike trap should only be required when the duplicate trains do not meet the RD specification, during the initial relative accuracy test and for on-going QA such as quarterly audits. When spikes are required (see comments above), the procedure should allow the use of liquid standard spikes that are traceable to NIST. Section 6.1.3 Gaseous Hg0 Sorbent Trap Spiking System does not allow for liquid spikes.

The liquid "spike" is the procedure used to prepare the calibration curve used in thermal desorption analyses (i.e., Ohio Lumex Analyzer). The analyst adds a known mass of mercury to the adsorbent using a calibrated pipette, followed by thermal desorption and analyses to comprise a data point as part of the calibration curve. Multiple repetitions at different mass levels comprise the "curve". Therefore, if this procedure is "good enough" to prepare the calibration curve, it should also allow for the preparation of spike traps.

The third section spike and analyses procedure does not account for any mercury sampling system issues; it is merely a check of the recovery efficiency. Therefore a liquid spike can accomplish this very same task without the added expense of purchasing a 50K elemental generator, very expensive calibration gases and regulators, or some homemade sparger set-up to generate gaseous mercury.

The following reference sentence in Section 1.2.2 should be deleted:

Section 1.2.2. "This specification is not designed to evaluate an installed sorbent trap monitoring system's performance over an extended period of time nor does it identify specific techniques and auxiliary procedures to assess the system's performance," .

The statement is incorrect. The fact that paired sampling trains meeting a relative deviation (RD) specification are required is a means for determining on-going evaluation over extended period of time.

Section 8.1.1 should be changed to read "select a location that is representative of Hg emissions". The wording "Locations shown to be free of stratification" indicates that only locations that are free of stratification must be selected. We agree that SO2 and NOx (as well as CO_2) traverses are sufficient to indicate potential stratification. However, since PS12B contains no specific procedures for conducting stratification tests and no criteria for what might constitute stratification, this is merely a suggestion, and subject to different interpretations. The intent should be that the sampling location must be representative of the source Hg emissions. If a point of average Hg concentration can be selected in a location where the gases are stratified, such a point should be acceptable.

Section 8.3 should be deleted because the RATA procedure is redundant and totally unnecessary. The RATA procedure calls for comparing the STMS to a reference Method (30B) that is practically a redundant measurement technology (i.e., carbon traps to carbon traps). This procedure is essentially already what is being done with the duplicate trains – one reference method train is being compared against another reference method train. erefore, the RATA procedure should be deleted from PS 12B, and spike traps used to certify and evaluate the system. PS 8A is similar in that calibration gases are used for the relative accuracy determination so comparisons of "FID – FID" are not done.

Response: To clarify, PS-12B specifies the use of Method 30B as well as several other method options as a reference method for certification of the PS-12B monitoring system.

We agree with the commenter; though they may use basically the same sampling and analytical equipment, the specifications in PS-12B are designed for multi-day integrated sample monitoring of mercury while Method 30B is designed for shorter term sampling and includes performance criteria necessary to serve a reference method for certifying CEMS.

With promulgation of amendments to the Portland Cement NESHAP, we promulgated 40 CFR 60, Procedure 5 which now includes the requirement for a yearly relative accuracy test audit of

sorbent trap mercury monitoring systems that are used for compliance monitoring. The routine day-to-day quality control checks used to verify data quality for individual samples (e.g., paired sample agreement, metering system checks, leak checks, breakthrough checks, and recovery checks) are included in PS-12B. The third section trap spiking requirement is analogous to the daily calibration check for a CEMS; it is a quantitative verification of the quality of the data from that sample trap.

We disagree with the commenter; as noted above, the third section trap spiking requirement is analogous to the daily calibration check for a mercury CEMS. It provides sample-specific quantitative verification of the data quality. The commenter suggests that the paired train agreement is an adequate check of data quality; the paired train agreement provides an assessment of measurement precision while the third section spike recovery check provides a quantitative confirmation (assessment of bias) that the measurement system is control.

We require gaseous spikes of elemental mercury as the elemental form of mercury (gaseous) is the most challenging form of mercury to quantitatively capture and recover.

Liquid spikes contain mercury salts as opposed to elemental mercury and are not adequate to challenge the sorbent capture and sample recovery processes; they are, however adequate for calibration purposes.

We disagree with this statement, please see explanation above.

Paired train sampling and the associated determination of precision is only one of the techniques we use to verify the quality of the resultant data. The third section spike recovery technique provides sample-specific and quantitative indication of bias akin to the daily calibration check conducted for mercury CEMS.

We agree with the commenter; Section 8.1.1 of the promulgated PS-12B (75 FR 54970, 9/9/10) now states "Place the probe inlet at a point or location in the stack (or vent)…..representative of the stack gas concentration of Hg. A location that has been shown to be free of stratification…is recommended."

We recognize that PS-12B and Method 30B utilize the same technology, however, Method 30B which is designed to be a short term compliance test method as well as a reference method for CEMS certification includes different measurement criteria for that purposes. This is similar to the situation where Method 7E, an instrumental reference test method, is used to certify NOx CEMS. In addition, the relative accuracy test of Section 8.3 also serves to confirm that the single-point sampling location of the PS-12B monitoring system is representative of the emissions in the stack or vent.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 87

Comment: Bag Leak Detector Monitoring Provisions

1. EPA has not demonstrated acceptable performance of BLDs to monitor

kiln, kiln/ in-line raw mills at cement plants and has not developed necessary guidance for or technical requirements that will be necessary for a BLD to meet the requirements in the proposed rule.

PCA and its members agree that BLDs, properly selected and applied specifically for cement kiln and clinker cooler systems, can provide a valid PM monitoring approach and can provide useful tools to indicate the need for inspection of a baghouse/fabric filter, and when needed corrective action. However, much work remains to be done to determine which types of measurement devices will perform acceptably at cement kilns kilns/in-line raw mills and to develop appropriate alarm setting procedures, installation, operation, and quality assurance procedures and corrective action procedures. EPA's proposed rule requires the development (and submission for approval) of a site-specific BLD monitoring plan addressing all of these issues. Yet EPA has provided no guidance on these matters and relevant validated procedures are not available from the measurement system suppliers for installations on cement kilns and kilns/inline raw mills. For example, in the selection of BLD devices it is clear that the most widely used probe type BLDs (such as "triboelectric" or "probe electrification" or "charge transfer" devices) are unsuitable for use on kilns/in-line raw mills because the responses of these devices are proportional to the square or to the cube of the local gas velocity and are also affected by changes in effluent temperature, moisture content, and resistivity of the dust. All of these factors change when the raw mill operational status changes. Furthermore, many of these type devices provide the operator with no automated means to check the performance of the installed device, nor any means to conduct external audits when the device is believed to be malfunctioning. Only after the many BLD issues are investigated and evaluated for monitoring kiln and kiln/inline raw mills will it be possible for to develop appropriate technical requirements and quality assurance procedures for BLDs and site-specific BLD monitoring plans.

2. The requirement to submit site-specific BLD monitoring plans to the Administrator or delegated authority should be removed.

EPA has failed to provide technical specifications, installation procedures, operation and maintenance procedures, quality assurance procedures, or alarm setting procedures or any relevant guidance for these issues for BLDs used to monitor kiln or kiln/in-line raw mill emissions, and instead places the burden to develop this information to the user. The proposed language for § 63.1350(k)(2) states, "You must develop and submit to the Administrator or delegated authority for approval a site-specific monitoring plan for each bag leak detection system." If EPA cannot provide technical requirements, criteria or guidance, then it certainly has no basis to review the site-specific plans for approval. With no established criteria or guidance, review by different regional offices or states as "delegated authorities" will likely result in different requirements, different interpretations, and more confusion. The deadline for submission of the site-specific BLD plan is not explicitly stated. More importantly, there is no time limit for EPA's approval, no obligation for EPA to render an opinion as to the acceptability of the plan, no instruction to the user as to monitoring prior to receipt of approval, and no indication of the consequences in the event the plan is not approved. The submittal for approval requirement appears to be nothing more than a bluff or slightly veiled threat. Until legitimate guidance and criteria and developed, it is sufficient that site-specific monitoring plans be available for review. The requirement to submit the site-specific plans for approval should be removed.

3. EPA should develop and promulgate Performance Specifications and Quality Assurance procedures for BLDs as it has for COMS and all other CEMS.

The BLD requirements contained in the proposed regulations are not adequate to ensure that the devices are reliable. EPA has not developed performance specifications for BLDs such as those found in Appendix B of Part 60. Similarly there are no daily calibration check requirements and there are no other on-going quality assurance requirements. There are also no external audit techniques for these devices which are available to users or to regulatory agencies. There are some very brief requirements for these devices found in the subject regulations. These include a mention of a manufacturer's certification of the device's detection limit, but there are no other quantitative performance requirements. Without adequate design and performance specifications for BLDs the measurement systems cannot be relied upon for their intended purpose by either the plant operator or the EPA and there is no consistent basis to evaluate expected performance, or actual performance of installed measurement systems. There is no initial basis to determine if an instrument is performing properly, and no basis to determine if it continues to perform acceptably on an on-going basis. In practice, the distinction between appropriate alarms indicating the need for corrective action for fabric filters and false alarms due to the misapplication of certain types of BLDs or instrument malfunctions (especially for a new application such as kilns and kilns/in-line raw mills) is left to subjective interpretation of the user and novice regulatory personnel. The cement plant purchaser is left only to the claims of manufacturers which are often incorrect (due to inexperience with the particular type of application) or unfounded (based on confusion or misinformation) or nothing more than marketing claims. This situation is simply "buyers beware" followed by a race to the lowest

possible instrument quality to gain market share and quick sales by unscrupulous instrument vendors.

4. Appropriate design and performance specifications are needed so that manufacturers can certify that their BLDs meet applicable criteria in order that the regulated users of such devices can rely on the manufacturer's certifications.

There are absolutely no procedures or specifications for conducting tests to make the necessary EPA certification. This raises numerous questions. For example, are tests of the actual device required? Under what conditions are such tests to be conducted? How are other factors that affect BLD response such as measurement principle, flow velocity, actual and aerodynamic particle size, particle size distribution, particle density, dielectric constants, effluent conditions, etc. taken into account in this certification? Are the tests to be performed for each instrument or a particular model? Is the certification a one-time test or must it be repeated periodically? Can the certification be based simply on the judgment of the instrument developer without conducting any tests at all? There are no means available to the cement plant operator to verify claims made by the BLD vendor or manufacturer regarding detection capability. Plant operators cannot be responsible for the design or performance of these systems and cannot be expected to able to determine the technical validity of vendor claims, especially where there are in effect no regulatory or technical requirements.

Other than the previously discussed detection limit capability, the only explicit requirements are (a) that BLDs "must provide an output of relative PM loading," and (b) that the devices include an alarm system that activates above a preset (and qualitatively set and adjustable) alarm set-

point. One might assume, (all other things and effects held constant) that the output of the BLDs should increase monotonically with increasing PM concentration. However, the output of "triboelectric" devices (often used as BLDs) are subject to influences from changing PM composition (density and dielectric constants), effluent velocity, particle size distribution, aerodynamic shape, effluent temperature, effluent pressure, effluent relative humidity, ambient temperature, etc. All of these factors are likely to change at a cement plant over time and certainly change dramatically when the raw mill operational status changes (i.e. mill on and mill off operation). These factors cannot be controlled by the operator nor are the changes known to the operator. Thus, the output of the BLD device is a qualitative indication of PM concentration. There is no limit or constraint to the effects of changing effluent velocity or other parameters known to affect the measurement output.

5. EPA should remove the requirement that the BLD should activate an audible alarm.

EPA's only published guidance for setting BLD alarms (Fabric Filter Bag Leak Detection Guidance, EPA-454/R-98-015, September 1997) is out-of-date and applies to only one type of monitoring device and one type of fabric filter cleaning configuration. More general and up-to-date guidance can be found in Appendix 2 to ASTM D7392-07 which applies to settling alarm levels for the full range of BLDs and fabric filter configurations that are encountered at cement kilns and kilns/in-line raw mills at plants that burn hazardous waste. The Proposal contains language for § 63.1350(k)(1)(iii) requires the alarm to be activated when the system detects an

increase in the "relative PM loadings" over the alarm set point established by (k)(1)(iv) which specifies adjustment of the "sensitivity (range) and averaging period of the device." The Proposal at 21,188. These statements again reflect bias to a particular manufacturer and particular approach which is not applicable to all cement kilns kiln/in-line raw mills. These statements are technically incorrect as the sensitivity is not the range, and one should adjust the time constant not the averaging period. In addition, some BLDs alarms should be set based on changes in the baseline emissions, some on changes in the peak heights, some on the changes in the "rms" emission levels, and even others based on changes in the rate of peak decay after an off-line cleaned compartment is returned to service. These parameters are not necessarily directly related to "PM loadings" which in fact are not quantitatively measured by the BLD. Finally, the requirement that the BLD continuously record the output from the BLD using a strip chart recorded or data logger is overly simplistic and inappropriate. The BLD alarm is properly based on the very rapid analysis of variations in output intensity over very short time periods by internal micro-processors and permanently recording the data at the frequency necessary to provide a meaningful record is not practical. (See ASTM D 7392 for detailed examples.)

Response: 1. At least one vendor has successfully installed and operated BLDs on fabric filters at four kiln/in-line raw mills. The vendor contends that if the BLDs are installed properly and maintained properly they perform well and meet all the requirements of EPA guidance on BLDs. The EPA has no reason to believe that the "Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" document needs updating or is inadequate. EPA has no knowledge that the QA procedures within the Bag Leak Detection Guidance is inadequate.

2. Technical specifications, installation procedures, operation and maintenance procedures, quality assurance procedures, or alarm setting procedures are contained within the EPA guidance document for bag leak detectors and are supplemented in manufacturer's specifications ,

installation procedures, and directions. EPA does not believe that this information does not need to be specific to kiln or kiln/in-line raw mill emissions because at least one vendor has successfully installed and operated BLDs on fabric filters at four kiln/in-line raw mills and these installations were successful and continue to provide quality data.

3. Performance specifications and quality assurance procedures found in Appendix B and F, respectively, of Part 60 are for the purpose of certifying a CEMS and for continual quality assurance for CEMS that are used for continual compliance with an emission limit and therefore are not applicable to BLDs. Again, the EPA has no reason to believe that the "Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" document needs updating or is inadequate. False alarms and instrument malfunctions or misapplication of BLDs is a site specific issue and can be averted by careful selection of an appropriate BLD and manufacturer with a vender guarantee of acceptable performance.

4. EPA's guidance for BLDs is not a certification procedure like performance specifications in Appendix B of Part 60 and therefore will not contain tests for certification. The bag leak detection system must be certified by the manufacturer and not the cement plant operator to be capable of detecting particulate matter emissions at concentrations of 10 or fewer milligrams per actual cubic meter. The operator must consider any operational changes and stack gas changes when selecting an appropriate BLD. BLD setup procedures and BLD system adjustments found within EPA's BLD guidance is sufficient for accounting for these changes. Again, at least one vendor has successfully installed and operated BLDs on fabric filters at four kiln/in-line raw mills and these installations were successful and continue to provide quality data.

5. The EPA agrees that an audible alarm may not be appropriate for all BLDs and has made this change to just requiring an alarm system that will alert an operator automatically. The

EPA BLD guidance is applicable to charge transfer type devices but several different manufacturer's instruments can be used that are applicable to this guidance. The EPA BLD guidance addresses only one suggested approach to the use of bag leak detectors. However, proper setup and operation of a bag leak detector can vary with site-specific conditions and those conditions may dictate variances from the approach suggested in this guidance.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 74

Comment: Feed Stream Analysis Plan. A compliance option using a feed stream analysis plan should be added to the proposed rule. The proposed rule provides the following methods for compliance demonstration with the feed dependent pollutants (cadmium, lead, mercury, sulfur dioxide, and hydrogen chloride): 1) Annual performance tests (with an option to skip to three years) and control technology continuous parametric monitoring systems; or 2) An option to use CEMS for mercury, HCl, or SO2 in lieu of testing and CPMS.

Now that the Proposed CISWI Rule is being expanded to include energy recovery units (boilers) which co-fire solid waste with fossil fuels, there is a need to provide other options. It is possible that an energy recovery unit may be able to comply with a CISWI emission standard without installing an air pollution control device or technology to reduce the pollutant concentration in the boiler effluent. Rather, such a unit may be able to comply by employing feed controls. As can be seen by observation of the available coal data, if a source were to rely on periodic performance tests, it would always run the risk of testing during a period of relatively high pollutant concentration in the coal, particularly if EPA has not properly accounted for the fuel variability when setting the standard. Also, while EPA has provided the CEMS option, a source may prefer a feed stream analysis option rather than incurring the expense of a CEMS or uncertainty with the current CEMS technology in a particular application.

EPA should include a compliance option that allows a source to develop a feed stream analysis plan and obtain the approval of its permitting authority. Such a scheme should allow for a 12-month moving average to account for the long-term fluctuations in the fuel supplies.

Here, a source would develop a feed stream sampling plan customized for its specific wastes and fuel types. For example, a source could sample (using standard ASTM sampling methods) and analyze each shipment of coal for heating value, chlorine and/or mercury content, and store that data in a spreadsheet along with the quantity of coal in the shipment (e.g. number of cars). The source can then calculate the weighted average lb/mmBtu feed rate of the pollutant fed to a given boiler (or set of boilers that are served by a common coal feed system) on a rolling average basis. On a monthly basis, a compliance determination that the average feed rate is less than the allowable feed rate would be made. For a unit not relying on the system control efficiency, that allowable feed rate would be equal to the emission standard. For a unit that does rely on system control efficiency, the source should be allowed to establish an allowable feed rate based on a

successful performance test by extrapolating from the actual feed rate and actual emission rate measured during the test.

This approach would follow closely with the compliance program used to comply with the HWC MACT (40 CFR 63 Subpart EEE). In the HWC MACT, each source develops and implements a feed stream Analysis Plan to adequately characterize the materials to be incinerated and then track the feed rates of parameters such as chlorine, metals, and ash to ensure they stay below the allowable feed rates established from a Comprehensive Performance Test. It should be particularly noted that Subpart EEE specifies up to an annual rolling average for mercury for liquid fuel boilers (see 40 CFR 63.1209(l)(1)(ii)).

Response: EPA disagrees with the assertion that the limit does not reflect variability. EPA also disagrees that the use of a CEMS will necessarily be more costly than a properly designed feed sampling plan, as the commenter provided no cost information. If an owner or operator want to use this kind of an approach, the source should petition the Administrator for an alternative monitoring method under the general provisions.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115

Comment Excerpt Number: 23

Comment: A compliance option using a feed stream analysis plan should be added to the proposed rule.

The proposed rule provides the following methods for compliance demonstration with the feed dependent pollutants (cadmium, lead, mercury, sulfur dioxide, and hydrogen chloride):

* Annual performance tests (with an option to skip to three years) and control technology continuous parametric monitoring systems.

* An option to use CEMS for mercury, HCl, or SO2 in lieu of testing and CPMS.

Now that the CISWI rule is being expanded to include energy recovery units (boilers) that co-fire solid waste with fossil fuels, there is a need to provide other options. It is possible that an energy recovery unit may be able to comply with a CISWI emission standard without installing an air pollution control device or technology to reduce the pollutant concentration in the boiler effluent. Rather, such a unit may be able to comply by employing feed

controls. As can be seen by observation of the available coal data, if a source were to rely on periodic performance tests, it would always run the risk of testing during a period of relatively high pollutant concentration in the coal, particularly if EPA has not properly accounted for the fuel variability when setting the standard. Also, while EPA has provided the CEMS option, a source may prefer a feed stream analysis option rather than incurring the expense of a CEMS or uncertainty with the current CEMS technology in a particular application.

We request that EPA include a compliance option that allows a source to develop a feedstream analysis plan and obtain the approval of its permitting authority. Such a scheme should allow for a 12-month moving average to account for the long-term fluctuations in the fuel supplies.

Here, a source would develop a feedstream sampling plan customized for its specific wastes and fuel types. For example, for Eastman's coal supply, we could sample (using standard ASTM sampling methods) and analyze each shipment of coal for heating value, chlorine and/or mercury content, and store that data in a spreadsheet along with the quantity of coal in the shipment (e.g. number of cars). The source can then calculate the weighted average lb/mmBtu feed rate of the pollutant fed to a given boiler (or set of boilers that are served by a common coal feed system) on a rolling average basis. On a monthly basis, a compliance determination that the 12 moving average feed rate is less than the allowable feed rate would be made. For a unit not relying on the system control efficiency, that allowable feed rate would be equal to the emission standard. For a unit that does rely on system control efficiency, the source should be allowed to establish an allowable feed rate based on a successful performance test by extrapolating from the actual feed rate and actual emission rate measured during the test.

This approach would follow closely with the compliance program used to comply with the Hazardous Waste Combustor MACT (40 CFR 63 Subpart EEE). In this rule, each source develops and implements a Feedstream Analysis Plan to adequately characterize the materials to be incinerated and then track the feed rates of parameters such as chlorine, metals, and ash to ensure they stay below the allowable feed rates established from a Comprehensive Performance Test. We note particularly that Subpart EEE specifies up to an annual rolling average for mercury for liquid fuel boilers (see 40 CFR 63.1209(l)(1)(ii)).

Response: EPA disagrees. See the response to comments EPA-HQ-OAR-2003-0119-1834.1, excerpt 74.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 49

Comment: EPA should modify the bag leak detection requirements to allow a facility to either follow manufacturer's specifications or EPA's guidance but should not require them to follow both.

Proposed 60.2710(p)(2) would require facilities that install bag leak detectors to follow both manufacturer's specifications and EPA's bag leak detection guidance document. EPA's bag leak detection guidance is restricted to triboelectric monitors and specifically states in the opening paragraph that the guidance is only one approach for using bag leak detectors. It goes on to state that "proper setup and operation of a bag leak detector can vary with site-specific conditions and those conditions may dictate variances from the approach suggested in, this guidance." While the bag leak detector guidance document has been used for a number of years, it is recognized that the guidance has a number of limitations.

First, CRWI believes that requiring a facility to follow this guidance document is not appropriate. This guidance document itself points out that proper set up and operations can vary with location and that it describes only one way to set up these detectors. In addition, the manufacturer's specification and the guidance document may differ in how to install, operate, and maintain these instruments. If they, do, which requirement should the facility follow? CRWI suggests that EPA modify the language in this paragraph so that facilities can follow either the manufacturer's specifications or the guidance but not both.

Response: The final rule includes some changes to reflect these concerns. The EPA BLD guidance addresses only one technology type for bag leak detectors and we agree that there are several vendors that sell variations of the charge transfer technology. We also agree that proper setup and operation of a bag leak detector can vary with site-specific conditions and those conditions may dictate variances from the approach and is allowed by the guidance. The EPA has no reason to believe that the "Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" document needs updating or is inadequate. To date EPA has no information on any conflicts between the manufacturer's specifications and the guidance document.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 53

Comment: A Compliance Option using a Feed Stream Analysis Plan should be Added to

the Final Rule.

The proposed rule provides only two compliance methods for the feed dependent pollutants (cadmium, lead, mercury, sulfur dioxide, and hydrogen chloride): stack testing/parameter monitoring or CEMS. Now that the CISWI rule is being expanded to include energy recovery units (boilers) that co-fire solid waste with fossil fuels, EPA should provide other compliance options. It is possible that some energy recovery units may be able to comply with a CISWI emission standard without installing an air pollution control device or technology to reduce the pollutant concentration in the boiler effluent. Such a unit may be able to comply by employing feed controls (e.g., minimizing the amount of metals, sulfur, and/or chloride in the fuel/feed). If a source were to rely on periodic performance tests, it would always run the risk of testing during a period of relatively high pollutant concentration in the fuel/feed, particularly as EPA has not properly accounted for the fuel variability when setting the standard. Also, while EPA provides the CEMS option, a source may prefer a feed stream analysis option rather than incurring the expense of a CEMS or uncertainty related to performance of CEMS technology in a particular application.

We request that EPA include a compliance option that allows a source to develop a feed stream analysis plan for approval by its permitting authority. Such an option should allow for a 12-month moving average to account for the long-term fluctuations in the fuel supplies.

Under this option, a source would develop a feed stream sampling plan customized for its specific wastes and fuel types. For a unit that does rely on system control efficiency, the source should be allowed to establish an allowable feed rate based on a successful performance test by extrapolating from the actual feed rate and actual emission rate measured during the test.

This approach would follow closely with the compliance program used to comply with the HWC MACT. In the HWC MACT, each source develops and implements a Feed Stream Analysis Plan to adequately characterize the materials to be incinerated and then track the feed rates of parameters such as chlorine, metals, and ash to ensure they stay below the allowable feed rates established from a Comprehensive Performance Test. We note particularly that Subpart EEE specifies up to an annual rolling average for mercury for liquid fuel boilers (see 40 CFR 63.1209(l)(1)(ii)).

Response: See the response to comments EPA-HQ-OAR-2003-0119-1834.1, excerpt 74.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 79

Comment: Air Pollution Control Device Inspection

Air pollution control device inspection must be no more than 12 months following the previous inspection. While the proposed rule does not specifically state this to be an internal inspection, it can be interpreted that way, and as such, there is a need for flexibility in scheduling relative to typical shutdowns for inspection, overhaul and maintenance for the specific equipment involved,

since longer operating times between scheduled shutdowns could be necessary for some units. 75 FR 31977, 31979, 31992-93, 31995.

Response: The text of the final rule does not require an internal inspection, and can include reviews of parameter monitoring as noted in the rule. Internal inspections should be coordinated with scheduled shutdowns. The annual inspection required under this section does not need to be completed all at one time. Thus the results of the last internal inspection can be combined with additional review to meet this requirement.

11.0 STARTUP, SHUTDOWN, AND MALFUNCTION (SSM)

11.1 SSM - Regulatory text provisions

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 19

Comment: EPA Must Provide Some Accommodation for Start-Up, Shut-Down and Malfunction Periods

To assure that startup, shutdown, and malfunction are appropriately accommodated, EPA must either assure that the data on which the standard is based include representative data from such periods, or alternatively, set a separate work practice standard to properly accommodate startup, shutdown, and malfunction. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." [see submittal for footnote]

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers start up on natural gas or distillate oil).

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble for the response on rationale for subcategories-burn off ovens.

Commenter Name: James P. Brooks

Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 5

Comment: The regulation does not include provisions for start-ups and shutdown. Start-ups and shutdown can result in short term spikes in a number of pollutants, especially from biomass boilers. We recommend that EPA require facilities to develop and implement plans to minimize the amount of time for startup and shut-downs and to minimize the amount of pollutants emitted during these periods. Accompanying emission standards with long averaging periods will ensure that overall emissions from affected units are minimized.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 3

Comment: In the Proposed Rule, EPA has removed the 2000 CISWI Rule exemption from emission limits during periods of startup, shutdown and malfunction (SSM), In applying the proposed emission limits to all periods of operation without demonstrating that these emission limits can be achieved during SSM events is arbitrary and capricious. Additionally, EPA has applied this restriction without evidence that the limits can be achieved in practice or achievable by any particular source during an SSM event. For this reason, CEMEX believes that EPA should re-propose this rulemaking and work with CEMEX to resolve this improper assumption.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: John Walke
Commenter Affiliation: Natural Resources Defense Council (NRDC), Earthjustice, Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-2027.1
Comment Excerpt Number: 8

Comment: EPA Should Apply Section 129 Standards During Periods of Startup, Shutdown, and Malfunction.

We support EPA's proposal to require compliance with § 129 requirements during periods of startup, shutdown, and malfunction ("SSM"). 75 Fed. Reg. at 31,964. In Sierra Club v. EPA, 551 F.3d 1019, 1028 (D.C. Cir. 2008) ("Sierra Club SSM"), the D.C. Circuit held that because

§ 112(d) and § 302(k) unambiguously require "continuous section 112-compliant standards," the SSM exemption from compliance with § 112 emission standards was unlawful. Like § 112,

§ 129 requires specific standards (42 U.S.C. § 7429(a)(2), (4)) that must apply on a continuous basis (42 U.S.C. § 7602(k)). Thus, any SSM exemption from compliance with § 129 standards would be just as unlawful as the one vacated in Sierra Club SSM.

Furthermore, we agree with EPA that separate SSM standards are not required for the CISWI rule. EPA notes in setting the MACT for the proposed CISWI rule that most units use natural

gas or clean distillate oil to start the unit and that emissions from such fuels are significantly lower than emissions from burning solid waste. 75 Fed. Reg. at 31,964. EPA also notes that emissions during startup and shutdown are generally "significantly lower" than during normal operations. Id. Thus, no separate standards are required for startup or shutdown.

Finally, the standards should not tolerate, and in fact should discourage, frequent "malfunction" incidents; therefore EPA should not establish separate standards for such

incidents, but should rather review enforcement with an eye to appropriate factors such as good faith efforts to comply. See 42 U.S.C. § 7413(e)(1) (providing authority for EPA to consider various factors, including good faith efforts to comply, in determining penalties for violations). EPA has recently finalized rules declining to set separate standards for malfunctions on similar grounds. See, e.g., Final Rule, National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, EPA-HQ-OAR-2007-0877 (final rule forthcoming).

For all these reasons, we support EPA's proposal not to apply an SSM exemption to the emissions standards proposed in these rules.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 15

Comment: EPA Must Accommodate Start-Up, Shut-Down and Malfunction

To assure that startup, shutdown, and malfunction are appropriately accommodated, EPA must either assure that the data on which the standard is based include representative data from such periods or, alternatively, set a separate work practice standard to properly accommodate startup, shutdown, and malfunction. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures.

Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs."

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers start up on natural gas or distillate oil).

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 59

Comment: The proposed CISWI Rule states that the emission limits will apply at all times, including startup, shutdown, and malfunction (SSM) periods. The current CISWI rule includes an exemption for SSM periods and the standards only apply after waste is charged to the incinerator, but EPA is proposing that the emission limits will now apply at all times due to a court decision regarding SSM that related to MACT regulations under Section 112. That SSM Decision, which struck down the general SSM provision for standards promulgated pursuant to Section 112, was decided under Section 112 and had no effect on standards promulgated under Section 129. In the SSM Decision, this Court vacated

a general "exemption" from normal emission standards under Section 112 during SSM periods for standards promulgated under Section 112. 551 F.3d at 1027-28. That decision was based on the language of Section 112, where this Court found that the general duty standard, which applied during SSM periods, was not a "Section 112- compliant" standard. Id. No such finding has been made with respect to Section 111 or 129.

EPA admits that the SSM Decision "did not have a direct impact on source category-specific SSM exemptions" in 129 standards. [74 FR 51375] EPA also agrees that the SSM Decision "directly affects only the subset of CAA Section 112(d) rules that incorporate §63.6(f)(1) and (h)(1) by reference and that contain no other regulatory text exempting or excusing compliance during SSM events." [Id. at 51394] EPA's memorandum on the effect of the SSM Decision identifies no Section 111 or 129 standards that may be affected, and gave no indication that it believed the SSM Decision required re-evaluation of SSM provisions under those sections. [EPA-HQOAR-2006-0534-0377] Thus, EPA provides no rationale for why the SSM Decision has any bearing on Section 111 or 129 standards such as the CISWI Rule.

Since 1972, EPA has recognized the need for SSM provisions, because technologies used to meet these standards of performance often "do not reach optimum operating efficiency for some time," and because there is a "statistical probability of infrequent, unavoidable mechanical

failures" that can make it impossible for a source to meet the standards during these periods. [37 FR 17214, Aug. 25, 1972]

While the floor setting procedure may be similar, Section 129 and Section 112 require different standards. In particular, Section 129 standards are performance standards under Section 111. EPA has provided no explanation as to how the SSM provisions here are not Section 129- or 111-compliant standards, and that issue was never addressed in the SSM Decision. This Court in the SSM Decision found that the standard for SSM periods need not be the same standard as those for normal operations. [551 F.3d at 1027 (rejecting claim that Section 302(k)'s requirement that standards "assure continuous emission reduction" necessarily required "continuously applying a single standard").]

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 61

Comment: With regard to malfunctions, EPA argues in the preamble to the proposed CISWI Rule that these periods should not be viewed as a "distinct operating mode," and thus, emissions from these periods do not need to be factored into developing the MACT floor levels. Moreover, EPA states that even if malfunctions were to be considered a distinct operating mode, it would be "impracticable to take malfunctions into account in setting CAA section 129 standards for CISWI" given that these episodes are by definition sudden and unexpected events which vary in degree, frequency, and duration. Id.

EPA has failed to recognize that even best performers will experience malfunctions. It is possible for pollution control equipment to fail in various ways that have nothing to do with the fact that units are top performers. Electrostatic precipitator fields can trip, power failures can occur, fabric filters can fail, scrubber pumps can fail. Industry can and does work to minimize such periods, but they do occur.

EPA's proposed changes to the requirements for the operator training program at 60.2070(c) have deleted the requirement that facilities train operators on "Actions to correct malfunctions or conditions that may lead to malfunction" and replaced it with the

requirement that facilities train operators on "Actions to prevent malfunctions or to prevent conditions that may lead to malfunctions." AF&PA agrees the training should cover prevention of malfunctions, however, it should also cover malfunction correction, since malfunctions are sudden and unexpected events that are not always preventable.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Andrew T. O'Hare

Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 67

Comment: EPA Does Not Have Emissions Data To Impose Emissions Standards During Startup, Shutdown, and Malfunction Events

The 2000 CISWI Rule provided for an exemption from the emission limits during periods of SSM [Footnote: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incinerator Units, 65 Fed. Reg. 75338 (Dec. 1, 2000).]

The Proposed CISWI Rule notes that the December 19, 2008 decision by the U.S. Court of Appeals in Sierra Club v. EPA vacated the 40 C.F.R. part 63 "General Provisions" exemption from compliance with emission standards during periods SSM. Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008). EPA states in the Proposed CISWI Rule that "while the Court's ruling did not specifically address the legality of source category-specific SSM provisions adopted in the 2000 CISWI rule, the decision calls into question the legality of those provisions." 75 Fed. Reg. at 31964. Instead of closely examining the emission limits and actual operations of the various sources subject to the Proposed CISWI Rule, EPA takes the drastic step of applying the proposed emissions limits to all periods of operation without an ounce of data showing that the emissions limits have been achieved in practice or even achievable by any particular source during periods of SSM.

Furthermore, EPA improperly established emission limits during SSM in the Prepublication Portland Cement NESHAP by imposing restrictions on start-up fuels and connecting emissions limits to concentration-based limits. This was done without allowing the public to comment. EPA has not provided an adequate opportunity in this rulemaking for PCA to comment on establishing enforceable alternative emission limits for periods of SSM and has not proposed any methods for converting emission limits to address SSM issues.

PCA does not agree that the Sierra Club decision applies to source category-specific SSM provisions. There is nothing in the Court's decision that would make it apply to regulations promulgated under § 129 of the CAA. The Court did not rule that the same emission limits must apply at all times, but the D.C. Circuit emphasized in Sierra Club that EPA never defended its decision. Id. at 1028. Even if this decision would apply to § 129 regulations, EPA must still comply with the MACT setting process. The Court's decision does not excuse EPA from having to set emission limits based on those achieved in practice, and promulgate an achievable standard.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 69

Comment: EPA addresses periods of malfunction by stating, again with no information on how many malfunctions have occurred within the MACT floor units, that "best performing" sources operate in a manner to avoid malfunctions. Id. This assertion is totally unsupported as there is absolutely no analysis of malfunction occurrences at the MACT floor units in the record. Malfunctions at industrial sites can be extremely dangerous and can easily result in the loss of property and life. The fact is that they occur even at the best performer and best operated facilities. EPA's rationale is contrary to the definition of malfunction, which requires malfunctions to be unavoidable. EPA is setting an arbitrary MACT floor without any information and forcing sources to choose between complying with the proposed emission limits

and risking property and life. Not only is EPA acting arbitrarily in its establishment of the MACT floors; it is acting irresponsible in regards to the safety of plant personnel and malfunctions.

EPA's method of addressing malfunction is not a true affirmative defense. It is solely a characterization of its enforcement discretion. EPA's malfunction approach does not meet the legal standard courts have required of technology-based standards such as those in the Clean Water Act. Most importantly, EPA does not apply its discretion to injunctive relief. This in itself makes EPA's assertion that it is providing an affirmative defense false. EPA only grants relief to civil penalties. Furthermore, EPA should clarify whether this "affirmative defense" could be used in a ____ suite. The preamble to the Proposed CISWI Rule is unclear on this important issue and EPA should characterize its intent.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 71

Comment: B. EPA Should Develop Work Practice Standards To Apply During SSM Periods

PCA believes the best way to require compliance during SSM events is to require work practice standards that would apply during such periods. Particularly given the lack of data on emissions during periods of SSM, as well as the variety of circumstances that may be presented during SSM events, it would be exceedingly difficult to craft separate emissions standards for these events. If EPA wishes to have the same emission standards apply, the level of those standards would need to account for emissions during periods of SSM, which are unavoidable. Thus, work practice standards appear to be the best solution. Because § 129 of the CAA emissions standards are promulgated as NSPS under § 111 of the CAA, EPA has clear statutory authority to use work practice standards to address SSM events under § 111(h).

In the case at hand however, EPA did not attempt to collect SSM data. Lack of information by the EPA is not an excuse. Even where information is difficult to come by or uncertain, EPA must still make a reasonable effort to develop the facts. Small Refiner Lead Phase-Down Task Force

v. EPA, 705 F.2d 506, 531 (D.C. Cir. 1983) (quoting Ethyl Corp. v. EPA, 541 F.2d 1, 28 (D.C. Cir. 1976)).

PCA suggests two options to EPA for consideration. The first option is to develop a work practice standard based on the fact that it is not practicable to apply a measurement

methodology during SSM events. The second option is to put regulation of SSM emissions on a separate track from this overall rulemaking to ensure that there is enough time to assemble preliminary modeling data to determine the feasibility of establishing an emission floor during SSM.

The appropriate work practices that will apply during SSM events will vary between facilities and the control technologies they apply. Therefore, the rule should call for the creation of an SSM Work Practices Plan by source owner. This was accomplished in the other regulations, and PCA recommends that each affected facility be required to prepare an SSM "work practice plan" containing certain required components. The work practices plan should address:

* Preventive maintenance activities intended to minimize malfunctions and unplanned shutdowns of air emissions control systems.

* Procedures to be followed to minimize emissions during kiln start up and during planned shutdowns.

* Procedures for detecting and remedying malfunctions that result in excess emissions. This will include a determination of the cause and taking corrective actions.

In developing these work practice plans, PCA is prepared to work closely with EPA to achieve the correct balance between accountability and the flexibility to deal with the wide range of conditions as they vary between kilns, control strategies and operating conditions. PCA has already engaged with its members on the development of plant SSM plans, as can be seen by the sample SSM plan outline provided by PCA to its members, attached [see submittal for attachment 5 provided by commenter.]

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 5

Comment: GPI - Macon Mill also contends that EPA should establish work practice requirements to address malfunction events. In the reality of manufacturing operations, malfunctions do occur. Per 40 CFR 60.2, EPA has defined malfunctions as sudden, infrequent and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner.... As EPA has already noted, per this definition, malfunctions are "not reasonably preventable" and are clearly distinct from normal, startup, or shutdown operations; it makes no sense that EPA then concludes, on page 31964 of the federal register, that malfunctions should not be viewed as a distinct operating

mode and, therefore, any emissions that occur at such times do not need to be factored into development of the CAA Section 129 standards, which, once promulgated, apply at all times. Even the "best performing" sources will encounter malfunction events - it is a practical reality. GPI - Macon Mill encourages EPA to consider a work practice standard similar to the prior requirement for a plan to operate in a manner that minimizes the emissions of pollutants during a malfunction event.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 7

Comment: EPA has proposed that CISWI emission limits apply at all times, including startup, shutdown, and malfunction periods. DuPont believes this approach is unworkable and fails to recognize the realities of operating the many types of CISWI units. The proposal states that 3 hour rolling average values are used to determine compliance with operating limits except for bag leak detection (BLD). This is the same averaging time as in current CISWI rule where limits did not apply during SSM periods. During startups and shutdowns, it is simply impossible for 3 hour rolling average operating limits to meet values that are set during steady state performance testing. The approach appears unworkable as it is proposed for some units. EPA states that because they accounted for emissions variability and established appropriate averaging times, that they have adequately addressed any minor variability that may potentially occur during startup or shutdown. This is incorrect since EPA has not utilized long term emissions data such as CO CEMS data to adjust emissions test data to be representative of actual operating data over time. EPA needs to specifically demonstrate that emissions from the best sources actually meet the standards on the basis they have proposed, or EPA must approach SS differently. It is not feasible to conduct emissions testing during SSM periods due to the variable nature of those conditions. It is not feasible to conduct emissions testing during malfunctions since by definition there are operational problems that could indeed be safety issues during those periods. Therefore, trying to incorporate SSM periods into an emission limit that must be met at all times is fraught with problems. We are concerned that if such limits were set, operators could be placed in an untenable position of trying to operate equipment and not exceed emissions limits, and be tempted to take shortcuts that could place equipment and personnel at risk relative to equipment integrity and safety.

Therefore, we urge EPA to utilize its discretion to allow facilities to establish site and unit-specific startup and shutdown plans as a work practice approach during SS periods so that appropriate practices are followed with minimization of emissions during those periods to the extent practical.

Malfunctions cannot be avoided, even by top performers; EPA provides no data from top performers indicating that they have no malfunctions. Congress realized that malfunctions occur and included provisions to allow for that occurrence. We recommend that malfunctions also be

managed similarly with a malfunction plan, so that operators are knowledgeable and trained to recognize potential malfunctions and to take appropriate actions which allow for safety as of utmost importance along with protection of equipment integrity.

Wording in §60.2070 and §60.2085 of Subpart CCCC and §60.2635 and §60.2650 of Subpart DDDD currently only address actions to prevent malfunctions. EPA needs to recognize that malfunctions will occur despite perfect intentions, and proper actions to address those need to be available beforehand so operators know proper actions to safely handle those situations while minimizing emissions. These potential situations and proper actions need to be part of the operator training process. The proposed rule deletes §60.2120 in CCCC and §60.2685 in DDDD which addressed SSM with a 3 hour maximum malfunction time limit. This approach could be reinstated with a means to address malfunctions per above, with appropriate changes for different combustor types.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements and the final regulatory text on revisions to the proposed rule language.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1953.1
Comment Excerpt Number: 9

Comment: EPA Should Not Require CISWI Compliance During Startup, Shutdown, and Malfunction Events.

For the last two decades, EPA required MACT facilities to develop and follow

startup, shutdown, and malfunction ("SSM") plans to address HAP emissions during

times when steady-state operations were not possible. In 2008, the D.C. Circuit vacated this 40 CFR 63.6(f)(1) authority in Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008) ("SSM Vacature"). This opinion required EPA to reassess the SSM system for all 40 CFR 63 MACT standards. Please see the ACC comments on this issue for more details concerning SSM and the Boiler MACT and GACT MACT standards.

However, the SSM Vacature did not invalidate SSM provisions for CISWI or any other Part 60 NSPS standard. CISWI, per § 129(a), is promulgated following standards used for NSPS standards, not under the MACT system. Nothing in the SSM Vacature opinion addressed Part 60 standards. EPA does not explain in the proposal how it infers that the SSM Vacature applies to CISWI. In fact, prior case law (Essex Chemical Corporation v. Ruckelshaus, 486 F.2d 427 (D.C. Cir. 1973) requires EPA to consider SSM when setting Part 60 standards, which EPA failed to do for CISWI. EPA did not collect SSM emissions data, did not consider how its floor applied or did not apply during SSM events, and did not set separate SSM emissions standards for CISWI.

In addition, EPA incorrectly changed §§ 60.2070(c)(1)(vii) and 60.2635(c)(1)(viii), among other citations, replacing the word "correct" with the word "prevent." These changes are part of EPA's ill-advised reconstruction of SSM. Here EPA removes the historical process optimization nature of SSM compliance and replaces it with a system that no longer recognizes that malfunctions happen. Historically, owners and operators used the SSM process to recognize, solve, and

prevent future occurrences of problems that otherwise wouldn't arise in process units. However, EPA inappropriately assumes here that SSM authority only prevents problems. This refocusing discourages operators from finding and solving problems that emerge, and only encourages operators to focus on problems that don't yet exist. EPA should not adopt these proposed changes in CISWI, or any other §§ 111, 112, or 129 standards, but should encourage, even in light of the MACT SSM Vacature, prevention and resolution of SSM issues within the SSM structure. EPA should reevaluate the CISWI standards, including SSM considerations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 14

Comment: The proposed emissions limits should not apply during periods of startup, shutdown, and malfunction. The proposed rule requires that the emission standards apply even during periods of startup, shutdown, and malfunction. However, we could locate no data showing that EPA considered emissions from such periods in establishing the floor. Rather, EPA hypothesized that sources could meet the standards during periods of startup and shutdown based on how they believe the best performing sources should operate. We do not believe it is appropriate to establish numerical emission limits based on hypotheses in the absence of data. Rather, it is more appropriate to establish work practice-type emission standards for these periods. [Footnote: 112(d)(2) of Title III, the same title in the Clean Air Act Amendments of 1990 under which the §129 standards are promulgated, identifies work practices as a form of emission standard.]

For malfunctions, EPA asserts the standards apply and for each such event, if the source cannot meet the emission standard during the period, that enforcement discretion will be used. We believe this is an impracticable provision. For example, we believe it may be reasonable to suspect that an incinerator may be incapable of meeting the CO limits in the event of a gas supply failure where the waste is left to burn on its own – potentially smoldering – but there is no way to be certain of this without running the source in that mode in order to perform a test. Running a source to perform such a test would be irrational and potentially inconsistent with the §129(f)(3) requirement to comply with the emission standards at all times.

To summarize, EPA must develop separate emission standards (e.g., work practice requirements) that apply during periods of startup, shutdown, and malfunction (SSM). Sweeping emission limits applicable during normal operations and these SSM periods are without basis.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115

Comment Excerpt Number: 19

Comment: There is no legal reason for EPA to reverse its policy concerning treatment of startup, shutdowns, and malfunctions (SSMs) for rules written under section 129 of the Clean Air Act.

Proposed §60.2670(a) requires the emission limitations to "apply at all times the unit is operating including and not limited to startup, shutdown, or malfunction." This is a reversal of the previous requirement in the rule at §60.2685. EPA explains in the preamble on page 31964 that this provision is of questionable legality due to a D.C. Circuit Court ruling that invalidated

certain SSM provisions under the Clean Air Act section 112 program. We fail to see the connection of the court's ruling under section 112 and regulations set under sections 111 and 129 of the Clean Air Act. Depending of the situation, EPA has either excluded or included SSM periods from compliance with a numerical emission limitation set under NSPS. Under subpart Db (industrial boilers), EPA elected to exclude periods of SSM for PM and opacity but to include them for SO2 and NOx. In the case of SO2 and NOx, EPA established 30 operating day rolling averages that account for startup periods. Due to the short-term nature of the opacity limit and the unknown effect of startups on PM, EPA properly decided to exclude SSM.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 21

Comment: EPA should establish work practice standards instead of numerical emissions standards for energy recovery units operating during periods of startup and shutdown.

It is inappropriate to require compliance with numerical emissions standards that are achievable during periods of steady-state operation during periods of startup and shutdown. Institutional,

commercial and industrial boilers, like their larger Electric Generating Unit (EGU) analogs, require an extended period of startup during which most, if not all, equipment in the boiler and pollution control systems are not operating in their normal condition. This extended startup period, typically several hours, is required due to equipment integrity concerns, limitations of the technologies, or safety concerns:

* Equipment Integrity – For example, a Fabric Filter (FF) cannot be put into service until the flue gas temperature is above the dewpoint. This requires that all heat transfer surfaces, ducts and flues from the combustion zone to the FF inlet be warmed up from ambient temperatures to dewpoint temperature (which varies by fuel type and fuel constituents, but is typically in excess of 140oF / 60oC). It takes a considerable amount of time, typically several hours for larger units, to warm up this considerable mass of steel: waterwall tubes, superheater tubes, reheater tubes, economizer tubes, casings, turning vanes, air preheaters, ducts and inlet plenums. During this

warmup period, the FF cannot be put into service without risking catastrophic failure of the bags and intensive corrosion damage to the FF. This limits a unit's ability to control particulate matter and mercury during the several hours of startup.

* Limitations of the Technology – For example, units equipped with a Spray Dryer Absorber (SDA) for acid gas removal are limited in the amount of reagent slurry that can be injected into the flue gas during startup. The slurry federate is limited due to the nature of the technology by the amount of moisture the flue gas can evaporate. This in turn requires that a minimum temperature be achieved by the flue gas before the slurry federate can be initiated, and imposes a lengthy period of time during which the slurry federate is significantly limited until all the upstream heat transfer surface and ductwork has been warmed up. As such, SDA cannot remove Hydrogen Chloride in significant quantities for several hours after the unit is first fired.

* Safety Concerns – For example, reductions in the amount of time required to warm the boiler system up could be realized by increasing the ramp-rate of adding fuel to the unit. In theory, a boiler could be brought from first flame to full load in a matter of minutes, but decreasing the warm-up period from what the OEM recommends risks severe metallurgical stresses due to rapid changes in temperature and wide variances in temperatures across boiler and duct parts. Immediate failures could occur if inconsistent heating caused tears or ruptures in support steel or heat transfer surfaces, posing considerable risk to personnel in

the plant. Failure rates would also increase due to the considerable stresses introduced by rapid heating and cooling cycles, yielding failures at unpredictable times (steady state operation or future startups or shutdowns). For this reason, OEM recommendations for startup times are closely followed across industry.

Instead of trying to establish numerical emissions limits for startups and shutdowns, EPA should establish work practice standards issued under section 112(h) of the Clean Air Act to ensure emissions are minimized during startups and shutdowns without unreasonably requiring sources

to attempt to comply with steady-state emission standards. EPA should add provisions to require sources to develop and adhere to operating practices specific to the unit's design, fuel

type, and OEM recommendations that will ensure emissions minimization without forcing owner/operators to choose between putting their equipment and personnel at risk versus failing to comply with this rule. Such an operating practice should be crafted to be flexible, given the wide variety of boiler sizes, types, vintages, and fuels fired, and should be developed by the source based on OEM recommendations. General guidelines could include:

* Sequencing of equipment startups, per OEM recommendations

* Startup time durations, per OEM recommendations, and

Provisions to clearly define what constitutes "online" versus "startup". This could be crafted to mean a percentage of the unit's maximum continuous rating, or steam temperature/pressure, etc.

Eastman notes that EPA followed this approach in its final rule for Reciprocating Internal Combustion Engines (RICE) issued on March 3, 2010. There, EPA concluded "it was not feasible to prescribe a numerical emission standard for stationary CI engines during periods of startup because the application of measurement methodology to these engines is not practicable due to the technological and economic limitations described below." (75 Federal Register 9665). Many of the reasons EPA articulates for this decision apply to the boiler and process heater

source category regarding the accuracy of the stack gas sampling methods during transient load cases like startup. Eastman recognizes that EPA has set work practice standards in the RICE rule by limiting startups to 30 minutes. We agree this is appropriate. However, when it comes to boilers and process heaters, it is a much more complicated issue. Given the variety of units, operating pressures and temperatures, etc., we do not believe it is practical to set startup and shutdown periods on a "one-size fits all" basis. Rather, each source should work with their permitting authority to establish and obtain approval of appropriate work practice standards as we discuss above.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 7

Comment: Applicability of the proposed limits to startup, shutdowns and malfunctions (SSMs) without collection of empirical data from these operating modes for consideration in the floor development.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Eveleen Muehlethaler
Commenter Affiliation: Port Townsend Paper Corporation (PTPC)
Document Control Number: EPA-HQ-OAR-2003-0119-2105.1
Comment Excerpt Number: 10

Comment: We recommend that EPA reconsider the Boiler and CISWI MACT rules to include:

Inclusion of SSM language for Start-up, Shut-down and Malfunctions

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 3

Comment: In addition, EPA must account for startup, shutdown and malfunctions. The court recognized in Portland Cement, a case adjudicating standards under CAA § 111, that "`start-up'

and ‘upset’ conditions due to plant or emission device malfunction, is an inescapable aspect of industrial life and that allowance must be made for

such factors in the standards that are promulgated. Id. at 399. Similarly, in Essex Chem. Corp. v. Ruckelshaus, 486 F.2d 427, 432 (D.C. Cir. 1973), another § 1’11 case, th,e court held that SSM provisions are "necessary to preserve the reasonableness of the standards as a whole." Id. at 433. When coupled with NLA’s requirement to consider the most adverse conditions reasonably expected to recur, it is clear that, under § 111, EPA must either exempt sources from compliance during periods of SSM (because they are reasonably expected to recur) or set standards that sources can comply with.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Terry Walmsley
Commenter Affiliation: Fibrowatt LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2118.1
Comment Excerpt Number: 5

Comment: As stated in the CISWI Rule at 31964, a source must meet emission standards at all times during the operation of the plant, therefore this presumably would uniformly include during periods of Startup, Shutdown, and Malfunction ("SSM") . While EPA suggests that a uniform emission limit can encompass normal SSM, Fibrowatt believes that continuous compliance can be adversely impacted by a truncated daily averaging period. Fibrowatt further believes that this requirement can have practical problems associated with normal transitions through periods of SSM and supports an approach that would stipulate an alternative but enforceable limit during periods of startup and shutdown as opposed to a single uniform limit. Fibrowatt further requests that EPA provides more definitive guidelines on how periods of malfunction will be appropriately addressed in the rules and address emission limit applicability during such unpredictable occurrences.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert E. Cleaves
Commenter Affiliation: Biomass Power Association (BPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2221.1
Comment Excerpt Number: 6

Comment: EPA should assure that its emissions databases are representative of all units and operating periods, and that its standards encompass the practical capabilities of controls and the variability in operations, fuels, raw materials and emissions performance across the many regulated sectors. A significant problem, as will be noted by others, is that the emission standards make no accommodation for startup and/or shutdown.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble for the response on rationale for subcategories.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 10

Comment: EPA Must Provide Some Accommodation for Start-Up, Shut-Down and Malfunction Periods

To assure that the proposed limits properly consider start-up, shutdown, and malfunction periods, EPA must either assure that the data on which these standards are based include representative data from such periods or, alternatively, set a separate

work practice standard for start-up, shutdown, and malfunction periods. EPA states in the preamble that it is not proposing separate emission standards during start-up or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs."

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers start up on natural gas or distillate oil). As such, either separate limits or work practice standards remain necessary for periods of start-up, shutdown, and malfunction.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 11

Comment: EPA wrongly assumes that SSM periods in cement kilns are similar to incinerators. During SSM periods, materials remain in the kiln and chemical reactions continue to occur regardless of the fuel used.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 12

Comment: Important Improvements Made by EPA in the Proposed Rules

Start up, shut down, and malfunction rules: The previous boiler MACT proposal and the prior solid waste incinerator rules contained exceptions for otherwise applicable emissions limits during" periods of startup, shutdown and malfunction."[Footnote: Id. at 32,012.] In accordance with the D.C. Circuit's opinion in Sierra Club v. EPA (2008),[Footnote: 551 F.3d 1019 (DC Cir. 2008), cert. denied, 2010 U.S. LEXIS 2265 (2010).] the current proposed rules do not contain any such exemptions, and the proposed standards would apply to regulated sources at all times.[Footnote: 75 Fed. Reg. at 32,012.]

In addition to the legal reasons contained in the D.C. Circuit's opinion, this change is also justified on policy grounds. As the proposed rule notes, startup and shutdown are entirely predictable events and can be included in the general emissions standard by EPA.[Footnote: Id. at 32,013.] By contrast, malfunction events should be entirely unpredictable and, as the preamble for the Major Source Proposal notes, the best performing sources should not be malfunctioning at all.[Footnote: Id.]

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 13

Comment: Because there is no legal requirement to remove it and it is appropriate for batch type units such as burnoff ovens, we request that the exception for compliance during startup, shutdown and malfunctions (SSM) be reinstated.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1

Comment Excerpt Number: 16

Comment: During Start-up, Shutdown, Malfunction (SSM) periods, boilers and process heaters operate under conditions that are likely to generate unavoidable increases in CO emissions. These conditions are driven by safety considerations (e.g., ensuring sufficient air flow to avoid explosive fuel-rich scenarios), operational concerns (e.g., gradually warming up

the equipment in order to prevent thermal damage), and warranty requirements (e.g., equipment vendors require gradual warm-up as a warranty condition). Thus, setting the proposed inappropriately low CO emissions limit will encourage quick start-up and shutdown of equipment in order avoid exceedances of limit. EPA should not promulgate a rule that promotes such unsafe and improper operation of boilers and process heaters.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble Section V. for the responses on MACT Floor Analysis.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 29

Comment: If burn-off ovens are regulated, relief is needed during startup

If EPA regulates burn-off ovens under the CISWI rule, EPA should either allow a work practice approach during startup, or set emission limits that take startup emissions into account. In most cases, burn-off ovens must be pre-loaded with the parts to be cleaned at ambient or near-ambient conditions. Properly situating parts in the oven is generally very labor intensive and cannot be accomplished mechanically, especially after the oven has reached operating temperature. EPA‘s assumption that CISWI units would not be fed until reaching full operating conditions is

inaccurate for most units in this subcategory. As a result, these units would need relief during start-up from meeting standards established for normal operations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 37

Comment: EPA Has Not Considered Emissions During Startup, Shutdown, And Malfunction

The proposed CISWI Rule states that the emission limits will apply at all times, including startup, shutdown, and malfunction (SSM) periods. [Footnote: 75 FR 31949.]The current CISWI

rule includes an exemption for SSM periods and the standards only apply after waste is charged to the incinerator, but EPA is proposing that the emission limits will apply at all times based on a 2008 D.C. Circuit court ruling. Sierra Club v. EPA, 551 F.3d 1019 (D.C. Cir. 2008). That ruling, which vacated the SSM exemption in the general provision for standards promulgated pursuant to section 112, was decided under section 112 and has no effect on standards promulgated under section 129. [Footnote: As discussed in our comments on the proposed Boiler MACT and Area Source rules, ACC also believes that EPA's approach to addressing SSM under section 112 is incorrect and inappropriate.] The court vacated a general "exemption" from normal emission standards

promulgated under section 112 during SSM periods for standards promulgated under section 112. Id. That decision was based on the language of section 112, where the court found that the general duty standard, which applied during SSM periods, was not a "Section 112-compliant" standard. Id. No such finding has been made with respect to Section 111 or 129.

EPA admits that the SSM Decision "did not have a direct impact on source category-specific SSM exemptions" in section 129 standards. [Footnote: 74 FR 51375]EPA also agrees that the SSM decision "directly affects only the subset of CAA Section 112(d) rules that incorporate §63.6(f)(1) and (h)(1) by reference and that contain no other regulatory text exempting or excusing compliance during SSM events." [Footnote: Id. at 51394.] EPA's memorandum on the effect of the SSM decision identifies no section 111 or 129 standards that may be affected, and gave no indication that it believed the SSM Decision required re-evaluation of SSM provisions under those sections. [Footnote: EPA-HQ-OAR-2006-0534-0377.] Thus, EPA provides no rationale for why the section 112 SSM ruling has any bearing on section 111 or 129 standards such as the CISWI Rule.

Since 1972, EPA has recognized the need for SSM provisions because technologies used to meet these standards of performance often "do not reach optimum operating efficiency for some

time," and because there is a "statistical probability of infrequent, unavoidable mechanical

failures" that can make it impossible for a source to meet the standards during these periods.[Footnote: 37 FR 17214, Aug. 25, 1972.]

While the floor setting procedure may be similar, section 129 and section 112 require different standards. In particular, section 129 standards are performance standards promulgated under section 111. EPA has provided no justification as to how the SSM provisions in the existing CISWI rule do not comply with section 111 and section 129. We note that the court in the SSM decision found that the standard for SSM periods need not be the same standard as those for normal operations.[Footnote: 551 F.3d at 1027 (rejecting claim that Section 302(k)'s requirement that standards "assure continuous emission reduction" necessarily required "continuously applying a single standard").]

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 38

Comment: EPA's proposal to require CISWI units to comply with the same emission standards during periods of startup, shutdown, malfunction, and steady state conditions is neither logical nor lawful.

Before the court's decision in Sierra Club v. EPA, 551 F.3d 1019 (DC. Cir 2008) ("SSM Decision") addressing the SSM provisions in the MACT program, the DC Circuit had consistently held that technology-based standards promulgated under § 111, must contain exemptions or less stringent standards during periods of startup, shutdown, and malfunction (SSM) than would usually apply during

steady state periods. Since § 129 rules must also reflect § 111, EPA cannot rely on an SSM Decision decided under a different section (§ 112) to override the long-standing requirement that EPA must account for SSM events in § 111 standards.

For example, in Portland Cement, supra at 375, 396, 398 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974), the DC Circuit recognized that "'start-up' and `upset' conditions, due to plant or emission device malfunction, is an inescapable aspect of industrial life and that allowance must be made for such factors in the standards that are promulgated. The Court, which was addressing EPA's NSPS rules, also noted that including the startup, shutdown, and malfunction provisions "imparts a construction of 'reasonableness' to the standards as a whole and adopts a more flexible system of regulation than can be had by a system devoid of 'give." Id. at 399.

In Essex Chem. Corp. v. Ruckelshaus, 486 F.2d 427, 432 (D.C. Cir. 1973), petitioners argued that lesser or no standards should apply during startup, shutdown or malfunction conditions. The Court agreed, holding that such provisions "appear necessary to preserve the reasonableness of the standards as a whole." Id. at 433. And in NRDC v. EPA, 859 F.2d 156 (D.C. Cir. 1988), the court held that, although water-quality permit limits need not incorporate an "upset defense," "[a] technology-based standard discards its fundamental premise when it ignores the limits inherent in the technology." Id. at 208 (citing Marathon Oil. Co. v. EPA, 564 F.2d 1253, 1273 (9th Cir. 1977)). Consequently, because all pollution control technologies will occasionally malfunction and take time to get to their steady-state conditions (such as during startup, shutdown or malfunction), "achievable" technology-based standards must contain provisions for compliance during such unavoidable events.

Now that the court has decided that MACT compliant standards must apply during periods of SSM, the Agency must develop standards that are "achievable." Indeed, the court has already spoken to this issue when it stated, that for standards to be "achievable," they must be achievable under the most adverse circumstances which can reasonably be expected to recur. Sierra. Club, supra 666, citing National Lime Ass'n v. EPA 627 F2.d 416 (D.C. Cir. 1980)

("National Lime I"). Thus, since startup, shutdown, and malfunctions will recur,

EPA must set standards that must be achievable during those times.

EPA has stated that CISWI units can meet the standards during startup because most units use natural gas or clean distillate oil to start the units and then add waste once the unit has reached combustion temperature (75. FR 31964). This is simply not correct for burn-off ovens. For this sub-category, most of these units are charged with the parts to be cleaned and then the, burners are turned on.

The majority of the entire cycle is taken up by startup and shutdown. Thus, for one entire sub-category, facilities may not be able to meet the steady-state standards during startup and shut down.

CISWI facilities cannot comply with the standards EPA is proposing during periods of SSM. For example, facilities with baghouses cannot comply during startup periods because they have to bypass the bags until the temperature gets above the condensation point. Otherwise, they will prematurely damage their bags. There similar issues for other types of air pollution control devices.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 39

Comment: With regard to malfunctions, EPA asserts in the preamble to the proposed CISWI Rule that these periods should not be viewed as a "distinct operating mode," and thus, emissions from these periods do not need to be factored into developing the MACT floor levels.[Footnote: Id. at 31964.] Moreover, EPA states that even if malfunctions were to be considered a distinct operating mode, it would be

"impracticable to take malfunctions into account in setting CAA section 129 standards for

CISWI" given that these episodes are by definition sudden and unexpected events which vary in degree, frequency, and duration.[Footnote: Id.]

EPA has failed to recognize that even best performers will experience malfunctions. It is possible for pollution control equipment to fail in various ways that have nothing to do with the fact that units are top performers. Electrostatic precipitator fields can trip, power failures can occur, fabric filters can fail, scrubber pumps can fail. Industry can and does work to minimize such periods, but they do occur.

EPA's proposed changes to the requirements for the operator training program at section 60.2070(c) have deleted the requirement that facilities train operators on "Actions to correct malfunctions or conditions that may lead to malfunction" and replaced it with the requirement that facilities train operators on "Actions to prevent malfunctions or to prevent conditions that may lead to malfunctions." ACC agrees the training should cover prevention of malfunctions, however, it should also cover malfunction correction, since malfunctions are sudden and unexpected events that are not always preventable.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, see the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 61.

Commenter Name: Melvin E. Keener

Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 40

Comment: Just because EPA states that the goal of best performing sources is to have no malfunctions (75 Fed. Reg. at 31964) does not make malfunctions go away. Even the best operated and maintained facilities will have malfunctions and the courts have recognized the need to allow for "upset" conditions. For example, any facility that is tied into the external electric power grid (most have at least a small tie-in) will face power disruptions potentially causing. malfunctions. We have all lost power in our homes at one point in time — it's an inevitable. We also agree that it is difficult to develop the data necessary to set numerical emissions limits for transient conditions. For example, if a facility ran a Method 5 test during startup, a single test would take 3 — 6 hours (each run takes at least an hour, three runs are required for a valid test, and the sampler must have time In

between runs to change out the sampling trains). During those six to eight. hours, -the conditions would have, changed so significantly that it would be virtually impossible to understand what that data meant or to extrapolate the results

(which will be one hour averages) to other transient conditions.

As such, EPA must establish and explain why, facilities can comply with the standards, it promulgates. As the court noted in National Lime I, "by failing to explain how the standard proposed is achievable under the range of relevant conditions which may affect the emissions to be regulated, the Agency has not satisfied this initial burden." National Lime I, supra, at 433.

While it is appropriate to use data gathered under steady-state conditions to set emission standards for steady-state conditions, it is not appropriate (from either a logical or legal perspective) to apply those standards to non steady-state conditions. Since standards developed under steady-state conditions do not include transient events, they cannot possibly incorporate the variability that occurs under these conditions. Expecting a facility to comply with emission standards developed under steady state conditions during transient events is

neither logical nor is it lawful. If appropriate sampling methods can be developed, EPA should gather data during startups, shutdowns, and malfunctions and incorporate this data into the data gathered during steady-state conditions to set numerical emission standards. Emissions standards based on data collected during all modes of operation could then reasonably apply at all times.

CRWI would like to make one additional point. EPA should allow an alternate oxygen correction factor during SSM events. During the first part of startup and the last part of shutdown, the oxygen concentrations will approach ambient concentrations. When it does that, the equation used to calculate the correction factor will approach infinity (dividing by zero). Under these conditions, it is not appropriate to apply the oxygen correction factor as proposed. The HWC MACT

rule allows facilities to set up an alternate correction factor for these conditions. See 40 CFR 63.1206(c)(2)(iii). This is one example of how this problem can be addressed.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 44

Comment: Current SSM provisions will not work for these types of batch processes.

Burn-off ovens are batch operated units that must be loaded with the parts to be cleaned at ambient or near-ambient conditions. Properly situating, parts in the oven is generally very labor intensive and cannot be accomplished mechanically, especially after the oven has reached operating conditions. Typically these units will have a 6-8 hour cycle time taking 2 hours to come up to temperature, 2-3 hours to clean the part, and 2-3 hours to cool down. Given the short cycle time with a major portion of that cycle being in either startup or shutdown, EPA cannot rationally apply the same standards to these units at all times. If EPA decides to set standards for these units, they must set standards for at least three different operational modes (startup, normal operations, and shutdown).

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 61

Comment: To determine compliance with operating limits, except for BLD, 3-hour rolling average values are used. This is the same averaging time as in the current CCCC, where limits did not apply during SSM periods. It is impossible for 3-hour rolling averages to meet values set during steady state performance testing during startup/shutdown (SS) conditions. Would the response to this concern be that solid waste materials should not be fed until under steady state conditions and that the CCCC limits do not apply to the unit during those times? Or, would EPA say that the unit needs to meet DDDDD limits during SS periods when waste is not fired? This approach appears unworkable as it is proposed for some units. CIBO recommends that SSM periods be handled with a work practice approach, so that emission limits can be reasonably established using normal operating conditions. 75 FR 31976, 31992.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1

Comment Excerpt Number: 68

Comment: Other CEMS and Monitoring Systems. EPA has proposed the optional use of NOx, SO2, HCl, multi-metals, Hg, CEMS, and integrated sorbent trap Hg monitoring because CEMS data is not available. EPA concluded that use of a 24 hour block average was appropriate to address potential changes in emissions that cannot be accounted for with short term stack test data. EPA has not demonstrated how these 24 hour block averages are adequate to also cover inherent variability involved with startup and shutdown periods, which can be extensive for energy recovery units. 75 FR 31962.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 80

Comment: SSM (Start up, Shut down, Malfunction)

The Rule applies emission limits at all times, including during startup, shutdown, and malfunction (SSM) periods. 75 FR 31949. SSM periods are exempt from the CISWI Rule now in place. See, e.g. 40 CFR 60.43b(g). EPA proposed to eliminate the exemption, based on Sierra Club v. EPA, 551 F. 3d1019 (D.C. Cir 2008), which vacated the general exemption from emission standards during SSM periods for standards promulgated under §112. Sierra Club v. EPA is inapplicable to CISWI standards, which are NSPS standards promulgated under §111 and §129. EPA agrees that the case does not govern these rules. 75 FR 51375, 51394.

EPA asserts that CISWI unit compliance during startup and shutdown periods will not be a problem because:

"...most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." 75 FR 31964."

EPA asserts that emissions during malfunctions need not be accounted for in setting floors, because they are not a "distinct operating mode." 75 FR 31964. With regard to each of these operating conditions, EPA has failed to consider enough data to adequately characterize emissions variability. The standards were set based on 3-run stack test data obtained under the best of operating conditions (and typically only one operating condition), with no long-term CEMS data and no adjustment for fuel variability. Unless EPA collects and analyzes data to account for variability during SSM periods, it is arbitrary to apply emission limits developed based on best operating conditions to all boiler operating conditions.

Regarding operator training, the rule should include response to malfunctions, not just operation in a way to prevent malfunctions, as malfunctions do and will occur and operators must be prepared to handle them safely.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 82

Comment: Requiring Emissions Controls during SSM is Technically Infeasible

The decision by EPA to eliminate omission of SSM emissions records is not only short sighted but technically unjustified. A series of previous emission control programs over the last twenty-five years has resulted in the installation of several systems to achieve specific emission reductions through targeted technologies, but most are designed for steady state or normal operations.

The first of these was implemented under the CAA revision of 1990 that required units larger than 25 MWe to reduce sulfur emissions below 1.2 lb/MMbtu and achieve at least a 90% reduction. One of the few methods of doing this that could survive severe abrasive characteristics present in some units was dry limestone injection. This process is dependent on injection of sized limestone into the furnace/boiler, calcinations of the limestone, and subsequent absorption of sulfur present in the flue gas. This process begins to occur at a useful rate at about 860 deg. F and is functional up to about 2200 deg. F. (Unfortunately at about 1640 deg. F thermal NOx generation normally inhibits operation above that temperature.) For a boiler to achieve the lower useful temperature of 860 deg. F, it must be heated up to that level, generally using natural gas or fuel oil. This thermal change to the materials that boilers are fabricated with, is limited by impacts of thermal stresses placed on both the generating tubes and drum materials, by the manufacturers to a temperature increase of 100 degrees F per hour. Thus, to take a unit from 'cold' to the functional temperature that limestone becomes effective for SO2 removal, takes a minimum of about eight to ten hours. Application of normal steady state limits based on a temperature of 1600 degrees F makes no sense. Due to the high volume of combustion air involved during startup conditions, units falling outside of the optimum band for absorption also, so application of the limits during these periods is short sighted, as it is technically unfeasible to attain them.

A similar situation exists with respect to NOx. Many facilities were swept into further NOx reduction under the NOx Budget Program in the late 1990's. To meet these requirements, most installed a Selective Non-Catalytic Removal system, which injects ammonia or urea into the combustion gas stream and results in much of the NOx present there becoming a solid and mixing into the ash residue from combustion. This process occurs at a meaningful level at temperatures above 1200 deg. F up to about 1650 deg. F. The same 'heat-up' limits apply for cold plant startup, as well as the effectiveness of the impacts as listed above.

A second 1990 requirement resulted in baghouse installation instead of electrostatic precipitators

for any new installations. Unfortunately, for many of these units the baghouses were unable to withstand the gas stream temperature when they were heated up to operating temperature with gas or fuel oil burners, as the bags in them were limited to temperatures less than 350 deg. F. but greater than 150 deg. to avoid water formation/plugs in the ash and air stream. The high end could not be maintained with limited combustion air heater flow until the unit temperature approached about 800 deg. F during the heat up, while the lower end was present until achieving at least 300 deg. during the heat up. A baghouse bypass was installed for that purpose, although not used at any other time. Currently some bag vendors have developed replacements that can withstand a higher temperature and are more resistant to problem situations, but not all of them.

All of the above are functional in reverse during a shutdown. Other types of emissions removal [e.g. SCR] also require specific thermal inlet temperatures to function that cannot be maintained during either startup, shutdown, or during specific malfunctions.

Lastly, many CEM units are calibrated to operate at specific stack temperatures associated with normal operations. During thermal cycles of the unit, it is doubtful that any of the CEMs maintain required accuracy much less record actual emissions. It is likely that the only trustworthy data is opacity during SSM as most of the other instruments may provide an output, but nothing in the current regimen of testing assures its accuracy.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 83

Comment: Startup and Shutdown Periods are Best Accounted for with Work Practice Standards.

ICI boilers require an extended period of startup during which most, if not all, equipment in the boiler and pollution control systems are not operating in their normal condition. Consequently, pollutant emission concentrations and emission rates can exceed those experienced during normal operation. It is very common in the boiler industry for certain control devices to be out of operation during periods of startup due to the nature of the equipment. During such periods it is likely that emissions will exceed the standards proposed and would never be able to recover to meet the average limitations. (See below for a more expanded discussion with respect to a few specific technologies). EPA should develop work practice standards under CAA §111(h) to address startup and shutdown periods for CISWI units.

This extended startup period, typically several hours, is required due to equipment integrity concerns, limitations of the technologies, or safety concerns:

Equipment Integrity – For example, a Fabric Filter (FF) cannot be put into service until the flue gas temperature is above the acid dewpoint. This requires that all heat transfer surfaces, ducts and flues from the combustion zone to the FF inlet be warmed up from ambient temperatures to

above dewpoint temperature (which varies by fuel type and fuel constituents, but is typically in excess of 140oF / 60oC and can be up to 280 F / 138C). It takes a considerable amount of time, typically several hours for larger units, to warm up this considerable mass of refractory and steel: waterwall tubes, superheater tubes, reheater tubes, economizer tubes, casings, turning vanes, air preheaters, ducts and inlet plenums. During this warmup period, the FF cannot be put into service without risking catastrophic failure of the bags and intensive corrosion damage to the FF. This

limits a unit's ability to control particulate matter and mercury during the several hours of startup.

Limitations of the Technology – For example, units equipped with a Spray Dryer Absorber (SDA) for acid gas removal are limited in the amount of reagent slurry that can be injected into the flue gas during startup. The slurry feedrate is limited due to the nature of the technology by the amount of moisture the flue gas can evaporate. This in turn requires that a minimum temperature be achieved by the flue gas before the slurry feedrate can be initiated, and imposes a lengthy period of time during which the slurry feedrate is significantly limited until all the upstream heat transfer surface and ductwork has been warmed up. As such, SDA cannot remove Hydrogen Chloride in significant quantities for several hours after the unit is first fired.

Safety Concerns – For example, reductions in the amount of time required to warm the boiler system up could be realized by increasing the ramp-rate of adding fuel to the unit. In theory, a boiler could be brought from first flame to full load in a matter of minutes, but decreasing the warm-up period from what the OEM recommends risks severe metallurgical stresses due to rapid changes in temperature and wide variances in temperatures across boiler and duct parts. Immediate failures could occur if inconsistent heating caused tears or ruptures in support steel or heat transfer surfaces, posing considerable risk to personnel in the plant as well as potential off-site impacts. Failure rates would also increase due to the considerable stresses introduced by rapid heating and cooling cycles, yielding failures at unpredictable times (steady state operation or future startups or shutdowns). For this reason, OEM recommendations for startup times are closely followed across industry.

EPA makes a mistaken assumption that startups and shutdowns are "predictable and routine." 75 FR at 31964. Industrial facilities, unlike electric utilities, typically operate a large number of smaller units of varying ages instead of operating a small number of very large units. When normal equipment failure rates (e.g., tube leaks) are multiplied across a large number of units, the total number of unit failures can be significantly larger at industrial facilities. One member company operates a facility with over a dozen boilers, which average more than two unplanned outages per unit above and beyond each unit's planned outage in a any given year. It is not uncommon for unplanned outages to occur in clusters, such as when a given component (e.g., an economizer) might suffer a failure due to corrosion or erosion. Repairs may fix the failure at identified vulnerable areas nearby, but the root cause of the failure could be occurring in multiple areas that are not easily identified, resulting in additional failures in a short timeframe.

Startup and shutdown periods vary in duration and intensity, a fact that can significantly impact actual emission profiles. Additionally, because unplanned outages are a reality in the operation of any boiler, industrial or utility, and because unplanned outages are by their nature unpredictable, unplanned shutdowns can and will cluster together. For example, if a unit firing eastern bituminous coal equipped with a Spray Dryer Absorber for acid gas control were to have

two unplanned outages in the month following startup from a planned shutdown, the calculation of a 30-day average fails to prevent a deviation from the HCl standard [see submittal for table providing the example referenced by commenter]

Such a scenario would result in a unit being out of compliance because EPA inappropriately failed to craft a compliance protocol to address the fact that emissions performance during startups and shutdowns is necessarily not equivalent to emissions performance during steady-state operation.

Extended averaging periods are similarly inadequate to provide a reasonable method to demonstrate compliance with the CO standard, due to the inherent variability of CO in solid fuel boilers across the load range, but especially upon startup. [See submittal for figure showing CO data from a coal stoker fired boiler that monitors CO via CEMS provided by commenter.] It is readily apparent that CO emissions during normal startup conditions can be as two orders of magnitude above the proposed standard of 50 ppm for stoker boilers.

[See submittal for table with a data set illustrating the impact of a typical unit startup on a calculated 30 day average and the problem with requiring a unit to comply with a steady-state emission standard during startups and shutdowns.] Had this unit been subject to the standard proposed in this rule, the source would have been out of compliance due to the two calendar days that saw startup activities,

despite the fact that the source was operated near or below the proposed standard for CO the following 40 days.

EPA should instead provide additional provisions to ensure emissions are minimized during startups and shutdowns without unreasonably requiring sources to attempt to comply with steady-state emission standards. EPA should add provisions to require sources to develop and adhere to operating practices specific to the unit's design, fuel type, and OEM recommendations that will ensure emissions minimization without forcing owner/operators to choose between putting their equipment and personnel at risk versus failing to comply with this rule. Such an operating practice should be crafted to be flexible, given the wide variety of boiler sizes, types, vintages, and fuels fired, and should be developed by the source based on OEM recommendations. General guidelines could include:

* Sequencing of equipment startups, per OEM recommendations;

* Startup time durations, per OEM recommendations, and

* Provisions to clearly define what constitutes "online" versus "startup". This could be crafted to mean a percentage of the unit's maximum continuous rating, or steam temperature/pressure, etc.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1

Comment Excerpt Number: 84

Comment: The Rule Fails to Account for Malfunction Periods in Floor Setting.

It is also a concern that compliance with the emissions standards during malfunction events will be difficult to gauge since emissions testing during such events is near impossible given the sporadic and unpredictable nature of malfunctions.

The proposed rule could have the effect of forcing units to choose between safety and compliance with emissions requirements. For some affected units, malfunctions by their very nature create unsafe conditions which can lead to excessive combustible mixtures in a furnace that can result in explosions, equipment damage and personnel hazards.

EPA states in the proposed rule that if a source fails to comply with the applicable standard due to a malfunction, EPA "would determine an appropriate response." 75 FR 31964. Malfunctions occur due to component failure and have nothing to do with "poor maintenance or careless operation" as defined in 40 C.F.R. 60.2. Congress acknowledged that malfunctions cannot be prevented, and gave EPA authority to set alternate work practice standards, ensuring that sources would still be subject to standards during these periods. EPA also acknowledges that malfunctions cannot be prevented, even by top performers, and therefore defines malfunction in the regulations. Now, however, EPA unreasonably proposes to require all sources to comply with standards established for steady-state operation during periods of malfunction. This approach inappropriately fails to include provisions that take into account the unpredictable nature of malfunctions, and that malfunctions occur to all units including top performers and that appropriate responses to malfunctions must be planned for and training provided to operators to take appropriate safe action. EPA should write in §111(h) standard or include other provision to accommodate the unpredictable and unavoidable malfunctions that both Congress and EPA acknowledged would occur.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

11.2 SSM - Emissions

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 6

Comment: Inclusion of SSM emissions: CES agrees with the EPA that SSM emissions should be included in calculations of emissions.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 20

Comment: SSM HAP metal emissions should be included and can be measured with proven, contemporary monitoring methods.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 21

Comment: Inclusion of SSM emissions necessitates measurement of PM and vapor phases of all HAP metals including mercury

The Court of Appeals for the District of Columbia Circuit recently vacated the SSM exemption. Sierra Club v. EPA, 551 F. 3d 1019 (D.C. cir. 2008). This Court action has the following key, relevant implications:

CEMS will be required to measure emissions during randomly occurring malfunction events.

PM is not expected to be a good surrogate for HAP metals during SSM events in which emissions, control of these emissions, the chemical state of the emissions and the partitioning between phases could, and in realistic circumstances, would be expected to be different from those during normal operation.

All physical phases of all HAP metals, including mercury need to be measured during SSM events. For example, if mercury is captured on powdered activated carbon, which in turn is captured on a fabric filter, the percentage of mercury in the PM fraction downstream of the fabric filter during malfunctions could and would be expected to be significant.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: John A. Cooper
Commenter Affiliation: Cooper Environmental Services, LLC (CES)
Document Control Number: EPA-HQ-OAR-2003-0119-1133.2
Comment Excerpt Number: 26

Comment: The Court of Appeals for the District of Columbia Circuit vacated the SSM exemption. Sierra Club v. EPA, 551 F. 3d 1019 (D.C. cir. 2008).

CES is supportive of the inclusion of these emissions, feels it is a step in the right direction, will help plants better manage their emissions and will provide local stakeholders with the assurance that these emissions will be minimized in general as well as recognized early during malfunctions and thus minimized. New HAP metals monitoring methodologies certainly make this possible for all urban HAP metals as noted above. As such, CES strongly encourages the EPA to include these emissions as the Court has directed.

Inclusion of these emissions has significant implications. Although it is now technically possible to include these HAP metals, it may not be possible for all HAP species. However, such limitations should not prevent the EPA from moving forward with the inclusion of these emissions for those HAP species for which it is now technically feasible (HAP metals) and will in fact encourage the development of technologies for the measurement of those HAPs for which it might not be feasible at this time.

Emissions from these events should be included because current methodology allows these emissions to be monitored at no additional costs and if these emissions are significant, they should be included and if they are not significant it doesn't matter since the cost of including them is insignificant with this proven multi-metals CEMS technology.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 18

Comment: EPA stated at FR 75 page 31964 explains why startup and shutdown emissions are included in the emission limitations. The reasoning is that EPA believes CISWI units will be able to meet the emission limitations during periods of startup because most units use natural gas or fuel oil for startup and solid waste is added once the unit has reached combustion temperature. It is further stated that emissions from natural gas or fuel oil firing would generally be significantly lower than emissions from burning solid waste. EPA further states that "we believe we have addressed any minor variability that may potentially occur during startup or shutdown."

We strongly disagree that the emissions limitations would be reached during periods of startup for concentration values corrected to a given O2 level (in this case, 7%). While EPA accurately states that most units startup with natural gas or fuel oil (all our units startup on natural gas), this is not the case for everyone. We recommend that EPA reconsider these limits within the context of its prescribed methods and the operations of these facilities.

Furthermore, there are mathematical problems in using concentration levels corrected to an O2 level under startup conditions. Elevated O2 levels seen during startup result in highly inflated PPM values (we refer to this as "data blowup") that cannot be compensated for in a longer averaging time. For example, in the first hour of startup when the O2 levels are near ambient levels, the O2 correction calculations provided for in Method 19 of 40 CFR 60 Appendix A yield invalid numbers. If the O2 monitor reads 20.9% (common for the first hour in startup), the emissions in corrected PPM is equal to infinity. If the O2 monitor reads 21% at the beginning of

a startup (possible, given the accuracy of the instrument), the corrected PPM value will be a huge negative number. The excessively high PPM corrected values will continue for the first couple hours of startup and it can take up to 10 hours before the O2 level reaches anything close to 7%, at which point the mathematical "penalty" will stop. The same can occur in a shutdown, although for a shorter amount of time. No averaging time will compensate for the invalid values seen when using a concentration corrected to a given percentage of O2 during this time. We have corrected our operating permits in all cases that eliminates the use of a PPM corrected value (or a lb/MMBtu value, which in Method 19 carries the same mathematical problem) during startup or shutdown conditions. We instead rely on mass emission rate values, which is practical on a unit-by-unit basis considering actual size.

We provide a table that demonstrates this phenomenon where raw readings of 20 PPM (random value) are converted to the corrected value under various O2 levels [See submittal for attachment C provided by the commenter.]

While this issue may be "hidden" for compounds that are stack tested (assuming stack tests never occur during startup or shutdown), this issue is very obvious for pollutants that are continuously monitored. In our case, this is an issue for the proposed CO, NOx and SO2 emission limits. Note in addition to the CO CEM (required in the proposed rule), our facilities also are equipped with NOx and SO2 CEMs. So although the proposed method of compliance may be a stack test for NOx and SO2, we are continuously collecting data.

Since it is not practical to establish a concentration based limit during startup or shutdown, and a mass emission limit during such time cannot be established given the variability in the sizes of affected units, EPA must establish an alternative, such as a work practice standard, to apply during startup and shutdown events.

Additionally, we are concerned that an individual state agency could require stack testing during startup and shutdown to prove compliance with the emission limits for sources that utilize stack testing.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 8

Comment: EPA MUST PROVIDE SOME ACCOMODATION FOR STARTUP/SHUTDOWN/MALFUNCTION PERIODS.

EPA has proposed to eliminate §60.2120 from Subpart CCCC. This section currently reads as follows: § 60.2120 What happens during periods of startup, shutdown, and malfunction?

(a) The emission limitations and operating limits apply at all times except during CISWI unit startups, shutdowns, or malfunctions.

(b) Each malfunction must last no longer than 3 hours.

This action would therefore completely eliminate any provisions for higher excess emissions during SSM periods. To assure that startup, shutdown, and malfunction are appropriately accommodated, EPA must either assure that the data on which the standard is based include representative data from such periods, or alternatively, set a separate work practice standard to properly accommodate startup, shutdown, and malfunction. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." [pg. 31964].

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize many energy recovery units (not all boilers start up on natural gas or distillate oil). In addition, certain air pollution control equipment, such as electrostatic precipitators (ESPs), selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR) cannot be brought online until a minimum temperature is reached during startup. Thus, higher emission can and do occur during startup conditions.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 60

Comment: EPA states the following in the preamble to the proposed CISWI rule: "While the Court's ruling did not specifically address the legality of source category-specific SSM provisions adopted in the 2000 CISWI rule, the decision calls into question the legality of those provisions." [75 FR 31964] However, they do not explain why that is the case for standards adopted pursuant to Sections 111 and 129, not Section 112. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures.

Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." [75 FR 31964]

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers startup on natural gas or distillate oil). In addition, it also does not account for the fact that oxygen levels at startup can be very high and result in very high pollutant concentrations when correction to 7 percent oxygen is required. EPA recognized this fact in setting different emission standards for startup and shutdown under the recent revisions to the Portland Cement MACT standards and NSPS. [Footnote: Rulemaking dockets EPA-HQ-OAR-2007-0877 and EPA-HQ-OAR-2002-0051 (only prepublication versions of the final Portland Cement MACT standards and NSPS were available at submittal of this document).]

EPA also states: "Because we accounted for emissions variability and established appropriate averaging times to determine compliance with the standards, we believe we have adequately addressed any minor variability that may potentially occur during startup or shutdown." [75 FR 31964] AF&PA does not agree that EPA has considered enough data to adequately characterize emissions variability, as the standards were set based only on 3-run stack test data obtained under the best of operating conditions (and typically only one operating condition), no long-term CEMS data were used, no adjustment was made for fuel or feed pollutant content variability, and no data collected during periods of startup or shutdown were analyzed. In addition, the averaging periods under this rule are not adequate to account for conditions that may occur during startup or shutdown, as opacity and other operating parameters have only a 3-hour average and it may take 3 hours or longer for an energy recovery unit to reach normal operation after startup. Emissions measured using CEMS only have a 24-hour averaging period, and if stack oxygen levels are high during startup, emission limits will likely be exceeded for periods of time until a certain load is reached. As there is little short-term CEMS data in the CISWI database, we cannot provide specific examples for top performers.

Collecting specific emission data related to startup (or shutdown) periods would be problematic. Because by definition a startup is not steady state, it is unlikely that emissions over the course of a startup would be consistent. For example, if a startup required nine hours for a unit to go from a cold, ambient state to its normal operating

condition, it is likely that emissions would not be constant across the 9-hour startup period. Emissions would likely be higher initially, then emissions would approach the emissions measured at steady state as the unit approaches its normal operating conditions. The stack test would have to be designed to capture the entire start-up period such that one integrated sample over the entire start-up captured the different short-term emission rates, or multiple tests would need to be conducted, during multiple startups, to get replicate results of similar operating conditions.

It is common in industry for certain control devices to perform below optimum levels during periods of startup due to the nature of the equipment. Electrostatic precipitators (ESPs) must warm-up to be effective. This practice is recommended by vendors supplying such equipment. During periods of start-up, combustion starts and as fuel is introduced the ESPs warm-up on a designated curve that could last for between 5 and 8 hours. As the control device is heated up additional fuel is added until the ESP meets its design temperature and can be energized, then normal fuel firing is resumed. During such periods it is likely that emissions will exceed the proposed standards and would never be able to recover to meet the average limitations. This is only one example of equipment considerations during startup.

If work practices are not allowed under Section 129 regulations, EPA should gather additional data to determine if the standards being proposed truly are achievable during startup and shutdown for all types of units being regulated under the rule.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 68

Comment: By Applying The Proposed Emissions Limits During SSM Events, EPA Is

Proposing An Infeasible Standard Contrary To Court Directives

Because EPA is proposing to apply the MACT floors that were set by examining normal operating conditions to periods of SSM, the performance of the best performing sources must be established by including emissions data during SSM. EPA proposes that the variability calculations it performed for the data set of normal operating sources is sufficient to account for periods of SSM. This assertion by EPA is incorrect because no statistical analysis of the normal operating data can account for emissions during SSM events as the emissions during SSM events are completely different from those in normal operations. EPA is basically proposing an apples to oranges comparison.

EPA further states, without any supporting facts, that "most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures," and that "emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." EPA also ignores that kilns are not the same as incinerators. During unplanned S/S events, there continues to be raw material in the kiln and chemical reactions continue to occur for an extended period regardless of the type or amount of fuel being fed. 75 Fed. Reg. at 31964. These statements by EPA ignore the fact that (1) many of the pollution control technologies do not begin to operate until normal operations are maintained, (2) pollution controls must be shutdown before the units are shutdown, and (3) emissions can routinely be higher during times of SSM, even though waste may not be combusted.

EPA's descriptions, cited here, demonstrate that EPA has its facts wrong. Clean oil or natural gas applies to the narrow application of incinerators. EPA gives no consideration to kilns where initial fuel is used for heating, then the kiln introduces conventional fuels, then introduces raw materials; all before producing a product and reaching "normal" operations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)

Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 70

Comment: By not considering emissions during periods of SSM in the MACT floors, EPA is effectively establishing a standard that will be impossible to achieve. See Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 443 (D.C. Cir. 1980) ("EPA has a statutory duty to promulgate achievable standards."). The floors were developed with emissions data gathered only during times of steady state operations. By ignoring the variability that occurs during SSM events and the technological limitations of emission controls, EPA has established unrealistic emission floors based on data only from when a plant is operating optimally with no factual basis to demonstrate that such a floor could be achieved when SSM events are taken into account. Thus, EPA has provided no basis to justify that the established floor accurately depicts what the best-performing sources actually achieve during the entire course of their operations, and the established emission floors will almost certainly be impossible to meet on a continuous basis by even the very best performing sources.

In Hughey v. JMS Dev. Corp., 78 F.3d 1523 (11th Cir. 1996), the 11th Circuit found that where a developer took extensive steps to manage stormwater runoff he was not held liable for violations where the court found the statutory requirements impossible to achieve. In that case the developer took substantial steps to mitigate his pollution yet the statute's effluent limitations were so low that the court found that they were factually impossible to achieve, and thus unenforceable. Id. Likewise, in the case at hand, by ignoring SSM events, EPA's proposed emission floors will likely be unachievable by even those best-performing kilns that serve as the basis for the proposed limits.

The 9th Circuit Court of Appeals previously held that "EPA cannot require a level of control technology that is technologically and economically infeasible." Bunker Hill Co. v. EPA, 572 F.2d 1286, 1293 (9th Cir. 1977). "The proposed technology must not be 'at a level that is purely theoretical.'" Id. at 1294 (quoting Essex. Chem. Corp. v. Ruckelshaus, 486 F.2d 427, 433 (1973)). The "record must establish that the required technology is feasible, not merely possibly feasible." Id. at 1301. Establishing an emission limit that assumes that emissions will be curtailed without showing the feasibility of reducing those emissions is arbitrary and capricious. Id. at 1299. Here, at best, EPA establishes that the available technology is possibly feasible to meet the emissions standards during SSM by stating that "most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures." 75 Fed. Reg. at 31964. However, demonstrating that "possibly feasible" technology exists is not a sufficient basis to impose otherwise unattainable emission standards. Bunker Hill Co., 572

F.2d at 1301. As to malfunctions, EPA is proposing an enforcement discretion scheme that is not consistent or in accordance with the case law dictating how technology standards must be established. While EPA is proposing to provide relief from civil penalties, the standard would continue to apply for injunctive relief purposes. EPA is not proposing an affirmative defense as it suggests. It is simply providing a framework where sources would continue to have liability for malfunction events, but provide possible relief from civil penalties. EPA approach in the preamble seems to only apply to enforcement actions by EPA, and EPA should clarify how its approach applies to possible citizen suits addressing malfunctions.

There is a strong presumption that the process for setting an emission limit will demonstrate that it is not feasible to prescribe emissions floors during SSM events due to the inherent technological limitations that exist during these events. Thus far, no pollution controls work effectively during SSM, as the flue gas temperature is not within the range required by the control technologies. Additionally, the industry has concerns that applying emission floors to SSM events could have safety implications, as during these events the safety of kiln operators is a paramount concern, which might ultimately come into conflict with efforts to continuously achieve emissions limits. Unavoidable emergencies sometimes do occur at industrial facilities and EPA should not place plant operators in a position where they need to choose between protecting workers and complying with emissions limits.

The lack of data does not excuse the EPA from its affirmative obligation to set floor levels that are indicative of the level of performance actually achieved by the best performing sources throughout a range of operations. EPA cannot simply use the lack of data as an excuse to set overly stringent floor levels, particularly when general engineering principles strongly suggest that at least during SSM events emissions will be different than during normal operations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 4

Comment: The MACT floor limit of 2.2 ppmv CO from incinerators is not a practical limit especially if periods of startup are not exempt.

During the startup period for incinerators, the CO emission levels are much higher than emission levels once steady state operating conditions are reached. Typically, during periods of incinerator start-up, CO levels can be over I000 ppmv. During this time, the flame is not stable requiring adjustment to achieve an efficient burn. Once the flame has stabilized using conventional fuels (typically natural gas or propane), the temperature can be brought up until the waste is incinerated.

If the incinerator is designed for continuous addition of wastes, variation in the energy content of the waste and/or moisture content of the fuel may cause additional instabilities in the combustion process, which may cause swings in CO levels. It would be unlikely that the CO levels could be low enough under normal operating conditions for the average concentration to be under 2.2 ppmv for the averaging period. It is likely that for the source tests the sources used in determining the MACT floor were measured at steady state conditions.

If the emission limits are to include start-up operations then the underlying data must include startup operations.

Response: See preamble Section V. for the responses on MACT Floor Analysis and on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Steven G. Hanson
Commenter Affiliation: Graphic Packaging International, Macon Mill
Document Control Number: EPA-HQ-OAR-2003-0119-1959.1
Comment Excerpt Number: 4

Comment: On page 31964 of the Federal Register, EPA states we are not proposing a separate emission standard for the source categories at issue here that applies during periods of startup and shutdown. We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs. Furthermore, the approach for establishing MACT floors for CISWI units ranked individual CISWI units based on actual performance for each pollutant and subcategory, with an appropriate accounting of emissions variability. Because we accounted for emissions variability and established appropriate averaging times to determine compliance with the standards, we believe we have adequately addressed any minor variability that may potentially occur during startup or shutdown.

GPI — Macon Mill believes EPA has a flawed understanding of startup and shutdown operations within the energy recovery subcategory. The description EPA provides may be appropriate for traditional solid waste incinerators, but not all energy recovery units startup on fuels such as natural gas or fuel oil. In addition, while in startup or shutdown mode, not all emission control devices can be operated on an energy recovery unit.

If pulp and paper mill residuals are considered solid waste (as proposed under the alternative solid waste definition in the RCRA proposal), then GPI - Macon Mill's existing biomass boiler would potentially be a CISWI unit, within the energy recovery subcategory, as it presently combusts pulp and paper mill sludge. GPI — Macon Mill has the following concerns regarding startup and shutdown related emissions and compliance with proposed emission limitations:

A typical startup or shutdown for GPI — Macon Mill's existing biomass boiler is a period of approximately 8 hours and can comprise combustion of natural gas, biomass, fuel oil, or coal. For the proposed 24-hour averaging period, this comprises 21% of the averaging time, during which there is a strong probability compliance with the emission limitations might not be possible.

Control devices may not be capable of operating during periods of startup and shutdown, meaning monitored parameters would not be within ranges established during performance testing.

Ranges established during performance testing for parametric monitors are based on maximum normal operations, which differ substantially from startup and shutdown processes.

If the averaging period for a CEM is established as 24-hours, there is a strong probability that compliance with the proposed limitations is not possible.

EPA has a responsibility to set and enforce limits that a source can meet (i.e., achievable), not create a limit that is unattainable by any source in the US, new or existing. The proposed approach is the equivalent to setting the speed limit at an oncoming ramp to an interstate at

5 mph, and then expecting the car to immediately reach the speed of interstate traffic (55 mph or more) with no adverse events. The expectation of a source to comply immediately upon startup, which is known to have higher CO emissions, without taking into account these emissions when setting the MACT floor, is no different. Accordingly, GPI - Macon Mill contends that EPA

needs to establish separate emission limitations or, preferably, work practice standards specific to startup and shutdown operations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 20

Comment: EPA has used faulty logic to justify not setting separate emissions standards that apply during periods of SSM.

EPA goes on to explain that it did not propose separate emission standards that apply during SSM because (1) it "determined that CISWI units will be able to meet the emissions limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures", (2) "emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes", (3) "emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs", and (4) they "accounted for emissions variability and established appropriate averaging times to determine compliance with the standards".

While we are not commenting on the accuracy of EPA's logic regarding incinerators, we do not agree this logic applies to coal-fired boilers such as those Eastman uses to burn solid waste along with coal. Clearly, there are significantly higher and unpredictable emissions of carbon monoxide, PM, and opacity during the startup of a coal-fired boiler. We are including as Figure __ and Figure __ typical CO and opacity emissions from one of our stoker coal fired boilers that prove this point. In our case, the solid waste is not introduced to the boilers until they are fully started up on coal and have reached steady-state operation.

At least in the case of coal-fired boilers, we strongly disagree that EPA has gathered adequate data in the record to support their logic for requiring coal-fired boilers to meet steady state emission levels for CO (on a proposed 24-hour average) and opacity (on a 1-hour average).

Response: See preamble Section V. for the responses on Start-up, Shutdown, and Malfunction Requirements and opacity limits.

Commenter Name: Mark Denzler
Commenter Affiliation: Illinois Manufacturer's Association (IMA)
Document Control Number: EPA-HQ-OAR-2003-0119-2381.1
Comment Excerpt Number: 4

Comment: Startup, Shutdown, and Malfunction Requirements Are Unrealistic

The EPA proposal specifies that the proposed emission limits apply during periods of startup, shutdown, and malfunction. In support of this proposal, EPA states that startup and shutdown emissions are equivalent to normal operation emissions based on continuous emission monitoring

data obtained from best performing units that included periods of startup and shutdown. However, the test data does not show a sufficiently representative sampling of startup, shutdown,

and malfunction conditions that represent their duration and variety of characteristics. By considering these periods to be part of "routine operations" EPA ignored the circumstances that justify the establishment of work practices or emission limits that would apply in such situations.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 7

Comment: EPA's analysis failed to properly address the variability of the data, as well as emissions associated with startup, shutdown and malfunction.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 10

Comment: And more importantly as far as CO is concerned, CO stack tests that are conducted under steady state conditions cannot represent the actual variations in CO that will be recorded in the long term by a CO CEMS during periods of start-up, shut-down, and upsets. In the case of catalytic oxidizers used for control:

1. First they may not have been demonstrated for all fuels and all combustion technology, and therefore may not be effective, and

2. Secondly they are not effective during start-up conditions when the flue gas is below the effective temperature range of the catalyst.

Since MACT levels must be achieved in all conditions, EPA's approach makes it extremely unlikely any continuously monitored source could meet stringent CO limits. A more holistic, combustion engineering based

approach that recognizes feasible control technologies must be incorporated into these determinations and normal variability in emissions over the long term must be part of the consideration.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Jason Morin
Commenter Affiliation: Holcim (US) lnc.
Document Control Number: EPA-HQ-OAR-2003-0119-2042.1
Comment Excerpt Number: 12

Comment: EPA failed to develop SSM standards based on real data from cement kilns in SSM modes.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 15

Comment: To assure that startup, shutdown, and malfunction are appropriately accommodated, EPA must either assure that the data on which the standard is based include

representative data from such periods, or alternatively, set a separate work practice standard to properly accommodate startup, shutdown, and malfunction. EPA states in the preamble that they are not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly tower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs."

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers start up on natural gas or distillate oil).

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 20

Comment: EPA proposes that emission standards apply at all times but its floor setting methodology fails to consider actual emissions during startup, shutdown, and malfunction (SSM). EPA should require that State Implementation Plans (SIP) include a process which sets case-by-case numerical mass-based SSM emission standards.

Citing a 2008 court decision (Sierra Club v. EPA) related to General Provisions under 40 CFR Part 63, EPA has proposed that CISWI emission standards apply at all times, including during periods of startup, shutdown and malfunction (SSM). EPA acknowledges that the Court's decision did not specifically address category-specific SSM provisions. The case also did not deal with Section 129. As such, we believe that EPA is over-stepping its authority to void longstanding category-specific and Section 129 SSM provisions.

Aside from these legal deficiencies, EPA's proposed floor setting methodology fails to adequately consider emissions variability that occurs during SSM periods. In its proposal EPA states that its variability analysis (conducted using data from normal operating conditions) and an "appropriate" averaging time for limits adequately address SSM emissions but offers no further explanation. EPA downplays emissions variability during startup and shutdown, calling it "minor" and stating that natural gas or oil fired during startup and shutdown should reduce emissions, claiming "Emissions during periods of shutdown are generally significantly lower than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs." (75 FR 31964). Again, EPA offers no evidence to support these statements.

Emissions can be significantly higher during SSM due to the unavoidable less-thanoptimal emissions control performance during transitional (non-steady state) conditions. For example, at biomass-to-energy facilities combustion-related emissions such as CO,

particulate (smoke) and opacity increase during the startup period when load and temperature are coming up to full load steady-state conditions. The Maine Department of Environmental Protection has stated "Wood and multi-fueled boilers produce large CO variations during startups as the boiler heats up. Start-ups can take up to 14 hours for some units. Shutdowns can also result in significant CO variability." [Footnote: Letter James P. Brooks, Bureau Director, State of Maine Bureau of Air Quality to James Eddinger, USEPA, February 4, 2010.] (See Attachment 1.) [See Submittal for Maine DEP report and letter in Attachment 1 provided by

commenter.] Startup burners reduce emissions by preheating the combustion chamber and downstream equipment but are not sized to achieve full load temperatures and even if they were could not completely avoid temporary sub-optimal combustion conditions as heat load shifts from auxiliary fuel to waste during startup and from waste to auxiliary fuel during shutdown. Air pollution control equipment goes through similar transient temperature and flow conditions, e.g. changing furnace temperature profiles make SNCR systems less effective during startup than during full load steady state conditions. These conditions are distinct from the variable conditions that occur during normal operation. EPA's emission database excludes SSM periods and therefore does not capture this component of variability, leading to MACT floors that have not been achieved in practice.

Consider for example Covanta Energy Corporation's biomass-to-energy facility in Delano, California. The Delano plant combusts biomass in two bubbling fluidized bed combustors each equipped with natural gas fired auxiliary burners for startup and shutdown. The following table compares CO emissions observed during startup and shutdown periods with those during normal operations for the most recent four calendar quarters. Hourly averages from each unit were collected from the certified CEM system. Startup consisted of 2 hours worth of data before boilers were online and shutdown consisted of 2 hours of data after the boilers were offline. Normal emissions constitute the remaining hours. As can be seen both the average CO emissions and the standard deviation are far greater during startup and shutdown, contradicting EPA's "minor" characterization and indicating a variability that EPA's floor methodology does not consider.

[See submittal for table provided by commenter showing CO Concentrations for normal emissions, startup, and shutdown.]

EPA proposes to account for SSM emissions through "appropriate" and presumably longer averaging times which allegedly buffer out the effect of short term increases in emissions during SSM conditions. However, EPA failed to consider actual CISWI unit SSM data, simply claiming that the longer averaging times should suffice without actually changing the limit to account for any emission increases. In addition, EPA's "appropriate" time averages are inadequate; for all pollutants for both new and existing unit standards the averaging time is the shortest possible for valid performance tests, i.e. the duration of the EPA Reference Method which is only three to twelve hours. Only new unit CO has a longer averaging time, 24 hours. (75 FR 31985, Table 6 and 75 FR 32002, Table 7). EPA neither changed the emission limit nor meaningfully lengthened compliance averaging times to accommodate any variability in emissions due to SSM.

EPA should set standards which incorporate SSM emissions. There are a few options. First, EPA could set standards applicable at all times which reflect the emissions variability inclusive of SSM. Second, EPA could set distinct standards which would apply only during SSM periods. Both these options are problematic since its emission database does not contain SSM data and EPA would need to gather additional test data for the various subcategories and units. EPA could use certified continuous emissions monitoring data for those few pollutants that are continuously monitored, but non-CEM pollutant data would likely be unavailable and involve a costly and time-consuming effort to collect using manual methods. Collecting non-CEM pollutant data is further complicated by the fact that EPA's stack testing procedures (40 CFR 60, Appendix A) require that testing be conducted under steady state conditions.

There are also difficulties trying to set concentration-based standards corrected to a

standard diluent concentration (e.g., ppmdv @ 7% O2) for startup and shutdown periods.

Emission concentrations soar artificially due to the exponentially increasing correction factor as the stack oxygen concentration approaches ambient levels and CO_2 concentrations approach zero. At low unit loads at the beginning of startup or at the end of shutdown corrected emission concentrations could be very high giving the appearance of significant emissions when the actual mass emissions (pounds per hour) are small due to lower stack volumetric flow rates. If EPA decides to set concentration standards for SSM periods it should recognize the diluents caps of 14 percent for oxygen or 5 percent for carbon dioxide in emission calculations as is currently done in the Large MWC MACT rule (40 CFR 60.58b (b)(8)).

ERC supports a third SSM standard option in the CISWI rule which solves both the data availability and concentration-based standards problems. This approach would require that each State address SSM emission standards in its State Implementation Plans (SIP). The SIP would specify a procedure which would be used to set mass rate emission based standards for each subcategory and unit case-by-case based on emissions reductions achieved using accepted startup, shutdown and malfunction related procedures. For example, for a unit using SNCR NOx reduction technology the SSM NOx standard would be set considering the SNCR system would not be fully operable for a period of time after startup until the furnace temperature profile stabilizes. SSM emissions would be minimized by the same emission reduction technologies that would enable units to comply with all MACT standards and would thus represent a small component of a unit's annual emissions. The case-by-case SSM emission limits would be written into facility permits and become federally enforceable mass emission standards. The unit's continuous emission monitoring system (CEMS) would be used to calculate and report mass emissions during SSM periods.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 38

Comment: EPA states the following in the preamble to the proposed CISWI rule: "While the Court's ruling did not specifically address the legality of source category-specific SSM provisions adopted in the 2000 CISWI rule, the decision calls into question the legality of those provisions."[Footnote: 75 FR 31964.] We do not agree. Moreover, EPA fails to explain why that is the case for standards adopted pursuant to sections 111 and 129. EPA states in the preamble that it is not proposing separate emission standards during startup or shutdown for the following reasons:

"We determined that CISWI units will be able to meet the emission limits during periods of startup because most units use natural gas or clean distillate oil to start the unit and add

waste once the unit has reached combustion temperatures. Emissions from burning natural gas or distillate fuel oil would generally be significantly lower than from burning solid wastes. Emissions during periods of shutdown are also generally significantly lower

than emissions during normal operations because the materials in the incinerator will be almost fully combusted before shutdown occurs."

While this may be generally true for incinerators currently regulated under CISWI, this does not adequately characterize burn-off ovens (which are charged at ambient or near-ambient conditions and then heated to temperature) and many energy recovery units (not all boilers startup on natural gas or distillate oil). In addition, it also does not account for the fact that oxygen levels at startup can be very high and result in high pollutant concentrations when correction to 7% oxygen is required. EPA recognized this fact in setting different emission standards for startup and shutdown under the recent revisions to the Portland Cement MACT standards and NSPS. [Footnote: Rulemaking dockets EPA-HQ-OAR-2007-0877 and EPA-HQ-OAR-2002-0051 (only pre-publication FR versions of the final Portland Cement MACT standards and NSPS were available at submittal of this document).]

EPA also states: "Because we accounted for emissions variability and established appropriate averaging times to determine compliance with the standards, we believe we have adequately addressed any minor variability that may potentially occur during startup or shutdown." [Footnote: Id. at 31964] ACC does not agree that EPA has considered enough data to adequately characterize emissions variability, as the standards were set based only on 3-run stack test data obtained under the best of operating conditions (and typically only one operating condition), no long-term CEMS data were used, no adjustment was made for fuel or feed pollutant content variability, and specific data from periods of startup or shutdown were not collected nor analyzed. In addition, the averaging periods under this rule are not adequate to account for conditions that may occur during startup or shutdown, as opacity and other operating parameters have only a 3-hour average and it may take 3 hours or longer for an energy recovery unit to reach normal operation after startup. Emissions measured using CEMS only have a 24-hour averaging period, and if stack oxygen levels are high during startup, emission limits will likely be exceeded for periods of time until a certain load is reached. As the short-term CEMS data in the CISWI database is very limited, we cannot provide specific examples of CEMS data that show fluctuations during SSM for top performers.

Collecting specific emission data related to startup (or shutdown) periods would be problematic. Because by definition a startup is not steady state, it is unlikely that emissions over the course of a startup would be consistent. For example, if a startup required nine hours for a unit to go from a cold, ambient state to its normal operating condition, it is highly likely that emissions would not be constant across the 9-hour startup period. Emissions would likely be higher initially, then emissions would approach the emissions measured at steady state as the unit approaches its normal operating conditions. There is also no assurance that each startup of a unit will be the same from a time, temperature, or emissions perspective, since operator actions are almost always involved. The stack test would have to be designed to capture the entire start-up period such that one integrated sample over the entire startup captured the different short-term emission rates, or multiple tests would need to be conducted, during multiple startups, to get replicate results of similar operating conditions.

It is common in industry for certain control devices to perform below optimum levels during periods of startup due to the nature of the equipment. Electrostatic precipitators (ESPs) must warm-up to be effective. This practice is recommended by vendors supplying such equipment. During periods of start-up, combustion starts and, as fuel is introduced, the combustion

equipment and ESPs warm-up on a designated curve that could last for between 5 and 8 hours. As the control device is heated up additional fuel is added until the ESP meets its design temperature and can be energized, then normal fuel firing is begun. During such periods it is highly likely that emissions will exceed the proposed standards and would never be able to recover to meet the average limitations. This is only one example of equipment considerations during startup that EPA should be considering in establishing emission standards.

If work practices are not to be included in the final rule, EPA should gather additional data to determine if the standards being proposed truly are achievable during startup and shutdown for all types of units being regulated under the rule.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 39

Comment: Another major flaw is that EPA did not include emissions data during either startup or shutdown in the development of these standards because all data was collected under steady-state conditions. Emissions under non-steady-state conditions may vary significantly during these events and that variability is not captured in the data EPA used to set the standards. The only place where such data might be available is in the CO CEMs data The CISWI unit that EPA has CO CEMs data is ARDomtar. This unit labels two hourly data points as startup —one has 346 ppmv and the other is 3075 ppmv. This is not enough information on which to draw any conclusions. Of the boiler units where EPA has CO CEMs information, only one (VAPhilipMorris) labeled the operations as normal, startup, or shutdown. They did not identify any times that were malfunctions: The average of the hourly average CO CEMs readings for normal operations was 54 ppmv. This unit identified 34 hours where they were in startup mode. The average of the hourly CO CEMs readings for these 34 hours was 162 ppmv. There were 12 hours identified as shutdown mode. The average of the hourly CO CEMs reading for these 12 hours was 55 ppmv. This seems to indicate is that the CO readings during shutdown may be similar to those during normal operations but that the reading during startup may be significantly higher. However, this is a very limited set of data from one source and EPA should not make decisions based on such a limited data set. What it does indicate is that there may be differences during startup and the Agency should collect additional data.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 52

Comment: CO on a 24 hour block average basis with CO CEMS for new units at a 3 ppm does not address start-up/ shutdown periods where levels will be higher. No data was collected or used to demonstrate the levels achieved by the best performers during those vital periods.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and on Start-up, Shutdown, and Malfunction Requirements.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 81

Comment: EPA Asserts without Support that CEMs Data Includes SSM Periods .

To support its conclusion that the proposed emission standards are achievable even if applied during all operational periods, including during SSM events, EPA asserts that startup and shutdown emissions replicate normal operation emissions. These conclusions are not supported by the record. EPA relied on continuous emission monitoring (CEMs) data obtained from best performing units, which EPA claims included periods of startup and shutdown. It is unclear whether this CEMs data actually warrants these conclusions. First, it does not appear that any of the units considered in the data collection were in startup or shutdown during the 30-day period of testing that EPA looked at. If that is the case, then the CEMs data gives no bearing on

whether units can satisfy emissions limits over a 30-day period if all startup and shutdown events are included.

Another concern is that EPA used 3-run stack test data, and not 30-day data, to set the proposed emissions floors. EPA uses test run data collected through the ICR phase II testing process– which reflect normal, often steady state, operating conditions –to set proposed floors.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and on Start-up, Shutdown, and Malfunction Requirements.

11.3 Other - SSM

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 16

Comment: I also want to underscore the importance of eliminating the malfunction exemptions. On the other rules, the exemption allows chemical plants, refineries and other major facilities to violate their emissions standards over and over and over again without any accountability. And

as you know, I have personally fought a very long battle with the Agency on the startup/shutdown of malfunction provisions. These provisions at large sources of combustion like refineries, chemical manufacturing facilities, power plants, cement kilns can double or triple emissions. And it's very difficult with these startup/shutdown and malfunction get out of jail free cards for local citizen groups to have any kind of enforcement hook to reduce those emissions. It makes a mockery of the toxic release inventory. It makes a mockery of the permits to allow these start-up and shutdown malfunction exemptions. And so I actually copied pretty good case law from the D.C. Circuit on this and we want to make sure that these startup/shutdown malfunction provisions are closed.

Response: See preamble Section V. for the response on Start-up, Shutdown, and Malfunction Requirements.

12.0 RECORDKEEPING AND REPORTING REQUIREMENTS

12.1 Data reporting requirements

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 42

Comment: Under 40 CFR 60.2115 and 2680, pollution control devices not specifically identified by the CISWI rule, require a petition and approval process before their use. The list only includes wet scrubber, activated carbon injection, selective noncatalytic reduction, and electrostatic precipitator. We believe that baghouses have been inadvertently omitted from this list. In addition, the requirement to petition alternative control technologies should not apply to inherent process controls or other proven pollution control techniques employed by CISWI kilns that may assist in complying with CISWI limits. EPA should exempt this unnecessarily burdensome requirement for CISWI kilns.

Response: This edit has been made in the final regulation.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 16

Comment: Reporting time - As is discussed in other sections of the rule, test results must be reported within 60 days of the completion of the test. Test results for some parameters may not even be available until weeks following the completion of testing. Sixty days does not provide sufficient time to properly review all data results (including requisite quality control and assurance), perform and review the calculations and conclusions resulting from the test, prepare

and certify reports, and submit results electronically or manually. Similar requirements under the Hazardous Waste Combustion (Subpart EEE) and other MACT standards allow for reporting 90 days following testing. In addition under Subpart EEE itself, there is a provision to request additional time beyond 90 days. EPA has given no reason for requiring such a short reporting period.

In the final rule, Dow requests that:

* EPA revise the provision for test reports, such that these reports be due no sooner than 90 days following completion of testing, and

* EPA add a provision to allow requests for additional time for submitting test results.

Response: Existing CISWI units have been complying with this schedule for several years.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 21

Comment: EPA should exclude CISWI energy units from complying with the following elements that are clearly meant for traditional waste incinerators.

Requirements to perform a siting analysis prior to constructing a new source, modifying or reconstructing an existing CISWI unit.

Requirements to prepare a written waste management plan (§60.2265) addressing cost-effective actions to separate and segregate materials from the waste stream to reduce emissions of toxic pollutants.

Response: See preamble Section V. and the final rule for reporting requirements.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 26

Comment: Under 40 CFR 60.2115 and 2680, pollution control devices not specifically identified by the CISWI rule, require a petition and approval process before their use. The list only includes wet scrubber, activated carbon injection, selective noncatalytic reduction, and electrostatic precipitator. We believe that baghouses have been inadvertently left off this list. In addition, the requirement to petition alternative control technologies should not apply to inherent process controls or other proven pollution control techniques employed by CISWI kilns that may assist in complying with CISWI limits. EPA should exempt this unnecessarily burdensome requirement for CISWI kilns.

Response: This edit has been made in the final regulation.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 37

Comment: Reporting time

As is discussed in other sections of the rule, test results must be reported within 60 days of the completion of the test: Test results for some parameters may not even be available until weeks following the completion of testing. Sixty days does not provide sufficient time to properly review all data results (including requisite quality control and assurance), perform and review the calculations and conclusions resulting from the test, prepare and certify reports and submit results electronically or manually. Similar requirements under the Hazardous Waste Combustion (Subpart EEE) and other MACT standards allow for reporting 90 days following testing. In addition under Subpart EEE itself, there is a provision to request additional time to complete a report in case 90 days is not enough time. EPA has given no reason for requiring such a short reporting period.

Response: Existing CISWI units have been complying with this schedule for several years.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 58

Comment: The Proposed Performance Testing Requirements are Excessive and Should be Reduced to a Reasonable and Appropriate Level.

EPA proposes at §63.2710(b) that all units conduct performance tests for PM, HCl, fugitive emissions, and opacity on an annual basis. EPA further requires energy recovery units to conduct annual performance tests PM, HCl, cadmium, lead, mercury, dioxins/furans (D/Fs),

opacity, fugitive emissions, NOx, and SO2 (unless a CEMS is used for either PM, HCl, Hg, NOx, and/or SO2). Thereafter, EPA proposes to reduce the frequency to three years if there have been three tests in a row that have results of less than 75 percent of the emission standard.

This frequency of testing is unreasonable and inconsistent with other MACT and NSPS standards and other state performance testing requirements. The HWC MACT, for example, requires a Comprehensive Performance Test (CPT) only once every 5 years (and, for some units, a confirmatory test for D/Fs in between CPTs). Many MACT standards and NSPS standards only require one initial performance test unless there is a physical change to the control device. The purpose of the initial performance test is to confirm that the technology installed is capable of meeting the emission limits and continuous parameter monitoring is used to monitor its continued performance.

For facilities with multiple CISWI units, annual testing is a burdensome and costly requirement. We recognize EPA has included a provision to skip to a three year frequency, but a source must pass three tests in a row with at least a 25% margin. Given the very stringent limits EPA has proposed, very few units are likely to qualify for this provision, so we question its value.

We believe that there is not adequate justification for annual testing. While we understand EPA has already promulgated this requirement for the original relatively narrow set of CISWI sources, it is now expanding the applicability to potentially hundreds of units and adding several pollutants to the list. The testing for D/Fs in particularly costly and takes two test days to accomplish. We estimate that one of these comprehensive performance tests for all the

pollutants would cost about $60,000. The continuous parametric monitoring requirements proposed in required by the proposed rule provide ample assurance the control equipment are not deteriorating and are operated properly.

Response: See preamble Section V. and the final rule for testing provisions.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 60

Comment: EPA Should Allow More Time For Submitting Test Reports And Allow Requests For Additional Time

As proposed, test results must be reported within 60 days of the completion of the test. However, test results for some parameters may not even be available until weeks following the completion of testing (especially dioxin/furan). Sixty days may not provide sufficient time to properly review all data results (including quality control and assurance procedures), perform and review the calculations and conclusions resulting from the test, prepare and certify reports, and submit results electronically or manually. Similar requirements under the HWC MACT and other MACT standards allow for reporting 90 days following testing. In addition there is a provision in the HWC MACT to request additional time to complete a report if 90 days is not enough time.

ACC member experience has shown that more than 60 days is almost always needed. We believe EPA should allow 90 days and also include a provision for a source to seek additional time.

Response: Existing CISWI units have been complying with this schedule for several years.

12.2 Records that must be retained

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 9

Comment: We request that EPA reduce some of the recordkeeping burden. For example, calculating three-hour rolling average values on continuous temperature data is a excessive requirement for such small sources.

Response: See the final rule on recordkeeping requirements.

12.3 Electronic Reporting Mechanism

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 77

Comment: EPA Should not Require ERT Reporting

The requirement for ERT reporting should be removed. Industry had many problems submitting Industrial Boiler MACT and CISWI ICR data using the ERT, and there are still many problems with the tool based on experience that utilities and testing firms are having while entering Utility Boiler MACT ICR data into the tool. Use of this tool will add cost and burden to the already costly emissions testing requirements in this rule. The tool is not a replacement for a stack test report, but rather an additional reporting burden, as permitting agencies will still require a hard copy stack test report with all supporting documentation.

The following are examples of issues encountered with the ERT:

* It is not intuitive and it is difficult to use.

* It is not set up to handle data from multiple stacks from the same source being tested at the same time.

* It only allows for one intermittent leak check during a test run. Many stacks have more than two ports so the ERT should be set up to handle those scenarios rather than having to add leak check volumes together to come up with a total.

* It is not set up to handle mixed blend calibration gases, which are extremely common.

* The import tool is inadequate, as it does not have enough rows for long runs and often imports data in the wrong order.

* The tool is not set up to handle blank corrections.

* The tool is “buggy” and slow to respond.

* The tool seems to only be designed to work under the most ideal of test scenarios, which is not always realistic. The EPA should ask for comments on the format and uploading tool from individuals that encounter actual real world scenarios for testing to incorporate into future editions.

* Revisions to the ERT should have a revision number such that the users can

make sure the version they are using is the most recent version available.

Requiring the ERT will add time and cost to stack testing projects, as time will have to be spent entering the test data into the tool and then quality assuring the ERT output. We do not believe that EPA has included this extra cost in their analysis.

In addition, compliance tests are submitted to the state or local permitting agency for review and approval. At times, the agency provides comments to the regulated facility that adjust the test results. In these cases, the information entered into the ERT at the time of the stack test would not match the final, state-approved emission test results. At a minimum, there needs to be a mechanism for the ERT data to be updated in these situations or a flag to indicate whether the report has been reviewed and approved by the permitting agency. Alternatively, EPA could require the permitting agency to enter the stack test results into the ERT once approved, rather than requiring facilities to enter the data.

If use of the ERT is required, EPA needs to develop a comprehensive ERT Guidance Manual that provide complete instructions with examples for:

* all entries including:

* the various facility identification codes, and where to find them

* BDL instructions

* calibration instructions

* required attachments

* the "external" spreadsheets" that are used to import certain data into the ERT

* the "external spreadsheets" that are used for reporting test methods not currently supported by the ERT

EPA should also develop an "outreach" or "training" program that provides instructions for specific source categories and related parameters. Such efforts need to be readily-available – via presentations at relevant conferences/seminars, as well as web-based sessions ("webinars").

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Darryl Sanderson
Commenter Affiliation: The Dow Chemical Company (Dow)
Document Control Number: EPA-HQ-OAR-2003-0119-1766.1
Comment Excerpt Number: 15

Comment: Dow requests changes to the reporting requirements for testing reports

Dow requests that EPA remove the mandatory requirement to use the WebFIRE database for submitting test results electronically, or make use of the tool optional. In addition, Dow requests that EPA allow more time to prepare and submit test results.

Section 60.2235(b) of the proposed subpart CCCC and section 60.2795(b) of the proposed subpart DDDD requires that, beginning December 31, 2011, all test data conducted to demonstrate compliance be entered electronically into EPA's WebFIRE database within 60 days

of completing a performance demonstration. Dow has the following concerns with this proposed requirement:

Lack of justification - EPA provides no insight or justification in the preamble or otherwise for requiring this form of data submittal. The cost of this requirement, as compared to conventional reporting, is not evaluated or disclosed in the proposed rule. Although a number of affected facilities may be already trained and equipped to accomplish such electronic reporting, many of the affected facilities have not had to participate in such reporting procedures in the past. These facilities will require additional staff time, equipment and training to accomplish this requirement. The proposed effective date of this requirement means that even the initial reporting must be conducted electronically. This further burdens the affected facilities in unnecessarily having to develop new reporting techniques and procedures concurrent with the other tasks required to implement a new rule. EPA has failed to describe any benefit of this requirement as compared to these additional burdens.

Potential lack of state acceptance - It is also likely that implementation of the initial testing, much less any later testing, will be accomplished under state authority. Unless state agencies are willing to use this same electronic reporting tool, facilities will have a dual requirement for reporting. EPA has also failed to describe any effort to convince state agencies to use this tool as their preferred reporting mechanism.

Potential lack of textual explanation - Dow is also concerned about other uses of the information in the tool. For example, test results from testing companies can incorporate a number of "qualifiers" in their data reporting, especially when results are near detection limits (e.g., ND for not detected, LOQ for limit of quantitation, BLQ for below limit of quantitation, "<" for less than). Sometimes a test will include additional sampling runs that are not used for demonstrating compliance in case there was a reason to abort a sampling run. Facilities report that data, too, since it was part of the testing effort. Testing companies also report and explain deviations from a test plan or test method or analytical method in case conditions arose during the test that required the deviation. These small deviations are usually discussed with agency observers at the time so the testing can continue and be completed. If the electronic tool cannot accommodate the use of textual explanation about these anomalies, then the tool's usefulness and accuracy is suspect and could cause additional burden on the facility to explain.

In the final rule, Dow requests that:

* EPA eliminate the use of WebFIRE as a mandatory requirement but instead allow facilities to have the option to report performance evaluations electronically

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 13

Comment: The State intends to continue to request sources to submit stack test reports to the State, in addition to EPA's collecting stack testing data via the Electronic Reporting Tool (ERT).

The State appreciates EPA's need to readily access stack test data and applauds efforts to improve emission factors. However, the State believes that the stack test data reported must be considered along with additional, specific information for each source's operations. This evaluation cannot be easily conducted with the limited data reported in the ERT. The State believes that the stack test data submitted in the ERT, taken at face value, may be misleading unless the context in which the testing was completed is understood. Until the number and degree of source configuration and operation variables can be adequately accounted for and

reported in one reporting tool, allowing the associated test data to be wholly considered, the State will continue to request stack test reports be submitted to the State.

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Renee Lesjak Bashel
Commenter Affiliation: Small Business Ombudsman and Small Business Environmental Assistance Programs (SBO/SBEAP)
Document Control Number: EPA-HQ-OAR-2003-0119-2254.1
Comment Excerpt Number: 4

Comment: Recommendation: Take the burden off smaller sources for providing data electronically. Consultant costs will be prohibitive, alongside the already high cost of testing.

At a recent training program, one of the SBEAPs reportedLy Learned that it can take a person—with experience using computers—a coupLe days to enter aLL the data into EPA's ELectronic Report TooL (ERT) system as required in 60.2235(b) and 60.2795(b). The consuLtant fee was reportedLy thousands of doLLars, just for the data entry. If they cannot afford to have someone eLse enter the data, smaLL business owners and their staff often Lack basic computer use experience sufficient to maintain the most basic records and spreadsheets much Less use a compLex appLication on their own. In addition, many smaLL businesses may not have the computing power to deaL with a program in Microsoft Access and transfer fiLes that it generates.

UntiL EPA can streamLine this system and make it something anyone can easiLy use, pLacing the burden of data entry on a business shouLd be Left to the Larger major sources that are better abLe to afford the cost.

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Melvin E. Keener
Commenter Affiliation: Coalition for Responsible Waste Incineration (CRWI)
Document Control Number: EPA-HQ-OAR-2003-0119-2128.1
Comment Excerpt Number: 36

Comment: CRVVI requests EPA remove the mandatory requirement to use the WebFire database for submitting test results and allow additional time to generate test reports.

§ 60.2235(b) of the proposed subpart CCCC and § 60.2795(b) of the proposed subpart DDDD requires that, beginning December 31, 2011, all test data conducted to demonstrate compliance be entered electronically into EPA's WebFire database within 60 days of completing a performance demonstration. CRWI has the several concerns with this proposed requirement.

Lack of justification

EPA provides no insight or justification in the preamble or otherwise for requiring this form of data submittal. The cost of this requirement, as compared to conventional reporting, is not evaluated or disclosed in discussion of the cost and impact of the proposed rule. Although a number of affected facilities may be already trained and equipped to accomplish such electronic reporting, many of the affected facilities have not had to participate in such reporting procedures in the past. These facilities will require additional staff time, equipment and training to accomplish this requirement. The proposed effective date of this requirement means that even the initial reporting must be conducted electronically. This further burdens the affected facilities in unnecessarily having to develop new reporting techniques and procedures concurrent with the other tasks required to implement a new rule. EPA has failed to describe any benefit of this requirement as compared to these additional burdens.

Potential lack of state acceptance

It is also likely that implementation of the initial testing and most subsequent testing will be done under state authority. Unless state agencies are willing to use this same electronic reporting tool, facilities will have a dual requirement for reporting. EPA has also failed to describe any effort to convince state agencies to use this tool as their preferred reporting mechanism. At a recent conference, a number of state regulators were asked about using WebFire to report test results. They responded that just having the numbers does not tell the whole story. It is important to look at the qualifiers, the test methods, the QA/QC plans, and the justifications before making any decisions on the validity of the numbers. For example, test results from testing companies can incorporate a number of "qualifiers" in their data reporting, especially when results are near detection limits (i.e., ND for not detected, LOQ for limit of quantification, BLQ for below limit of quantification, "<" for less than, etc.). Sometimes a test will include additional sampling runs that are not used for demonstrating compliance in case there was a reason to abort a sampling run. Facilities report that data too, since it was part of the testing effort. Testing companies also report and explain deviations from a test plan or test method or analytical method in case conditions arose during the test that required the deviation. These small deviations are usually discussed with agency observers at the time so the testing can continue and be completed. If the electronic tool cannot accommodate the use of textual explanation about these anomalies, then the tool's usefulness and accuracy is suspect and could cause additional burden on the facility to explain.

In summary, CRWI requests that EPA

* eliminate the use of WebFire as a mandatory requirement but instead allow facilities to have the option to report performance evaluations electronically,

* revise the provision for test reports, such that these reports be due no sooner than 90 days following completion of testing, and

* add a provision to allow requests for additional time for submitting test results.

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 59

Comment: Electronic Reporting Tool (ERT) Reporting Should Not Be Required

The requirement for ERT reporting should be removed. ACC members and other had many problems submitting Industrial Boiler MACT and CISWI ICR data using the ERT, and we understand that there are still many problems with the tool based on experience that utilities and testing firms are having while entering Utility Boiler MACT ICR data into the tool. Use of this tool will add cost and burden to the already costly emissions testing requirements in this rule. The tool is not a replacement for a stack test report, but rather an additional reporting burden, as permitting agencies will still require a hard copy stack test report with all supporting documentation.

The following are examples of issues encountered with the ERT:

It is not intuitive and it is difficult to use.

It is not set up to handle data from multiple stacks from the same source being tested at the same time.

It only allows for one intermittent leak check during a test run. Many stacks have more that two ports so the ERT should be set up to handle those scenarios rather than having to add leak check volumes together to come up with a total.

It is not set up to handle mixed blend calibration gases, which are extremely common.

The import tool is inadequate, as it does not have enough rows for long runs and often imports data in the wrong order.

The tool is not set up to handle blank corrections.

The tool is “buggy” and slow to respond.

The tool seems to only be designed to work under the most ideal of test scenarios, which is not always realistic. The EPA should ask for comments on the format and uploading tool from individuals that encounter actual real world scenarios for testing to incorporate into future editions.

Revisions to the ERT should have a revision number such that the users can make sure the version they are using is the most recent version available.

Requiring the ERT will add time and cost to stack testing projects, as time will have to be spent entering the test data into the tool and then quality assuring the ERT output. We do not believe that EPA has included this extra cost in their analysis.

In addition, compliance tests are submitted to the state or local permitting agency for review and approval. At times, the agency provides comments to the regulated facility that adjust the test results. In these cases, the information entered into the ERT at the time of the stack test would not match the final, state-approved emission test results. At a minimum, there needs to be a

mechanism for the ERT data to be updated in these situations or a flag to indicate whether the report has been reviewed and approved by the permitting agency.

If use of the ERT is required, EPA needs to develop a comprehensive ERT Guidance Manual that provides complete instructions with examples for:

all entries including:

the various facility identification codes, and where to find them,

BDL instructions,

calibration instructions,

required attachments ;

the "external" spreadsheets" that are used to import certain data into the ERT; and,

the "external spreadsheets" that are used for reporting test methods not currently supported by the ERT.

EPA should also develop an "outreach" or "training" program that provides instructions for specific source categories and related parameters. Such efforts need to be readily-available, such as presentations at relevant conferences/seminars, as well as web-based sessions ("webinars").

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 78

Comment: EPA is requiring submission of data via the Electronic Reporting Tool (ERT). 75 FR 31949. Notwithstanding EPA's assertions to the contrary, data submitted through the ERT is error-prone and imposes additional burdens on reporting sources because the ERT bypasses all data quality control. For the information collection process for the Boiler MACT suite of rules, EPA

required sources to use the ERT. Sources had requested in the ICR proposal stage that EPA not utilize the ERT, which was going through Beta testing, and informed EPA that the ERT had serious flaws including difficulty of use, content problems and inaccessibility. EPA decided to use it for data collection for these rules. The concerns proved correct, however, as sources were compelled to use the ERT, which is a difficult and time-consuming tool for submission of test data. The ERT data compiled was riddled with mistaken entries, incorrect and missing data, and the ERT had generally faulty output. Then the problem was compounded when EPA relied on the inaccurate data, leading to multiple calculation and other inaccuracies.

Using the ERT doubles the burden on sources that take the time to enter accurate source data, only to see it distorted. They then must spend hours finding the data error and conferring with EPA personnel to fix the problem. Only then are they able to consider EPA's rule proposal and its impact on their sources. In part due to the ERT and resulting data problems, regulated sources sought an extension of the comment period. [See DCN: EPA-HQ-OAR-2003-0119-1834.3

Comment Extension Request, especially Description of the Development of the Boiler MACT Database]

In the past, sources did compliance tests for the state, and the state approved the data. The state effectively conducted quality control on the data. The ERT bypasses the state, creating data quality issues. Using the ERT means that data is transmitted without any QC, and that results in multiple data errors. The ERT does not permit the easy identification or correction of errors. Reporting needs to be accomplished by whatever format permits the source to trace the same data throughout the process to ensure its integrity. This had been accomplished in the past by using the hard copy submitted to the State and a human being looking at data to QC it. If there was a problem, this could be identified and resolved in the early stage, before the faulty data was applied to formulas.

CIBO urges EPA to adopt a reporting methodology that ensures the data is quality controlled, and errors can be traced easily to their origins. The ERT needs to be improved before it is required for data submission for compliance demonstration. Inaccuracies may be more tolerable during the rule-writing process, but once the rules are in place, the stakes are much higher, as faulty ERT output can create compliance issues for sources. EPA may prefer the administrative ease of the ERT, but that should not outweigh the need for regulated sources to have assurances of accurate data and compliance status.

Response: See preamble Section V. for the responses on the Electronic Reporting Tool.

13.0 COMPLIANCE

13.1 Existing Unit (EG) Compliance Date

Commenter Name: Ronald W. Gore
Commenter Affiliation: ADEM
Document Control Number: EPA-HQ-OAR-2003-0119-1524.1
Comment Excerpt Number: 5

Comment: Given the stringency of many of the emission limitations listed in the proposed rule, the Department is concerned that many facilities may not have sufficient time to engineer and design the emissions control systems, raise the amount of capital to purchase the equipment, and install the required equipment. In addition, there could be hardware backlogs and/or insufficient skilled labor, which could delay compliance. The Department asks that the Agency consider a lengthy compliance timeline which wquld allow facilities to achieve compliance within practical time1ines.

Response: See preamble Section V. for the response on CISWI Implementation Schedule.

Commenter Name: Myra C. Reece

Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 8

Comment: In Table 6 of Subpart DDDD, the emission limitations for Incinerators apply either three years after the effective date of approval of a revised state plan or five years after publication of the final rule in the federal register. For tables 7 (Energy Recovery Units, 8 (Waste-Burning Kilns), 9 (Burn-off Ovens), and 10 (Small, Remote Incinerators), the emission limitations apply on the date of publication of the final rule in the federal register. Are these emission limitation dates correct?

Response: See preamble Section V. for the response on CISWI Implementation Schedule.

Commenter Name: Luc Ceyssens
Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 8

Comment: The proposed rule does not seem to allow for existing units to add or modify equipment to their VPAS (Air Pollution Control System) to bring the existing system within the emission limits of the EXISTING SOURCE MACT FLOOR EMISSION LIMITS. (see Paragraph 60.2015 (2) on page 31974).

As the MACT floor emission limits are based on the top 12% emission performers in each category, this would mean that the owners of 88% of all existing units, who have heavily invested in the past in purchasing and installing existing systems, would lose these investment entirely, as the NEW SOURCE MACT FLOOR EMISSION LIMITS could be unattainable for existing systems.

Therefore, we request that the proposed rule be clarified to clearly allow a window for existing systems to upgrade their Air Pollution Control Systems (as described on page 31949) once the revised State plans have been approved and published, while still remaining within the "EXISTING SOURCE" definition of the proposed rule.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 4

Comment: EPA must provide adequate implementation time, beyond the typical three year compliance window, to allow for transitioning away from alternative fuels, if necessary, and sufficient time to allow for the deluge of facilities who will call upon boiler and control system specialty firms to do the herculean task of what will no doubt be required to retrofit thousands of combustion units all across the country. Further, more time will be necessary to install, troubleshoot and certify continuous emission monitoring systems and to complete permitting of new and/or modified equipment. The dollars associated with complying with this suite of rules competes with the dollars that are also necessary to meet other EPA initiatives such as Residual Risk standards, Greenhouse Gas (GHG) [Footnote: 8Greenhouse Gas (e.g., Mandatory Greenhouse Gas Reporting Rule (40 CFR 98), Greenhouse Gas Tailoring Rule and other climate policies)], new National Ambient Air Quality Standards, and wastewater TMDLs requirements. The pool of available dollars is not without limits.

Response: See preamble Section V. for the response on CISWI Implementation Schedule.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 8

Comment: EPA must clarify in the final rule that the date that an existing boiler would be redesignated as a CISWI unit if operators choose to burn materials defined as wastes by the solid waste definition rule.

Sufficient time must be given to allow the regulated community to perform a full economic analysis of their fuel mix such that if they do decide based on this suite of proposed rules to make changes in their fuel use, they have sufficient time to obtain fuel

supply, make any necessary equipment changes that may be required due to that change, and obtain any new permits that may be required. Further, EPA must provide sufficient time for businesses choosing not to be regulated as CISWI units to consume

existing fuel inventories, secure contracts for replacement fuels and to implement alternative procedures for managing secondary materials.

Response: See preamble Section V. for the responses on CISWI Implementation Schedule and Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 12

Comment: EPA should extend the compliance deadline given the breadth of sources and competition for resources

EPA proposes to set the compliance deadline for existing affected sources at three years after the date of publication of the Final Rule in the Federal Register. It will be extraordinarily difficult – if not impossible – for all of the entities with existing boilers to make the changes necessary to comply with this rule in the three year timeframe that EPA proposes. Put simply, the normally herculean task of performing a boiler retrofit in three years will be made impossible by the enormous competition for critical resources and the likely gridlock in many state permitting processes that the broad application of this rule will create. Many boiler owners will be simply unable to secure equipment and assistance and/or to obtain the state/local permits needed to retrofit their units within three years.

Even under the best of circumstances, a major retrofit of a boiler takes years from project start to finish. EPA has estimated that the installation of an activated carbon injection

control system on one combustion unit – a comparatively simple installation – takes about 15 months [Footnote: EPA, Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies (2002).] However, EPA expects a range of control devices will be used to meet the standards, including fabric filters, carbon bed adsorbers, activated carbon injection, electrostatic precipitators, wet scrubbers, replacement burners, and combustion controls [EPA, Regulatory Impact Analysis: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 3-1 (April 2010) ("The control analysis considered fabric filters, carbon bed adsorbers, and activated carbon injection to be the primary control devices for mercury control, electrostatic precipitators for units meeting mercury limits but requiring additional control to meet the PM limits, wet scrubbers to meet the HCl limits, tune-ups, replacement burners, and combustion controls for CO and organic HAP control, and carbon injection for dioxin/furan control.")] Further, the sheer number of boilers impacted by the rule will make finding – and then scheduling – the design and construction resources almost impossible. EPA estimates that there are approximately 13,555 units located at 1,608 facilities covered by this rule. 75 Fed. Reg. 32048. Given that EPA has set emissions standards that no existing unit can meet, every single existing unit subject to an emission standard may need to be retrofitted. Boiler owners will need to hire consultants to assist them in designing and performing the retrofit. Thus, across the multitude of industries impacted by this rule, boiler owners will be competing for qualified consultants to design, permit and perform the retrofits necessary to make boilers compliant with this stringent rule. There are only a limited handful of consulting companies with the expertise to assist in such retrofits, and they will likely be unable to assist all of the boiler owners in less than three years. There will be a similar scarcity in equipment vendors, construction contractors, construction equipment (e.g, heavy lifting cranes), skilled labor (e.g., boilermakers), and other critical suppliers. Companies may even be unable to secure the basic building materials and control equipment (e.g., baghouses and scrubbers).

In order to retrofit a boiler, the owner will need to line up the capital necessary to pay for the retrofit. In these difficult economic times, just securing the necessary capital may take months, if not years. In addition, the owner will need to go though the relevant permitting process(es), which will similarly take months, if not years. Finally, once the finances are secure and the permitting is complete, the owner will actually need to perform the retrofit. The design,

procurement, installation, and shakedown of a retrofit project (e.g., installing a scrubber on a large boiler) can easily take more than three years.

In addition, the timing of the retrofit work needs to be carefully planned, particularly for boilers that provide the primary and/or base load energy supply for their facilities. A facility owner will only shut down a boiler when everything is properly staged to ensure minimal disruption of the facility's operation. In addition to ensuring that the design work is completed and the control equipment and other supplies are on-site and ready for installation, the facility owner needs to make sure that the full suite of consultants and laborers are available for the installation. Based on a discussions with a number of potentially affected companies, the turnaround or shutdown cycles for boilers at many of the facilities is so long as to make this type of precise staging exceedingly difficult to do in a three year period without substantial business interruption.

Finally, in many instances, the installation of pollution control equipment and associated charges to boiler must be permitted under state air pollution statutes and/or construction codes (building permits, etc.). The proposed rule will result in an increase in the number of permit applications, potentially swamping the state and local agencies. Even in those areas where the

rule may not result in significant increases in permitting work, the normal delays associated with permitting may make meeting the three year compliance deadline impossible.

In light of the difficulty in meeting a three year compliance deadline, EPA and authorized states should be prepared to readily grant one-year extensions under CAA § 112(i)(3)(B) to those units that have problems installing the necessary control equipment to comply with the industrial Boiler MACT rule.

In addition, EPA should establish an extended two-step compliance period for situations where a boiler owner voluntarily elects to replace or retrofit a boiler to burn a cleaner fuel source [Footnote: EPA recognizes the MACT rule should be crafted to encourage the use of cleaner fuels, such as natural gas. 75 Fed. Reg. 32025.] If a facility decides to switch to a cleaner fuel, the replacement or retrofit work required to make that switch will potentially take years, for all of the reasons discussed above. Rather than require the facility to add emissions controls to its existing boiler in time for the proposed three year compliance deadline – likely eliminating the possibility that the facility would switch to a cleaner fuel source – EPA should allow six years total for facilities to change their boilers and meet the MACT requirements for the cleaner fuel source. This six year period would occur in two steps; a no-backsliding provision would apply for three years from publication of the rule in the Federal Register, and then the facility would have three years to comply with MACT standard for the subcategory for the cleaner fuel subcatetory. EPA promulgated exactly this type of extended MACT compliance deadline for certain facilities that voluntarily elected to install new technology as part of the Pulp and Paper Cluster Rule. See Pulp and Paper Cluster Rule, 60 Fed. Reg. 18503, 18,508 (Apr. 15, 1998) [Footnote: This two-step approach for the MACT standard is consistent with the D.C. Circuit's decision in NRDC v. EPA, 89 F.3d 1364 (D.C. Cir. 2007) (finding invalid EPA's decision to extend the compliance deadline for a promulgated MACT rule by a year because of the substantial changes that the agency made to the rule). Rather than functioning as an extension of the compliance deadline, this MACT standard for certain facilities would become applicable in two steps. For the first three years, a no-backsliding MACT standard would be applicable, then the three year deadline to implement the MACT standard for the applicable "cleaner" source would begin to run.] In addition to providing an incentive for facilities to switch to cleaner fuel

sources, this approach would reduce some of the competition for resources discussed above by extending the deadline to complete the work to replace or retrofit certain boilers.

Response: See preamble Section V. for the responses on CISWI Implementation Schedule.

Commenter Name: Eric Trauner
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 5

Comment: The date for compliance should be set at five years, not three. By definition, there will be facilities that will not be able to comply with this MACT. Intelligent consideration of compliance options in such cases has many steps, each taking several months. For instance, it will take several weeks for a facility to review the final MACT and develop a compliance plan. A likely first step in such a compliance plan would be evaluation of current status, likely by stack testing. Because there are in fact a limited number of stack testers genuinely qualified to execute such work, even this seemingly simple step of compliance determination will take several months (as US-EPA has recently learned). Then, a review of compliance options in terms of engineering and economics will also take several months to a year. Hard engineering design can take an additional year or longer, followed by what could well be two years for acquisition of equipment, installation, and start-up/ shakedown, with a final official stack test. A sound compliance effort cannot be completed in three years.

Response: See preamble Section V. for the responses on CISWI Implementation Schedule.

13.2 Changes to Applicability Date of the 2000 NSPS and EG

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 7

Comment: It is unclear if units constructed prior to the original proposed rule of November 20, 1999 (65 FR 75350, December 1, 2000), would become subject to the CISWI Rule as existing or new sources when they start burning a fuel after June 4, 2010, that would be considered a non-hazardous solid waste as per the proposed RCRA rule.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG and Section V. on discussions on applicability and schedule.

Commenter Name: Luc Ceyssens

Commenter Affiliation: Keppel Seghers, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1523.1
Comment Excerpt Number: 7

Comment: We understand that the new proposed rule would take effect on [THE DATE 6 MONTHS AFTER THE PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], as written in the proposed rule at page 31973 paragraph 60.2005. We expect a final ruling to be published around December 16, 2010; therefore, the rule would take effect June 16, 2011.

As no final rule exists today, it can only be correct if the EPA applies the same date (THE DATE 6 MONTHS AFTER THE PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER) to the definition of any New Incineration Unit (CISWI) and does not apply any final new rule retroactively to June 4, 2010, as presently is written in paragraph 60.2015 of the proposed rule.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG and Section V. on discussions on applicability and schedule. See the final rule for revisions to the compliance schedule and applicability.

Commenter Name: Gary A. Molchan
Commenter Affiliation: Essroc Cement Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1903.1
Comment Excerpt Number: 4

Comment: Significant issues surround the key concept of "modification." What type (or types) of activities might force an "existing" CISWI unit into "new" unit status during operation and the consequences could be far reaching. EPA simply has failed to lay any groundwork on these and many other critical implementation issues for Essroc and other interested parties to provide meaningful comment.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG. Further, see preamble Section V. for the response on Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Satish Sheth
Commenter Affiliation: CEMEX, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1957.1
Comment Excerpt Number: 5

Comment: The definition of ‘modified’ (emphasis added) as it is proposed in this rule applies to ‘Any physical change in the CISWI unit or change in the method of operating it that increases

the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.'

In contrast, at 40 CFR 60.14 (emphasis added):

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning f section 111 of the Act.

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable.

We understand that EPA has always applied the 60.14 test as controlling for CAA NSPS purposes. Thus, despite the literal wording, any increase in emissions, for NSPS purposes, has been limited to increases in hourly emission rates. The CISWI proposal is not clear on this point and may be interpreted to mean that any change that increases emissions, in any way, will be considered a modification under CISWI. If this is the case, then modification could be triggered by a change in raw materials used to accommodate specialty products or different types of cements manufactured to meet customer requirements. EPA should clarify the types of physical changes or changes in method of operation that would constitute a modification under CISWI. EPA should also clarify whether the 'hourly rate' qualification of 40 CFR 60.14 applies to the CISWI definition.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 8

Comment: Numerous significant issues surround the key concept of "modification." What type (or types) of activities might force an "existing" CISWI unit into "new" unit status? The consequences could be devastating, as the proposed "new" source standards are in almost all instances unachievable. The proposal's use of existing regulatory language leaves us with a major ambiguity on one key modification issue, and the proposal simply fails to address many other issues. EPA simply has disregarded the groundwork required in this rulemaking and many other critical implementation issues for PCA and other interested parties to provide meaningful comment.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 33

Comment: An equally critical issue is whether such a source would be considered a "new" or "modified" CISWI source. We think the statute and regulations would not allow such a source to be treated as a "new" or "modified" CISWI source because the obvious focus of the "new" and "modified" definitions in the statute and the regulations is on whether the facility itself is "new" or "modified," not whether an existing facility decides for the first time to combust solid waste. See CAA § 129(g)(2), (3). We urge EPA to affirm this point in its final rules.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 34

Comment: "New" and "Modified" CISWI Sources

It is obvious from the proposal that the emission standards applicable to "new," "reconstructed," and "modified" sources will be much more stringent than the standards applicable to "existing" sources. It will thus be critical for any CISWI source to be able to ascertain which standards apply to that source. We have identified two issues in need of correction and/or clarification.

What is the "Cut-off" Date?

In the regulatory language section of the proposed rulemaking, EPA proposes in many places to add new language in Subparts CCCC and DDDD that would overlay existing language in these subparts going back to the year 2000. Sometimes, the Proposed CISWI Rule would delete certain language from the existing Subparts CCCC and DDDD; sometimes the Proposed CISWI Rule would change the words in existing language; sometimes it would leave existing language intact.

EPA's proposal would leave untouched the following provision (60.2550(b)):

(b) If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after June 1, 2001, the CISWI unit becomes subject to subpart CCCC of this part and the State plan no longer applies to that unit.

Surely this does not accurately reflect EPA's intent as applied to waste-burning kilns. See, for example, proposed Table 7 to Subpart CCCC, 75 FR at 31987, entitled "Emission Limitations for Waste-Burning Kilns that Commenced Construction after June 4, 2010 or that Commenced Reconstruction or Modification after [the Date 6 Months after Publication of the Final Rule].

It would of course be highly inappropriate and illegal for EPA to attempt to subject kilns that may have made modifications since 2001 to these new CISWI standards. We urge EPA to correct this error (and any similar errors) in its final rule. We have found similar errors in Subparts CCCC and DDDD as follows:

CCCC –

§ 60.2265 erroneously continues to peg both the "modification" and the "reconstruction" trigger dates for all CISWI standards to June 1, 2001.

§ 60.2075 specifies a deadline for operator training of December 3, 2001. DDDD – (In addition to the erroneous provision already noted above --)

§ 60.2875 erroneously continues to reference the "reconstruction" date to June 1, 2001.

Response: See the final rule for revisions to the applicability and compliance schedule timelines. See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 35

Comment: What Type of Modification Would Make An Existing CISWI Source a "New" CISWI Source?

The proposed CISWI rules would be codified in 40 C.F.R. part 60 (subpart CCCC for new, reconstructed, and modified sources and subpart DDDD for existing sources). In the general provisions to part 60, the definition of "modification" states:

Modification means any physical change in, or change in the method of operation

of, an existing facility which increases the amount of any air pollutant (to which a

standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

40 C.F.R. 60.2.

Under the wording of this provision, any physical change or change in method of operation that "increases the amount" of emissions of a pollutant would be considered a "modification." Thus, literally, an increase of a few pounds of pollutant per year could make an existing source into a new source.

EPA's part 60 regulations go on to provide, however (emphasis added): § 60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act.

. . .

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable.

We understand that EPA has always applied the 60.14 test as controlling for CAA NSPS purposes. Thus, despite the fact that the literal wording of 60.2 would make any increase in emissions a modification, EPA has applied its part 60 regulations for NSPS purposes to be limited to increases in hourly emission rates.

The Proposed CISWI Rule is not clear on this point. First, EPA has not included any new definition of "modification" in either its proposed CCCC and DDDD regulatory sections in the Proposed CISWI Rule. EPA is thus proposing to retain the definition of "modification" that appears in the currently-existing subparts CCCC and DDDD.

The definitions of "modification" in the current CCCC and DDDD provide:

Modification or modified CISWI unit means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(2) Any physical change in the CISWI unit or change in the method of operating

it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

60.2265 (CCCC), 60.2875 (DDDD).

First, we note that the date "June 1, 2001" appears in the definition. Once again, we assume this needs to be changed and urge EPA to clarify this in its final rule. We also note there is no confusion in the regulations regarding the "reconstruction" portion of the definition (respecting cumulative costs exceeding 50%).

There is nothing in parts CCCC or DDDD, however, that reflects the permitted "hourly rate" qualification of 60.14. And there is absolutely nothing in the Proposed CISWI Rule about any of this. EPA proposes no amendments or clarifications to the existing definitions, and never even discusses the issues.

One is thus left with this major critical question unanswered: Will CISWI units be considered modified if they do anything to increase their emissions in any way, as suggested by the current provisions in 60.2 and in CCCC and DDDD, or will the 60.14 qualification (regarding hourly emission rate) override?

We assume that the better reading of EPA's regulations would be to apply the permitted "hourly rate" qualification of 60.14 to CISWI units under subparts CCCC and DDDD. This is such a critical issue, however, that we think it is highly inappropriate for the regulations to leave this as an open question, and we urge EPA to add language in subparts CCCC and DDDD to make this clear and propose its final decision through notice and comment.

EPA should also specify in this rulemaking what would constitute a physical change or change in the method of operation. At a minimum, EPA should make clear that changing of ingredients and routine changes to accommodate specialty products or different types of cement are not physical changes or changes in the method of operation. Kilns are constructed to manufacture many types of cement with different properties, each requiring a unique raw material mix design. The usage of raw material or NHSW changes significantly from one year to the other based on market conditions and its availability. It is possible that a material is not used for a few years before being used again. Kiln operators should continue to be allowed to operate kilns to meet normal consumer demands without the fear of triggering the modification provisions of the Proposed Rule as long as they remain below the permitted levels.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 38

Comment: The CISWI modification trigger possesses several complications to CISWI units that may not continuously combust solid waste and/or make a principal product through direct firing of NHSWs (e.g., kilns). In cement kiln operations, unlike most other CISWI units, the CISWI regulated pollutants can be emitted and can change when no solid waste is being combusted or used. As a result, understanding how the modification trigger will be implemented must be clarified by EPA in the final rules. Again, EPA appears to have failed to account for these significant aspects that CISWI kiln operators would be bound to comply with in this proposed rulemaking.

The CISWI modification definition under CAA § 129 generally follows the definitions contained in CAA § 111 (NSPS). One notable difference with the implementation of the term "modification" in the CISWI rules is that EPA has defined certain modification or reconstruction activities as exempt (see 40 CFR 60.2015(b) under Subpart CCCC). These exemptions principally relate to projects designed to bring units into compliance with CISWI requirements.

Below is an illustration of some of the potential scenarios that kiln operators could face that result in regulatory ambiguity in CISWI applicability that EPA has failed to account for in the proposed rule:

* An existing CISWI kiln undertakes a physical change or change in the method of operation that is unrelated to an existing use of a NHSW (e.g., a new alternate raw material is sourced to meet product quality requirements that is new to the kiln). And, this change increases the hourly emissions of a CISWI regulated pollutant. Based on the current definitions, it appears that the CISWI kiln may become subject to the new source Subpart CCCC requirements without undertaking any change whatsoever related to NHSW usage or emissions from usage of those materials.

* An existing non-CISWI kiln adds a NHSW fuel after June 4, 2010 that decreases the hourly emissions of a CISWI regulated pollutant. In this case, the cement kiln could be considered a "new" CISWI kiln despite reducing CISWI regulated pollutants and possibly without making any expenditures. This outcome seems wholly in contradiction with the object of § 129 of the CAA in how modifications or new sources should be subject to regulations under CISWI.

* An existing CISWI cement kiln wants to increase the use of a historically used NHSW fuel (and it does not have a permit restriction on its usage amount). The hourly emissions from the kiln do not increase but it is possible that the portion of the CISWI regulated emissions attributable to the NHSW fuel did increase on an hourly basis. Under the current regulatory structure, it appears that this source may be subject to Subpart CCCC requirements – again possibly without a expenditure and without emission increases related to combustion of solid wastes.

An existing CISWI kiln undertakes a physical change to comply with other federal emissions standards (e.g., NSPS Subpart F) that will result in an increase of a CISWI pollutant. This may constitute a modification under the current CISWI Subpart CCCC rules.

In the event EPA pursues final regulation of CISWI kilns, PCA believes that EPA should include specific exemptions from the definition of modification and reconstruction under the CISWI rules to avoid what PCA believes would be unintended and inappropriate application of the modification definition to CISWI kilns. This should include, but not be limited to, the following:

* Modifications that do not increase the hourly potential emission rate above permitted levels of CISWI regulated pollutants resulting from NHSW combustion.

* Modifications related to new or increased use of NHSWs that do not result in hourly increases in CISWI regulated pollutants above permitted levels.

* Modifications to CISWI kilns that are required to comply with any other federally required air pollutant control programs (e.g., NESHAP LLL or NSPS Subpart F).

* Modifications in volume, amount, or type of NHSW that do not increase hourly potential emissions above permitted levels from the CISWI kiln.

* Modifications that meet the exemptions included under 40 CFR 60.14(e)(1-6).

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 9

Comment: June 4, 2010 must not be used as the date designating when a boiler is regulated as a “New” CISWI unit since rules defining solid wastes must be finalized before determining if a unit is subject to CISWI regulations. Companies need time to assess compliance strategies (on the order

of 6 months), fulfill contracts to purchase and work off inventories of obsolete fuel materials (6 to 24 months) and engineer and install control devices (3 to 10 years depending on availability of engineering/design/build resources which will be in exceedingly high demand serving 10's of thousands of boilers.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG. Further, see preamble Section V. for the response on Section 129 vs. Section 112 - Applicability for Waste Firing Boilers and Kilns That Opt to Stop Burning Waste.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 12

Comment: Ambiguity with respect to continuation of the existing exemptions in the current rule until the compliance date of the proposed rule become effective.

Response: See preamble Section III for the response on how the rule amendments affect the applicability of the 2000 NSPS and EG and further discussions on applicability and compliance schedules in Section V. of the preamble.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 17

Comment: EPA should establish CISWI New Source Limits at levels that can be achieved by existing energy recovery units that are "modified", not just brand new units. This is because the definition of "modification" and reconstruction is more liberally drawn in the CISWI rule compared to other rules like MACT, NSPS and the like. It would be unconscionable for an existing unit that shares the high cost of CISWI compliance with existing source limits to then find they have unwittingly triggered "New unit" standards that were impossible to achieve. EPA could resolve this unintended consequence as they have in previous MACT standards by revising the definition of "New CISWI" to include the collection of all energy recovery units located at a site, or alternatively, by revising the definition of "reconstruction."

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1

Comment Excerpt Number: 20

Comment: EPA should confirm that burning a secondary material in an energy recovery unit that is already capable of accommodating that fuel will not constitute a modification triggering new source standards.

EPA should correct inconsistencies and errors from integrating the proposed provisions into the existing CISWI rule. Such as:

* Correcting the definition of "modification or modified CISWI unit" as one that undergoes a modification after June 2001, which is inconsistent with proposed amendments at §60.2105(a)(2).

* Correcting the definition of a new incineration unit as one that undergoes

modification after the date 6 months after publication of the final rule.

* Correcting the definition of "reconstruction" which defines it as rebuilding a CISWI unit after June 2001.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 5

Comment: EPA has stated in the preamble to the proposed rule (75 Fed. Reg. 31966) that CISWI has historically resulted in "negative growth" upon implementation to a source category. In fact, EPA reports that between 2000 and 2009, the population of existing CISWI sources has declined from 122 units to only 28 units, a 77 percent decrease. EPA goes on to state that during this 10 year period, no new CISWI units have been constructed and based on these trends, believes that the same results can be expected (particularly since the revised CISWI rule is more stringent) in the future as a result of this rulemaking.

Cement kilns that currently combust "non-hazardous secondary materials identified as "solid waste" (as defined in the proposed NHSM rule) will be required to comply with the proposed MACT limits for "existing sources" in the proposed CISWI rule. However, as EPA is aware, any modification or reconstruction to an existing kiln will result in that kiln becoming subject to the proposed MACT limits for "new sources". It will be extremely difficult for existing kilns to comply with the proposed "existing source" MACT limits of this rule; however, it will be impossible for any single kiln to comply with all of the "new source" MACT limits. Existing sources can easily become new sources through modifications or reconstruction.

As EPA forecasts in the preamble, a number of cement kilns currently combusting nonhazardous secondary materials will decide that alternative disposal options (primarily landfilling) are preferable to compliance with the proposed standards. Likewise, a number of kilns may determine that they can comply with the "existing source" CISWI MACT limits more readily

than the proposed NESHAP MACT standards. However, once an existing CISWI source undergoes a modification, it will no longer be subject to the "existing source" limits but to the "new source" limits. Because compliance with the "new source" limits will not be achievable, the remaining kilns that chose to be regulated under CISWI will be forced to discontinue using non-hazardous secondary materials and revert to regulatory coverage under the NESHAP rule.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 18

Comment: An equally critical issue is whether such a source would be considered a "new" or "modified" CISWI source. Lafarge believes the statute and regulations would not allow such a source to be treated as a "new" or "modified" CISWI source because the obvious

focus of the "new" and "modified" definitions in the statute and the regulations is whether the facility itself is "new" or "modified," not whether an existing facility decides for the first time to combust solid waste. See CAA §129(g)(2), (3). We urge EPA to address this issue in re-proposed rulemaking to allow public review and comment on EPA's position.

Response: See preamble Section III for a discussion on how the rule amendments affect the applicability of the 2000 NSPS and EG and the revised definition of Modification or modified CISWI unit in the final rule. Further, see preamble Section V. Legal and Applicability Issues, Compliance Schedule, and Certification Procedures.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 19

Comment: "New" and "Modified" CISWI Sources

It is obvious from the proposal that the emission standards applicable to "new," "reconstructed," and "modified" sources will be much more stringent than the standards applicable to "existing" sources. It will thus be critical for any CISWI source to be able to ascertain which standards apply to that source. We have identified two issues in need of correction and/or clarification.

1. What is the "Cut-off" Date?

In the regulatory language section of the proposed rulemaking, EPA proposes in many places to add new language in Subparts CCCC and DDDD that would overlay existing language in these subparts going back to the year 2000. Sometimes, the June 4 proposal would delete certain

language from the existing Subparts CCCC and DDDD; sometimes the June 4 proposal would change the words in existing language; sometimes the new proposal would leave existing language intact.

EPA's proposal would leave untouched the following provision (60.2550(b)):

If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after June 1, 2001, the CISWI unit becomes subject to subpart CCCC of this part and the State plan no longer applies to that unit.

We believe this does not accurately reflect EPA's intent as applied to waste-burning kilns. See, for example, proposed Table 7 to Subpart CCCC, 75 FR at 31987, entitled "Emission Limitations for Waste-Burning Kilns that Commenced Construction after June 4, 2010 or that Commenced Reconstruction or Modification after [the Date 6 Months after Publication of the Final Rule].

It would of course be highly inappropriate and illegal for EPA to attempt to subject kilns that may have made modifications since 2001 to these new CISWI standards. We urge EPA to correct this error (and any similar errors) in its final rule. We have found similar errors in Subparts CCCC and DDDD as follows:

CCCC:

* §60.2265 erroneously continues to peg both the "modification" and the "reconstruction" trigger dates for all CISWI standards to June 1, 2001.

* §60.2075 specifies a deadline for operator training of December 3, 2001.

DDDD: (In addition to the erroneous provision already noted above --)

??§ 60.2875 erroneously continues to peg the "reconstruction" date to June 1, 2001.

2. What Type of Modification Would Make an "Existing" CISWI Source a "New" CISWI Source?

The proposed CISWI rules would be codified in 40 CFR Part 60 (subpart CCCC for new, reconstructed, and modified sources and subpart DDDD for existing sources). In the general provisions to Part 60, the definition of "modification" states:

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.[40 CFR.60.2]

Under the wording of this provision, any physical change or change in method of operation that "increases the amount" of emissions of a pollutant to which a standard

applies would be considered a "modification." Thus, literally, an increase of a few pounds of any pollutant per time period could make an existing source into a new source.

EPA's part 60 regulations go on to provide, however (emphasis added): § 60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act.

. . .

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable.

Despite the fact that these seemingly inconsistent provisions have remained in place in Part 60 for almost three decades, we understand that EPA has always applied the 60.14 test as controlling for NSPS purposes. Thus, despite the fact that the literal wording of 60.2 would make any increase in emissions a modification, EPA has applied its Part 60 regulations for NSPS purposes to be limited to increases in hourly emission rates.

The new CISWI proposal is not clear on this point. First, EPA has not included any new definition of "modification" in either its proposed CCCC or DDDD regulatory sections in the June 4, 2010 proposed rulemaking. EPA is thus proposing to retain the definition of "modification" that appear in the currently-existing subparts CCCC and DDDD. The definitions of "modification" in the current CCCC and DDDD provide:

Modification or modified CISWI unit means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

60.2265 (CCCC), 60.2875 (DDDD).

First, we note that the date "June 1, 2001" appears in the definition. Once again, we assume this should be changed and urge EPA to clarify this in its final rule. We also note there is no confusion in the regulations regarding the "reconstruction" portion of the definition (respecting cumulative costs exceeding 50%).

There is nothing in parts CCCC or DDDD, however, that reflects the "hourly rate" qualification of 60.14, and nothing in the June 4 proposal about this apparent inconsistency. EPA proposes no amendments or clarifications to the existing definitions, and never even discusses the issues.

One is thus left with this major critical question unanswered: Will CISWI units be considered modified if they do anything to increase their emissions in any way, as suggested by the current provisions in 60.2 and in CCCC and DDDD, or will the 60.14 qualification (regarding hourly emission rate) override?

We assume that the better reading of EPA's regulations would be to apply the "hourly rate" qualification of 60.14 to CISWI units under subparts CCCC and DDDD.

This is such a critical issue, however, that we think it is highly inappropriate for the regulations to leave this as an open question, and we urge EPA to add language in subparts CCCC and DDDD to make this clear.

Response: See the response to comments EPA-HQ-OAR-2003-0119-1972.1, excerpt 34 and EPA-HQ-OAR-2003-0119-1972.1, excerpt 35.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 22

Comment: "Modification" Issues

The CISWI modification trigger possesses several complications to CISWI units that may not continuously combust solid waste and/or make a principal product through direct firing of NHSMs (e.g., kilns). In cement kiln operations, unlike most other CISWI units, the CISWI regulated pollutants can be emitted and can change when no solid waste is being combusted or used. As a result, understanding how the modification trigger will be implemented must be clarified by EPA in the final rules. Again, EPA appears to have failed to account for these significant aspects that CISWI kiln operators would be bound to comply with in this proposed rulemaking.

The CISWI modification definition under CAA Section 129 generally follows the definitions contained of CAA Section 111 (NSPS). One notable difference with the implementation of the term "modification" in the CISWI rules is that EPA has defined certain modification or reconstruction activities as exempt (see 40 CFR 60.2015(b) under Subpart CCCC). These exemptions principally relate to projects designed to bring units into compliance with CISWI requirements.

Below is an illustration of some of the potential scenarios that kiln operators could face that result in regulatory ambiguity in CISWI applicability that EPA has failed to account for in the proposed rule:

An existing CISWI kiln undertakes a physical change or change in the method of operation that is unrelated to the use of an existing or new NHSM. This change increases the hourly emissions of a CISWI regulated pollutant. Based on the current definitions, it appears that the CISWI kiln would become subject to the new source Subpart CCCC requirements without undertaking any change whatsoever related to NHSM usage or emissions from usage of those materials.

An existing non-CISWI kiln adds a NHSM fuel after June 4, 2010 that decreases the hourly emissions of a CISWI regulated pollutant. In this case, the cement kiln could be considered a "new" CISWI kiln despite reducing CSIWI regulated pollutants and possibly without making any capital expenditures. This outcome seems wholly in contradiction with objections of Section 129 of the CAA in how modifications or new sources should be subject to regulations under CISWI.

An existing CISWI cement kiln wants to increase the use of a historically used NHSM fuel (and it does not have a permit restriction on its usage amount). The hourly emissions from the kiln do not increase but it is possible that the portion of the CSIWI regulated emissions attributable to the NHSM fuel did increase on an hourly basis. Under the current regulatory structure, it appears that this source would be subject to Subpart CCCC requirements – again possibly without a capital expenditure and without emission increases related to combustion of solid wastes

An existing CISWI kiln undertakes a physical change to comply with other federal emissions standards (e.g., NSPS Subpart F) that will result in an increase of a CSIWI pollutant. This could constitute a modification under the current CISWI Subpart CCCC rules.

In the event EPA pursues final regulation of CISWI kilns, Lafarge believes that EPA should include specific exemptions from the definition of modification and

reconstruction under the CISWI rules to avoid what Lafarge believes would be unintended and inappropriate application of the modification definition to CISWI kilns. This should include, but not be limited to, the following:

Changes that do not increase the hourly potential emission rate of CISWI regulated pollutants resulting from NHSM combustion.

Change, including those related to new or increased use of NHSMs, that do not result in hourly increases in CISWI regulated pollutants.

Changes to CISWI kilns that are required to comply with any other federally required air pollutant control programs (e.g., PC MACT or NSPS Subpart F).

Changes in volume, amount, or type of NHSM that do not increase hourly potential emissions from the CISWI kiln.

Changes that meet the exemptions included under 40 CFR 60.14(e)(1-6).

Response: See the response to comment EPA-HQ-OAR-2003-0119-1972.1, excerpt 38.

13.3 Other - Compliance

Commenter Name: Myra C. Reece
Commenter Affiliation: South Carolina Department of Health and Environmental Control (SCDHEC)
Document Control Number: EPA-HQ-OAR-2003-0119-1839.1
Comment Excerpt Number: 3

Comment: Currently this proposed rule makes no differentiation between a deviation and a violation and also doesn't provide any information or clarifications on this issue with the exception of a violation of nitrogen oxides emissions limit in CAA Sections 60.2165 and 60.2730. A discussion of what constitutes a deviation and what constitutes a violation should be provided at least within the preamble of this rule. Specific items to clarify should include the following:

Exceedance Of An Emission Limit Should Be Considered A Violation When Using A Continuous Emission Monitor (CEM) - An affected source required to use a continuous emission monitor (CEM) that fails to comply with an emission limit should be considered a violation even during start up and shutdown events.

Establish Violation Thresholds For Continuous Opacity Monitoring Systems (COMS) And Continuous Parameter Monitoring Systems (CPMS) Deviations - The EPA has established

violation thresholds for operating limits for other section 129 sources. This rule needs to clearly identify that units are in violation of the standards when operating parameters used to demonstrate continuous compliance are not met. Also, the EPA proposes the use of continuous opacity monitoring systems (COMS), and continuous parameter monitoring systems (CPMS) for certain units to demonstrate continuous compliance with the proposed standards. The rule needs to include a percentage of time during a 6-month period that these continuous monitoring systems (CMS) are required to be operational and meet any operating limit in order to determine compliance.

Response: See final rule for revisions to the proposed regulation.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 22

Comment: EPA should exclude CISWI energy units from complying with the following elements that are clearly meant for traditional waste incinerators.

Requirements for operators to be trained on procedures for charging solid wastes, solid waste management, waste minimization and pollution prevention (§60.2265).

Response: Section 129 of the CAA contains operator training requirements.

14.0 IMPACTS ANALYSIS

14.1 Costs: Control Technology Cost Assumptions

Commenter Name: Andreya Marks
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0765
Comment Excerpt Number: 1

Comment: Learn from the German incinerators. They have been clean for decades.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437

Comment Excerpt Number: 21

Comment: The forest products industry has projected new equipment required in the proposed rules will cost more than $6 billion over a three-year-compliance period plus billions more in subsequent years for operating and maintenance expense. Those capital costs alone exceed the profit in the recent years.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 4

Comment: No impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 7

Comment: EPA has underestimated the costs that CISWI units will incur in order to meet emission standards. For example, a cost analysis performed by AF&PA and detailed in their comments on this rule shows significantly higher capital costs for installing controls on existing energy recovery units in order to comply with the proposed rule --a total estimate of just capital costs for installing controls of $740 million, versus EPA's total capital investment for both controls and monitoring equipment of $455 million in Table 12C of the CISWI cost memo [see submittal for footnote.]

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Ronald W. Gore
Commenter Affiliation: ADEM
Document Control Number: EPA-HQ-OAR-2003-0119-1524.1
Comment Excerpt Number: 2

Comment: In the preamble to the proposed CISWI rule, EPA stated that it anticipates that no new CISWI units will ever be constructed, due to the cost of meeting the proposed requirements. Section 112(d) of the Clean Air Act Amendments of 1990 explicitly states that the Administrator is to consider the cost of the achievability of new emissions standards. The Department does not understand how the Administrator has considered costs in this case, when it expressly states that the standards for new sources are too expensive to achieve.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Martha Rudolph
Commenter Affiliation: The Clorox Company (Clorox)
Document Control Number: EPA-HQ-OAR-2003-0119-1907.1
Comment Excerpt Number: 2

Comment: Burn-off ovens are typically equipped with afterburners designed to oxidize fully the organics in oven exhaust. Small burn-off ovens are generally not equipped with air pollution controls to address HCI or dioxin/furan formation or metals.

The proposed emission limitations for burn-off ovens include dioxin/furans, HCI, cadmium, and mercury. (Table 9 to Subpart DDDD of Part 60) Testing alone for these pollutants would be very costly, and retrofitting small-burn off ovens with pollution controls would be prohibitively expensive.\

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 2

Comment: We believe EPA has underestimated the costs that CISWI units will incur in order to meet emission standards. The FSI's cost estimate to meet the proposed Industrial Boiler MACT rule is $250-$300 million capital cost for the entire industry, or about $10-$15 million capital

cost per boiler (23 boilers in the industry). The proposed CISWI emission limits are much more stringent than the Industrial Boiler MACT standards for biomass-fired boilers for carbon monoxide (CO) and hydrogen chloride (HCl), and sets additional and very low limits for nitrogen oxides (NOx) and sulfur dioxide (SO2). Therefore, we believe that compliance with CISWI will be much more expensive than compliance with the Industrial Boiler MACT.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 3

Comment: In addition, EPA has underestimated the costs that CISWI units will incur in order to meet emission standards. AF&PA's analysis shows significantly higher costs -- a total estimate of just capital costs for installing controls of $740 million, versus EPA's total capital investment for both controls and monitoring equipment of $455 million.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 25

Comment: EPA has removed the exemption for laboratory analysis units, but we cannot find any cost or impacts analysis for these units.

Response: See preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 29

Comment: The ERG compliance cost analysis states that for CO control, advanced combustion controls (e.g., a linkageless burner management system for $19,127) were assumed for energy recovery units with CO between 400 and 1000 ppm, and a CO oxidation catalyst was assumed for energy recovery units with CO over 1000 ppm. First, we do not believe that installation of a combustion control system will be sufficient to reduce boiler CO to 150 ppm from levels up to 1000 ppm, especially for energy recovery units that primarily fire biomass. There are many factors that cause high CO emissions, and often combustion air and fuel delivery system retrofits are necessary to reduce CO emissions, at costs exceeding $500,000. Second, EPA has not shown that CO catalysts can be installed on energy recovery units and achieve reductions from 1000 ppm CO to below 150 ppm CO. EPA has also not considered the impact of requiring compliance with the CO limit during startup and shutdown in its analysis of compliance cost. Conditions during startup in particular (e.g., high levels of oxygen) will make compliance with the CO limit problematic, and the short averaging period will result in many excess emissions periods. There are also trade-offs between CO and NOx emissions that need to be considered when determining the appropriate CO emissions reduction strategy.

The ERG cost memorandum states that for units requiring a less than 10 percent improvement in NOx, "minor adjustments were considered sufficient." There is no basis for this assumption, and EPA states that these adjustments (such as air handling and distribution adjustments in the firebox) would be made at no additional cost. Facilities may already be operating their units at the lowest NOx emissions achievable with out add-on control, so this assumption seems arbitrary.

EPA has estimated costs to install packed bed scrubbers for HCl and SO2 control. Industrial boilers (regulated as energy recovery units under CISWI) do not used packed bed scrubbers for acid gas control, as the limitations of these devices make them impractical for use on applications with high flow rates, high PM loading, and high inlet pollutant concentration. EPA's own fact sheet on these devices, located at http://www.epa.gov/ttn/catc/dir1/fpack.pdf, lists limitations of these devices, indicating that they are only used in applications up to 75,000 scfm, which limits their use to small units only. Facilities will instead install wet scrubbers, dry scrubbers, or semi-dry scrubbers to control acid gas

emissions from energy recovery units. EPA has estimated HCl control costs for equipment that industry is not likely to install. The EPA fact sheet also indicates that these devices achieve 95 to 99 percent acid gas control; for a coal-fired energy recovery unit, achieving a 4.1 ppmv SO2 emission rate will likely require greater than 99 percent control. Lastly, no consideration was given for facilities

that may have zero discharge permits, where it is infeasible to install a wet control device. Costs for HCl and SO2 control have been underestimated due to the approach used.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)

Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 31

Comment: We created a spreadsheet [see DCN:EPA-HQ-OAR-2003-0119-1951.2] to estimate the capital cost of installing emissions controls on energy recovery units to comply with the proposed emission limits. The average emissions in the EPA database for each unit were compared to the proposed limits. We used some of the same assumptions that EPA used to cost out controls where emissions reductions were required: For PM, we assumed addition of a fabric filter (base cost for 250 MMBtu/hr unit of $7 million). For HCl, we assumed addition of a wet scrubber (base cost for 250 MMBtu/hr unit of $8 million). For CO, we assumed combustion improvements or CO catalyst ($2 million). For mercury and dioxin/furan, we assumed carbon injection ($1 million). For NOx, we assumed SNCR ($4 million base cost for 250 MMBtu/hr unit). The total estimated capital cost for installing controls is $740 million, versus EPA's total capital investment for both controls and monitoring equipment of $455 million in Table 2C of the cost memo [see DCN:EPA-HQ-OAR-2003-0119-0054.]

EPA should re-evaluate its cost estimates for the controls needed to comply with this rule based on the comments above.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 47

Comment: To meet the standards in the Proposed CISWI Rule, PCA estimates that 87% of all alternative fuel burning cement plants will be forced to invest in baghouses to meet particulate matter, lead and cadmium standards. This includes investments to existing baghouses and in some cases the construction of new baghouses. To comply with the combined Hg, SO_x and HCL standards, PCA estimates that 22% of all plants will be required to invest in a stand alone wet scrubber system, 62% of all plants will be required to invest in wet scrubber-ACI systems, 22% of all plants will be required to invest in SNCR systems and 39% will be required to invest in burner systems.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 58

Comment: Industry Capital Costs to Comply with EPA Emission Standards

Total industry investments to comply with the Proposed CISWI Rule are estimated at $2.0 billion. This excludes potential spending by plants PCA estimates will discontinue burning alternative fuels due to the inability to meet standards or due to the excessive financial burdens. These estimates only apply to alternative fuel burning cement kilns.

No cement plant burning alternative fuels can currently meet all standards in the Proposed CISWI Rule. As a result, all cement plants that intend to continue burning alternative fuels will require investment in emission capture systems. PCA employs EPA and PCA kiln and plant emission information to determine whether a plant must expend capital to reach compliance.

All emission data by plant, used in this report were sourced from one of several sources including: (1) EPA's ISIS model used for NESHAP, (2) EPA's National Emission Inventory database, (3) PCA SN3048 - Air Emissions Data Summary for Portland Cement Pyroprocessing, (4) PCA SN3050 - Air Emissions Data Summary for Portland Cement Pyroprocessing Operations Firing Tire-Derived Fuels, (5) PCA's annual Labor/Energy Input Survey. Units of measurement for the toxic air pollutants available from these various sources often did not map directly to CISWI emission limit units, therefore conversions were required. These conversions used an estimated exhaust gas flow rate [Footnote: Source: PCA's Innovations in Portland Cement Manufacturing). Conversion examples include pounds to mg/dscm (milligrams/dry standard cubic meter) or tons to ppmv (parts per million volume).]

For mercury emissions, PCA used the EPA plant-byplant study on Hg emissions from the cement industry, reflecting 2006 information, for 100 cement plants. (EPA: The Toxics Release Inventory (TRI) 2006) [Footnote: EPA: The Toxics Release Inventory (TRI) 2006]

A follow-up study was performed reflecting 2007 information for some 50 cement plants. Historical benchmarks on plant-by-plant Hg emissions reflect the most recently available data for each plant.

On a plant-by-plant basis, PCA employs a matrix solution that accounts for the plant's emissions of Hg, HCL, PM, NOx, SO_x, D/F, Pb and CO and employs PCA technology emission capture assumptions to determine which emission systems must be employed at the plant to comply with EPA standards. A plant with extremely high levels of Hg, HCL, and SO_x, for example, would likely be forced to invest in an ACI-wet scrubber system. Investment in the ACI-wet scrubber system, to comply with mercury emissions, for example, would presumably also take care of their HCL emissions at the same time. This investment for mercury control would also reduce SO_x emissions by 80%. Double counting of systems required for compliance is eliminated through this process. Each plant is carefully assessed using this methodology.

Under the Proposed CISWI Rule, PCA estimates that 87% of all CISWI cement plants will be forced to invest in baghouses to meet particulate matter, lead and Cadmium standards. This includes investments to existing baghouses and in some cases the construction of new baghouses. To comply with the combined Hg, SO_x and HCL standards, PCA estimates that 22% of all plants will be required to invest in a stand alone wet scrubber system, 62% of all plants will be required to invest in wet scrubber-ACI systems, 22% of all plants will be required to invest in SNCR systems and 39% will be required to invest in burner systems.

PCA capital cost estimates for each emission capture system are based on survey information from cement companies as well as equipment manufacturers and based on an average 1.2 million ton dry kiln cement plant with a precalciner and a preheater. Adjustments to this information are made to account for differences in the type of plant, such as a long dry or wet kiln. PCA assumes a 29% emission equipment installation cost premium for long dry kilns and a 143% cost premium for a wet kiln. Adjustments to this information are also made to account for size differences among plants.

This survey information reflects current estimated investment costs on emission systems. This information contains significant upside risk in the context of likely market conditions facing emission equipment suppliers. The cement industry will be mandated to install a massive

amount of emission capture equipment to comply with both the Pre-publication Portland Cement NESHAP and the Proposed CISWI Rule. This equipment must be in-place within three years for NESHAP compliance and five years for CISWI compliance. There are a limited number of emission capture equipment suppliers. Keep in mind, while there are 30 or more emission equipment suppliers only 6-8 are cement kiln emission focused. Demand for their services from the cement industry will increase dramatically. A premium will likely be placed on the urgency to install the systems over a short period of time. This dynamic is likely to be amplified as the overall economy regains traction. The likely outcome is an escalation in the costs of these systems. A 10% to 20% premium over existing costs is possible. PCA assumes a 15% increase over the survey information. Please note that these adjusted equipment cost estimates may differ from the current equipment cost estimates indicated elsewhere in the PCA comments. Based on these adjustments, PCA's estimates for a 1.2 million ton dry kiln with a precalciner and preheater are as follows:

* Baghouse System = $9.2 million

* Activated carbon injection (ACI) = $17.5 million

* Wet Scrubber System = $22.1 million

* ACI system combined with a wet scrubber system = $39.6 million

* Selective catalytic reduction systems (SNCR) = $8.5 million (wet kiln), $3.5 million (dry kiln).

* Burner Enhancements = $1 million

Every alternative fuel burning cement plant in the United States will be forced to spend tens of millions to comply – averaging $48 million per plant. Total industry investments to comply with the Proposed CISWI Rule are estimated at $2.0 billion. This excludes potential spending by plants PCA estimates will discontinue burning alternative fuels due to the inability to meet standards or due to the excessive financial burdens.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1

Comment Excerpt Number: 4

Comment: EPA's assessment of costs to be in incurred by both burn-off ovens and drum furnaces is a massive underestimate. It appears that costs were assessed based on the model plant assumptions typical of facilities operating parts-reclaimer units. For drum furnaces, our capital costs to retrofit would be at least three times the costs estimated by EPA

(~ $500,000 vs. ~ $147,000), not including our annual operating and maintenance costs. There are several reasons why our costs are higher than the EPA estimates:

1. The exhaust flow-rate typical of a drum reclamation furnace exceeds 10,000 cfm, far exceeding the flow-rate typical of a parts reclaimer and thus resulting in much larger capacity and thus more expensive air pollution control equipment.

2. The proposed regulations would require installation of a baghouse for control of particulate matter and metals for every drum reclamation furnace in the U.S.

3. Use of a baghouse would then require substantial retrofit of the combustion gas cooling systems, in many cases requiring the addition of a waste heat boiler or heat exchanger.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 30

Comment: EPA has not accurately estimated the cost of compliance with the proposed CISWI regulation. For example, its methodology underestimated costs for Eastman's three boilers by a factor of 10.

Taking our Tennessee facility as an example, Eastman has compared EPA's cost estimate (found in a memo dated April 28, 2010 entitled "Compliance Cost Analyses for CISWI Units") to our own estimates. In doing so, we discovered several flaws in EPA's analysis.

For Eastman's stoker coal fired boilers 18 – 20, EPA assumes the following technologies will be required to comply with the proposed emission standards for energy recovery units:

* Replace existing ESPs with Fabric Filters (to control PM and lead).

* Add a packed bed scrubber (to control HCl and SO2).

* Add activated carbon injection (to control mercury and dioxins/furans)

* Add advanced combustion controls (to control CO)

* Make "minor adjustment" to meet NOx limits

EPA estimated the total capital investment at approximately $25 M for new fabric filters and packed bed scrubbers on the three boilers.

First of all, EPA (see page 34, Appendix) has the sulfur dioxide emissions at 21 ppm and that a 89 percent reduction is needed to meet the proposed standard of 4 ppm. We do not know where EPA obtained the 21 ppm value, but Eastman submitted SO2 CEMS data for this unit which shows SO2 concentrations at around 600 ppmv corrected to 7 percent O2. There is no single scrubber technology available that can reduce a boiler burning Eastern bituminous coal to an outlet concentration of 4.1 ppmv, so clearly EPA has proposed a standard that in impracticable, if not impossible to meet. Also, EPA's assumption that a packed bed scrubber would be installed on a 249 mmBtu/hr rated coal boiler is unrealistic. No source would select this technology for a boiler this size. However, for the sake of comparison, Eastman included a circulating dry scrubber with a fabric filter FOLLOWED by caustic polishing scrubber to reduce SO2 to the lowest level possible. Our estimate of the capital cost to install this system is around $250 M, ten times the EPA estimate. We note even this assumes our wastewater treatment system can accommodate a large liquid effluent without removing dissolved salts.

Second, for NOx, EPA has the NOx emissions at 129 ppmv, while Eastman reported NOx GEMS data showing NOx around 300 ppmv, corrected to 7 percent O2. EPA had concluded only "minor adjustments". In this case, substantial capital and annual operating costs would be incurred to reduce NOx emissions to the 130 ppmv proposed standard.

Finally, it appears EPA has swapped our reported GO and NOx emissions, because it shows GO at 434 ppmv (the uncorrected range of values we reported for NOx) instead of 36 ppmv, corrected to 7 percent O2. EPA had assumed advanced combustion controls would be needed to reduce GO. While those controls would not be needed to meet the 150 ppmv proposed GO standard, they would be needed for NOx controls (along with SNGR).

Eastman is concerned that if this magnitude of error is made for the only sources we could check, then EPA's Regulatory Impact Assessment may be invalid.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 1

Comment: Cost Impact

1. Capital costs to comply with the CISWI standard are significantly higher than those required for Boiler MACT, principally because more capital is needed for the installation of devices to control more pollutants and to meet more stringent limitations for the same pollutants regulated under Boiler MACT. Even though the comment period was exceedingly short and not long enough to do all the engineering analysis necessary to fully determine potential costs from the proposed regulation, we do have some preliminary cost estimates that we feel demonstrate the significant costs associated with the proposed rule.

2. Capital cost for the sixteen IP boilers to comply with standards for CISWI energy recovery units is estimated to be $516 million dollars compared to $290 million dollars for these same boilers to comply with Boiler MACT and discontinuing the burning of secondary waste materials.

Annualized [Footnote: Total annualized cost includes cost of capital recovery.] costs for these sixteen boilers to comply with CISWI standards are estimated to be $108 million dollars per year, compared to a range of $76 to $363 million dollars for Boiler MACT depending on which current fuels become wastes (the difference of $287 million is the estimated maximum added cost for fossil fuels and disposal costs for fuels that may become wastes). [See submittal for chart showing IP preliminary estimated costs associated with the CISWI and Boiler MACT rulemakings submitted by commenter.]

4. EPA has underestimated the capital cost required for IP to comply with the CISWI rule by approximately $96 million dollars for the six boilers it evaluated. [See submittal for table showing a comparison of estimates from IP's own preliminary engineering assessment and EPA's analysis provided by commenter.]

EPA underestimated the cost because it assumed that most boilers would be able to achieve NOx standards by carefully managing combustion conditions, whereas our assessment concluded that capital control equipment would be required. A second major difference is that EPA did not appear to take into consideration how pollutant specific control devices must fit together to achieve the required performance levels. The details of IP's cost evaluation can be found in the Black & Veach (B&V) analysis included as Attachment 1 [Footnote: The content of this attachment is confidential business information and has been submitted separately for inclusion in EPA's confidential business information files.] [See separate submittal for confidential business information provided by commenter.]

(a) Different conclusions on control equipment needed to comply for Selma, Al - Riverdale Mill -No. 2 Bark boiler / BK02

The No. 2 Bark Boiler at IP's Riverdale mill was identified by EPA as a best controlled floor unit for controlling six of the ten CISWI pollutants including cadmium (Cd), carbon monoxide (CO), hydrogen chloride (HCl), lead (Pb), filterable particulate matter (PM) and dioxin/furans total mass (D/F). To comply with the remaining CISWI pollutants, EPA concluded that an Activated Carbon Injection (ACI) system would be required to control mercury and D/F TEQ, a Packed Bed Scrubber (PBS) to control sulfur dioxide (SO2), and Selected Non-Catalytic Reduction (SNCR) to control nitrogen oxides (NOx). EPA estimated that the total capital investment (TCI) required to install these controls would

be $7.2 million and the total annualized cost (TAC) would be $3.5 million dollars.

IP's engineering assessment agrees with EPA's conclusion that ACI and SNCR will be required. However, our analysis concludes that sorbent injection and fabric filter (FF) technologies will also be required to ensure continuous compliance with all of the proposed CISWI limits when taking into account the entire range of fuels and operating conditions of the Riverdale boiler and the expected increase in particulate matter concentrations attributed to the SNCR and ACI systems. IP estimates a TCI of $25.3 million dollars and TAC of $4.4 million for this boiler.

(b) Different conclusions on control equipment required: Mansfield, LA – No.1 and No.2 Power Boilers

The Mansfield, LA mill's No.1 and No. 2 power boilers are identical units burning the same fuels, although EPA's cost estimating methodology projects significantly different costs for compliance. The EPA cost estimate has projected a TCI of $16.7 million for No.1 power boiler and a TCI of $22.1 million for No.2 power boiler for installing the same control technologies of a FF, PBS, and ACI on both boilers. This demonstrates the potential error in estimating control costs based on a few stack tests and the limited data used in the EPA cost estimating method.

(c) Different conclusions on NOx levels achievable with combustion controls.

There appears to be an issue with the EPA method for determining when NOx controls are required for compliance with the proposed CISWI limits. In our evaluation of the six units EPA identified as CISWI units, we determined that NOx control would be required for five of them. In contrast, EPA's analysis concluded that only one of the units would require additional controls. It appears that there is a difference in the methodology for converting the ICR data for comparison with the 130 ppm NOx requirement. This accounts for $24 million of the difference in the two capital cost estimates.

This difference in cost estimates are greater than the ± 50% accuracy of this type of engineering cost estimate and affect the regulatory impact analysis of this proposed rule. EPA should complete a thorough review of the cost estimates and economic impacts before finalizing this rule.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 8

Comment: Because EPA massively underestimated the number of affected operations, the estimated cost impact in aggregate is also severely underestimated. From EPA's Regulatory Impact Analysis (Table 3-1), costs are estimated as [see submittal for summary table of capital and annual costs for existing CISWI sources provided by the commenter]

A review of the ERG document available in the docket "Compliance Cost Analyses for Existing CISWI Units" shows that these costs were developed solely on the compliance equipment assumed to be required for MACT floor compliance by the 36 parts/rack reclamation units identified in EPA's database as affected units. These aggregate totals for category-wide compliance costs reflect no cost impacts from the estimated 36 drum reclamation units existing in the U.S.

A review of Table 1A from the ERG document reveals the number of control devices assumed to be required for known Burn Off Ovens (considering only 36 parts/rack reclamation units) to

comply with the MACT floor requirements. [See submittal for summary table of controls required to comply with MACT Floor for parts/rack reclamation units.]

Considering the true estimated number of parts/rack reclamation units to be in excess of 15,000, the number of control devices that would be required is far in excess of these projections.

With respect to drum reclamation units, no MACT floor analysis has been performed to identify the actual controls that would be required for compliance. However, for

comparison purposes, RIPA has evaluated what controls may be required to comply with the MACT floor as currently proposed for existing Burn Off Ovens. Based on input from qualified industry consultants, it is expected that each drum reclamation unit would be expected to require:

Minimum Controls

* Fabric Filter – for control of PM, lead and cadmium

(must include installation of exhaust gas cooling – waste heat boiler or heat exchanger)

* Low NOx Burners – for control of NOx (as an alternative to SNCR)

Potential Additional Controls

* Afterburner retrofit – for control of CO

* Packed Bed Scrubber or Spray Dryer Equipment for Reagent Injection – for control of HCl and SO2

* Activated Carbon Injection – for control of dioxins and mercury

As shown in Table 2A from ERG's Compliance Cost Analysis, the costs for fabric filters, afterburner retrofit and packed bed scrubbers are a function of the exhaust flow rate of the combustion unit. As established above, parts/rack reclamation units range in size from 288 to 3127 dscfm, as compared to drum reclamation units with exhaust flow rates ranging from 12,000 to 30,000 dscfm. This difference results in much higher per facility costs for each of the control equipment components required.

Using similar methodology to the approach represented in ERG's Compliance Cost Analyses, RIPA estimates that the total capital investment would exceed $1,000,000 for the minimum control equipment described above. If additional controls are required the total capital investment could increase dramatically to approximately $2,000,000.

These costs are estimated per facility. Thus, assuming a total of 36 drum reclamation furnaces in the U.S., the aggregate capital cost impact would be between $36,000,000 and

$72,000,000. This impact is not contemplated in any of the assumptions used in the Regulatory Impact Analysis prepared by EPA.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 14

Comment: EPA's pollutant-by-pollutant approach does not address the technical feasibility of integrating multiple control devices or the impact that these devices may have on emissions of other pollutants.

EPA did not evaluate how a string of control devices each selected based on the merits of controlling a single pollutant would perform as an integrated suite of controls or whether such an integrated suite of controls could achieve the same levels as stand-alone optimized units. The EPA's evaluation failed to account for changes in the exhaust stream caused by one device will impact design considerations and performance of control devices located downstream. For example SNCR control systems cause an increase in exhaust gas particulate as a result of reactions between the injected reagents and other flue gas constituents. ACI systems require injection of carbon particles into the flue gas stream to allow

adsorption of trace pollutants and the subsequent collection of carbon in a downstream control device. EPA's analysis concludes that nearly every unit in the CISWI energy recovery category will require installation of ACI systems to achieve the proposed limits for mercury and dioxins. Despite the fact that this technology will by its very design pose greater demands on downstream control devices and can reasonably be expected to cause PM emissions to increase from downstream devices, EPA's analysis for IP's Riverdale boiler did not conclude that any additional PM control would be necessary. IP's Riverdale boiler was identified by EPA as a

floor unit for PM, cadmium and other particulate bound pollutants. Control technologies to reduce NOx will cause CO to increase, and combustion technologies to reduce organic HAP or CO will increase NOx as will exhaust gas re-heating systems needed to raise exhaust gas to appropriate temperatures for catalytic oxidation or to avoid acid condensation.

Setting emission limits on a pollutant-by-pollutant basis will in fact require some best performing facilities to remove the very control technology that qualified them as a best performing floor unit in the first place.

IP boilers identified as CISWI floor units will have to replace or reconfigure existing control equipment in order to meet all of the CISWI standards. Riverdale BB#2 was identified as being among the best performing units

for controlling six of the ten CISWI regulated pollutants. However, the current control system that qualified it as a best performer for cadmium, lead and particulate will be required to be reconfigured in order to design a system that will meet all of the CISWI pollutant standards. Similarly, Texarkana mill (PB2) and Valliant (BB), both identified as top performers for controlling HCl and SO2, will likely have to remove the wet particulate matter scrubbers used at these locations that qualified them as best performers in order to develop control systems for all CISWI pollutants. IP suspects its units are not unique and that others also identified as best performing under the pollutant-by-pollutant will also require removal and or significant modification of the technology that made them best performing units because EPA did not adequately consider the integrated suite of pollutants and the interrelationship of their respective control devices.

Emission limits set at levels that require the very best performing units to abandon their existing high performance air pollution control systems is surely not what Congress intended when it

directed EPA to set standards that reflect the level of control "achieved in practice" by the best controlled similar sources.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Arnold Schwarzenegger
Commenter Affiliation: State of California
Document Control Number: EPA-HQ-OAR-2003-0119-2108
Comment Excerpt Number: 4

Comment: The proposed MACT Standards did not take into account the technological and economic feasibility for some of the existing BTE facilities to meet the proposed emission limits. The supporting documentation to the MACT Standards stated that boilers with CO emission levels between 400 parts per million (ppm) and 1,000 ppm (at 3 percent 02) could install a Linkageless Burner Management Systems (LBMS) for under $20,000 dollars. However, there is no documentation that these systems can or have been successfully retrofitted to existing BTE facilities using stoker or fuel cell oven combustion to achieve the proposed levels. For units burning biomass, the draft regulatory analysis estimated that 72 percent of the units are exceeding the MACT floor emission limits, and that these units would need to install an LBMS. Based on ARB staff conversations with several stoker burner manufacturers, we could find no stoker units that have been retrofitted with these systems. Further, these manufacturers stated that a successful retrofit to meet the proposed standards was doubtful based on the inherent leakage of air in these types of facilities. In consulting with several LBMS manufacturers, none of these manufacturers were aware of any retrofits of stoker type boilers with a LBMS system. ARB recommends U.S. EPA conduct a more thorough analysis of the feasibility and costs for existing biomass facilities utilizing stoker or fuel cell/Dutch oven combustors to be retrofitted with a LBMS system.

BTE facilities required to install an oxidation catalyst to meet the proposed CO emission limit may have space limitations or other engineering constraints which would prevent the installation of the additional control equipment. For example, the temperature regimes at the catalyst placement site may not be high enough for the catalyst to function properly. In this case, additional heat (by co-firing) will be needed to get the exhaust temperature within the required temperature range. This co-firing will result in an increase of NOx and other pollutants and may also trigger NSR in California. ARB recommends U.S. EPA perform a more thorough analysis on the feasibility of existing facilities to meet the proposed standards.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Russell Wanke
Commenter Affiliation: Thilmany Papers

Document Control Number: EPA-HQ-OAR-2003-0119-2117.1
Comment Excerpt Number: 2

Comment: In addition to the capital investment required to become compliant, we estimate that the ongoing incremental annual operating costs of the mandated controls will be in the $4 to $6 million range.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 4

Comment: EPA has underestimated the costs that CISWI units will incur in order to meet emission standards. For example, a cost analysis performed by the American Forest and Paper Association (AF&PA) and detailed in their comments on this rule shows significantly higher capital costs for installing controls on existing energy recovery units in order to comply with the proposed rule -- a total estimate of just capital costs for installing controls of $740 million, versus EPA's total capital investment for both controls and monitoring equipment of $455 million.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Kevin M. Dempsey
Commenter Affiliation: American Iron and Steel Institute (AISI)
Document Control Number: EPA-HQ-OAR-2003-0119-2111
Comment Excerpt Number: 7

Comment: We believe that no impacts are included for units that currently meet exemptions that EPA is proposing to remove, such as laboratory units, cyclonic burn barrels, and agricultural units. Until the agency identifies the full population of sources impacted by the Proposed Rule, it will be impossible to promulgate appropriate standards based on representative sources.

Response: See preamble Section IV. for a summary of significant changes since proposal. Also, see preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 7

Comment: EPA's estimated costs of controls to comply with the rule are significantly lower that the real cost impact on sources. CIBO estimated the capital costs for installation of additional control technologies on existing boilers. The approach used by CIBO to estimate capital costs differed from EPA's in several respects, as described in [see DCN: EPA-HQ-OAR-2003-0119-1834.2 for CIBO's comments on the proposed Boiler MACT rule.] CIBO members have sources that will be subject to CISWI or alternatively, to MACT standards. The reasoning and estimated costs for controls that CIBO determined would be required to meet proposed MACT standards provide information from which CISWI controls and cost estimates can be extrapolated. CIBO conservatively estimates that the cost to sources to implement CISWI will be significantly higher than EPA estimates.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 16

Comment: The CISWI Standards for New and Reconstructed Sources Are Not Achievable

CAA Section 129(a)(2) provides for new units that the "degree of reduction in emissions that is deemed achievable * * * shall not be less stringent than the emission control that is achieved in practice by the best controlled similar unit, as determined by the Administrator". This statement assumes that all sources in a specific category have similar (or identical) uncontrolled emissions, and the installation of similar emission controls will result in emissions comparable to the "best controlled similar unit". Cement kilns are very different in design and operation from location to location, utilize very different raw materials and fuels, produce very different products, and thus have very different uncontrolled emissions. Therefore, even if Lafarge were to install control technology identical or even beyond that of the best controlled

similar unit, it could not guarantee it could meet the emission levels of the best controlled similar unit in each case. Therefore, the standards are not achievable for all sources.

Cement kilns that elect to comply with the "existing source" CISWI emission limits will ultimately face an impossible effort to comply with the "new source" CISWI emission limits once they modify or reconstruct their source. A simple comparison of some of the emission limits proposed in the CISWI rule make this conclusion obvious. [Note: Lafarge does not agree with the proposed emission limits for existing or new cement kilns. It uses the proposed limits and those in the proposed NESHAP and NSPS for demonstration purposes only.]

The current Portland cement NESHAP limits D/F from kilns to 0.2 ng TEQ/dscm (0.4 ng TEQ/dscm for those with APCD inlet temperatures <400°F). To comply with the current NESHAP limits, kilns were required to modify their operations and apply MACT. The proposed NESHAP (May 2009) does not recommend revising these limits, as it recognizes that this is MACT for both new and existing kilns. By comparison, the proposed CISWI sets D/F limits for new sources at 0.000028 ng TEQ/dscm. This equates to a 99.986% reduction in D/F levels. EPA has not provided any documentation on how an existing source that modifies and becomes subject to the "new source" CISWI limits can achieve this emission level, only that one source during one testing event was emitting at this level over a 3-hour period. No technology has ever demonstrated the ability to reduce D/F levels in kiln gases by a level even approaching this degree of reduction on a continuous basis. While EPA may argue that the "best performing source" is continuously achieving this level (to which Lafarge disagrees), it cannot demonstrate

that other kilns with their unique mix of raw materials, fuels and products is capable of achieving this emission level even while using the best available technology on the market.

The Portland cement NSPS and EPA's BACT/LAER Clearinghouse document provide EPA with a gauge of the NOx level being achieved in practice by new cement kilns. New cement kilns are preheater/precalciner (PH/PC) technology, designed to minimize NOx emissions through preheating the kiln gases by staging combustion in oxygen-deficient zones.

Existing kilns include not only PH/PC kilns, but preheater-only, long wet and long dry kilns. In particular, long wet and long dry kilns are not designed for preheating kiln gases or staging combustion, and therefore must burn most or all of their fuel at the main burner. This limitation results in uncontrolled NOx that is significantly higher than from PH/PC kilns.

The recently finalized Portland Cement NSPS (40 CFR 60, Subpart F) limit for NOx is 1.5 lbs/ton of clinker. BACT for new kilns subject to PSD/NSR has been 1.5 lbs/ton of clinker or higher based on case-by-case evaluations of kiln design, raw materials, fuels, etc. The proposed NSPS and existing BACT limits assume well designed PH/PC kilns utilizing SNCR technology. Although only a small portion of PH/PC kilns have SNCR installed, the data indicates that 1.5 to 2.0 lbs/ton of clinker has been achievable when using SNCR achieving approximately 50% NOx control. The proposed CISWI NOx limit for new sources is equivalent to approximately 1.0 lbs/ton of clinker. For new PH/PC kilns to achieve this limit, the SNCR systems would have to be capable of achieving at least 67-75% NOx control efficiency on a continuous basis. This level of continuous control has never been demonstrated by a SNCR system on a cement kiln.

Long wet and long dry kilns have much higher uncontrolled NOx emissions. To achieve a level of approximately 1.0 lbs/ton of clinker would require control efficiencies of greater than 80-90 percent. The only technology that is speculated to be capable of achieving this level of control is selective catalytic reduction (SCR). EPA is fully aware that SCR technology is not yet proven to be effective at these removal efficiencies on cement kilns on a continuous basis. EPA stated in the recently finalized Portland Cement NSPS that it believes that SNCR (not SCR) is best demonstrated technology (BDT). In fact, Lafarge is the only cement company in the U.S. that has agreed to install and trial an SCR on one of its long dry kilns, but this is not scheduled to occur until 2013 and no emission limits have been proposed or assumed. Therefore, it is premature to assume that long wet or long dry kilns can achieve a NOx emission level of 1.0 lbs/ton of clinker.

A similar argument can be made for the "new source" CISWI emission limit for SO2. SO2 emissions are a function of the type and quantity of sulfur inputs to the cement kiln. EPA has recently set the Portland Cement NSPS SO2 limit at 0.4 lbs/ton of clinker or a 90 percent SO2 reduction demonstration. BACT looks at case-by-case conditions and sets appropriate SO2 limits based primarily on limestone and fuel sulfur, and the cost effectiveness of various control technology options. At present, almost all of the BACT limits for SO2 are higher than the new NSPS limit.

The proposed CISWI SO2 limit for "new sources" translates to approximately 0.035 lbs/ton of clinker. This limit is over 11 times more stringent than the NSPS and lower than any current BACT limit for SO2. It assumes that even with a control technology capable of continuous 95 percent removal efficiency, the uncontrolled SO2 from any kiln subject to the rule

would have to be below 0.7 lbs/ton of clinker. This uncontrolled SO2 level is nearly as low as the final NSPS and is not achievable (even with controls) by more than 90% of the kilns in operation today.

Comparable arguments could be made for PM and lead. The best controls available for these pollutants are already being utilized (a high efficiency fabric filter baghouse). To achieve in excess of 70% additional reduction is not technically feasible unless multiple control devices were placed in series. This is impracticable and not economically feasible for a cement plant or any manufacturing entity.

Response: See preamble Section V. for the responses on Control Technology Assumptions for the Floor and Beyond-the-Floor and consistency between other applicable NESHAP limits.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 21

Comment: It is also important to point out that neither EPA nor the regulated sources have an adequate understanding of how to reduce or control D/F emissions from these units. Where no known technology or methodology exists to achieve the emission reduction, legally EPA cannot impose that requirement.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 30

Comment: Estimated HCl Emission Reductions Are Small and the Standard May Be Unachievable

The reductions estimated for HCl are relatively small. However, EPA assumed that scrubbers are or will be installed in order to meet the Subpart LLL standard. EPA assumes that further reductions would be a simple matter of fine-tuning the existing scrubbers. As industry commenters pointed out for the proposed Subpart LLL rule, there are no data to support the conclusion that, under various conditions, a wet scrubber designed to utilize lime will provide the required collection efficiency to meet a 2 ppm HCl emission standard [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009.] The standard for the CISWI rule is even lower at1.5 ppm. Thus, the lower CISWI standard may exacerbate an issue with HCl control via a scrubbing system that may already be incapable of meeting even the higher Subpart LLL proposed standard.

The proposed rule does not address the issues of control of HCl for cement kilns as it relates to achievability of the very low standard and the issues of the control technology as applied to cement kilns. As explained in the comments of the Portland Cement Association on the proposed Portland Cement NESHAP rule, the application of wet scrubbers may be very problematic or potentially infeasible in those areas of the United States where fresh water supplies are very limited. (Docket ID: EPA-HQOAR-2002-2845 and EPA-HQ-OAR-2002-0051-2922)

When a wet scrubber system is designed and installed to remove acid gases from a flue gas stream, an important part of the overall installation is the solids and liquid-handling systems. To recycle some of the water, the sludge is thickened, typically by compressing the material. In existing cement kilns that have wet scrubbers, the water in the sludge is reduced to about 40%–50% by weight. Because the chemistry of the 27 sludge will be very site-specific and somewhat unknown, plans will have to be made for disposal of some or potentially all of the sludge if it becomes necessary. Depending upon levels of sodium or potassium in the sludge, some or all of the sludge would have to be landfilled on-site, requiring land disposal permits. Although some water can be recycled back to the scrubber to prevent chloride buildup in the system, a portion of the water will have to be sent to a water treatment facility.

In addition, these systems typically use lime and not caustic (NaOH), the preferred scrubbing medium for HCl. Note: Because the sodium in caustic may adversely impact cement quality, it cannot be used. Thus, SYA believes that further reductions

in HCl to meet the CISWI standard are problematic at best and probably not achievable in cement kilns.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 39

Comment: In the preamble to this rulemaking (75 Fed. Reg. 31967), EPA anticipates an overall capital investment of $574 million dollars. This estimate assumes that the cement industry has already invested $4.7 billion in control technology to comply with the NESHAP rule. What EPA's cost model does not take into account is the revenue losses to the cement industry and the non-hazardous secondary materials markets, and the added costs associated with replacement of these materials with traditional fuels and nonrenewable virgin materials.

Due to the short time allotted by EPA to prepare these comments, Lafarge was not able to complete its analyses of the costs, but our preliminary estimates show that these costs applicable to the cement industry alone range from $200 million to $1 billion dollars annually. Given this significant cost impact, Lafarge believes that EPA is obligated to complete a more thorough review of the cost impacts associated with this rulemaking effort.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 64

Comment: EPA has removed the exemption for laboratory analysis units, but EPA has not provided any cost or impacts analysis for extending the rule to these units.

Response: See preamble Section V. for the response on Legal and Applicability Issues, Compliance Schedule, and Certification Procedures-Lab Analysis Units.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 68

Comment: The emission control technologies for CO that EPA assumed in the cost estimate are not likely to meet the proposed emissions standards, meaning that EPA has likely underestimated the compliance costs. The ERG compliance cost analysis memo states that for CO control, advanced combustion controls (e.g., a linkageless burner management system for $19,127) were assumed for energy recovery units with CO between 400 and 1000 ppm, and a CO oxidation catalyst was assumed for energy recovery units with CO over 1000 ppm.

EPA has provided no support in the administrative record that installation of a combustion control system will be sufficient to reduce boiler CO from levels up to 1000 ppm down to 150 ppm, and we do not believe that it is possible to achieve such a significant reduction through the use of a linkageless burner management system. There are many factors that cause high CO

emissions, and often combustion air and fuel delivery system retrofits are necessary to reduce CO emissions. (Such retrofits may cost more than $500,000.

Also missing from EPA's cost analysis for CO control is any discussion of the impact of requiring compliance with the CO limit during startup and shut down. Conditions during startup in particular (e.g., high levels of oxygen) will make compliance with the CO limit problematic and EPA has failed to address this reality. In addition, it seems EPA has not taken into account trade-offs between CO and NOx emissions when determining the appropriate CO emissions reduction strategy.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 69

Comment: EPA has likely underestimated the cost of replacing burn-off ovens. As an alternative to the use of burn-off ovens, EPA estimated the costs of sandblasting. However, abrasive cleaning is not a viable option for machined parts since abrasion can damage the parts beyond repair. Retrofitting the burn-off ovens is also not an economically viable alternative, as EPA estimated capital costs [Footnote: EPA-HQ-OAR-2003-0119-0054.] of over $2 million to retrofit these units with add-on controls. The retrofit costs combined with lack of viability of sandblasting will likely result in facilities discontinuing use of burn-off ovens and either shipping off parts to be cleaned (requiring purchase of duplicate parts and resulting in transportation emissions and additional cleaning cost) or cleaning their parts with organic solvent (if allowed by other environmental regulations).

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 71

Comment: The ERG cost memorandum assumes that for units requiring less than 10% improvement in NOx, "minor adjustments were considered sufficient." EPA further assumes that these adjustments (such as air handling and distribution adjustments in the firebox) could be made at no additional cost. However, EPA provides no evidence in the record to support either of these assumptions. There are no boiler adjustments of this type that are done at no cost. Additional NOx reductions generally involve CFD (computational fluid dynamics) modeling of the combustion air system, burners, and furnace to address proper air distribution relative to fuel

distribution to allow for carefully staged combustion. Modeling alone would be in the tens of thousands of dollars, and then modifications of air distribution systems such as baffle insertion or adjustment requires unit shutdown, burner removal, internal modifications, and reinstallation, plus startup testing and verification. Our members indicate that these activities could cost $50,000 at a minimum for a single burner boiler. Multiple burner boilers or stokers would be significantly higher.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 72

Comment: EPA has underestimated the likely costs for HCL and SO2 control. The Agency's calculations assume the installation of packed bed scrubbers. However, industrial boilers (regulated as energy recovery units under CISWI) do not used packed bed scrubbers for acid gas control, as the limitations of these devices make them impractical for use on applications with high flow rates, high PM loading, and high inlet pollutant concentration. EPA's fact sheet on these devices [Footnote: http://www.epa.gov/ttn/catc/dir1/fpack.pdf.] lists their limitations, indicating that they are only used in small units (applications up to 75,000 scfm). The EPA fact sheet

also indicates that these devices achieve 95 to 99 percent acid gas control, despite the fact that a coal-fired energy recovery unit will likely require greater than 99 percent control to achieve a 4.1 ppmv SO2 emission rate. Lastly, no consideration was given to facilities

that may have zero discharge permits, where it is infeasible to install a wet control device. EPA has thus estimated control costs for equipment that industry is not likely to install. Facilities would instead need to install wet scrubbers, dry scrubbers, or semi-dry scrubbers to control acid gas emissions from energy recovery units. Thus, costs for HCl and SO2 control have been significantly underestimated based on an approach no one with use.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 75

Comment: We estimate that the actual capital cost for installing controls is $740 million, which is dramatically higher than EPA's total estimated capital investment of $455 million for both controls and monitoring equipment (Table 2C of the cost memo). [Footnote: EPA-HQ-OAR-2003-0119-0054.] We created a spreadsheet (attached) to estimate the capital cost of installing emissions controls on energy recovery units to comply with the proposed emission limits. The average emissions in the EPA database for each unit were compared to the proposed limits. We used some of the same assumptions that EPA used to cost controls where emissions reductions were required: For PM, we assumed addition of a fabric filter (base cost for

250 MMBtu/hr unit of $7 million). For HCl, we assumed addition of a wet scrubber (base cost for 250 MMBtu/hr unit of $8 million). For CO, we assumed combustion improvements or CO catalyst ($2 million). For mercury and dioxin/furan, we assumed carbon injection ($1 million). For NOx, we assumed SNCR ($4 million base cost for 250 MMBtu/hr unit).

EPA should re-evaluate its cost estimates for the controls needed to comply with this rule based on the comments above, and re-propose this rule.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 31

Comment: Estimated HCl Emission Reductions Are Small and the Standard May Be Unachievable

The reductions estimated for HCl are relatively small. However, EPA assumed that scrubbers are or will be installed in order to meet the Subpart LLL standard. EPA assumes that further reductions would be a simple matter of fine-tuning the existing scrubbers. As industry commenters pointed out for the proposed Subpart LLL rule, there are no data to support the conclusion that, under various conditions, a wet scrubber designed to utilize lime will provide the required collection efficiency to meet a 2 ppm HCl emission standard [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009.] The standard for the CISWI rule is even lower at1.5 ppm. Thus, the lower CISWI standard may exacerbate an issue with HCl control via a scrubbing system that may already be incapable of meeting even the higher Subpart LLL proposed standard.

The proposed rule does not address the issues of control of HCl for cement kilns as it

relates to achievability of the very low standard and the issues of the control technology as applied to cement kilns. As explained in the comments of the Portland Cement Association on

the proposed Portland Cement NESHAP rule, the application of wet scrubbers may be very problematic or potentially infeasible in those areas of the United States where fresh water supplies are very limited. (Docket ID: EPA-HQOAR-2002-2845 and EPA-HQ-OAR-2002-0051-2922)

When a wet scrubber system is designed and installed to remove acid gases from a flue gas stream, an important part of the overall installation is the solids and liquid-handling systems. To recycle some of the water, the sludge is thickened, typically by compressing the material. In existing cement kilns that have wet scrubbers, the water in the sludge is reduced to about 40%–50% by weight. Because the chemistry of the

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sludge will be very site-specific and somewhat unknown, plans will have to be made

for disposal of some or potentially all of the sludge if it becomes necessary. Depending upon levels of sodium or potassium in the sludge, some or all of the sludge would have to be landfilled on-site, requiring land disposal permits. Although some water can be recycled back to the scrubber to prevent chloride buildup in the system, a portion of the water will have to be sent to a water treatment facility.

In addition, these systems typically use lime and not caustic (NaOH), the preferred scrubbing medium for HCl. Note: Because the sodium in caustic may adversely impact cement quality, it cannot be used. Thus, SYA believes that further reductions

in HCl to meet the CISWI standard are problematic at best and probably not achievable in cement kilns.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

14.2 Costs: Alternative disposal

Commenter Name: James Cunningham
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0880
Comment Excerpt Number: 1

Comment: Let's prevent new toxic dump sites while we struggle to clean up those left by others involved in fossil fuel extraction and combustion.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 13

Comment: The Proposed Rule Would Likely Take the Furnaces Out of Use Because of the Compliance Costs.

We agree with EPA's statement in paragraph D on page 31956 of the Proposed Rule that most facilities in the cleaning furnace category will cease operations if these proposed new standards are implemented. However, we do not agree with the Analysis Results for Incinerator, Small Remote Incinerator and Burn-Off Oven Subcategories on page 31958. Parties that previously used furnaces will need to find some other way to clean their parts such as abrasive blasting or chemical cleaning, because they can not simply throw away valuable tooling and parts. Abrasive blasting is not a viable option for many tooling and die parts with small cavities (such as breaker plates, spinnerettes, blown film dies, heat exchangers, electric motor stators, etc.), meaning chemical cleaning may be the only alternative. Abrasive blasting will also not work for some other materials, such as polymers, because the abrasive compounds bounce off of these materials. For many of those polymers, chemical cleaning is ineffective, meaning companies using those materials have no effective method to clean their equipment.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 4

Comment: Tooling Costs: At two Whirlpool facilities this will create a need to either ship off site or construct a new process. If kept on site additional capital would be needed. (Unquantifiable at this time) If shipped off site an additional $2 million of tooling is needed to compensate for offsite transport & treatment. The costs does not include the additional cost of transporting the tooling nor the cost of shot blast disposal.

Outsourcing Cost: Whirlpool anticipates an increased cost to outsourcing existing operations due to impact of shut down of the existing burn off industry. This increase does not consider additional cost of finding and contracting new shot blast vendors. Also the shot blast industry may not be able to absorb the additional volume.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)

Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 5

Comment: There are No Practical Alternatives to Burn-Off Ovens.

EPA incorrectly assumes that there are practical alternatives to the use of burn-off ovens. The CISWI Rule states that many facilities will cease to use burn-off ovens at the proposed MACT floor levels, and that the entire industry would disappear at beyond-the-floor levels. 75 Fed. Reg. at 31, 958 ("we concluded that all units . . . would shut down rather than comply with the beyond-the-floor limits"). The justification for this extraordinary statement is that EPA believes that facilities will simply adopt other strategies for waste disposal, specifically abrasive blasting and landfill disposal. We do not believe that Congress intended to regulate categories of sources out of existence if these units are serving a useful purpose, are environmentally beneficial, and there are no viable alternatives.

Neither alternative proposed by EPA is practical, thus illustrating again EPA's lack of a basic understanding about how burn-off ovens are used in our industry. Abrasive blasting is ineffective for repairing and rewinding electric motors and generators. Motors and generators have small openings in the steel core to accept the embedding of windings, such as semi-closed slots, that would prevent abrasives from reaching the windings for the purpose of removal. In addition, abrasive blasting would damage the very parts that our members are trying to repair; the steel core material would be worn away by the abrasive blasting, rendering the core unsuitable for reuse. At the same time, electric motors and generators cannot simply be thrown away every time they break down, as they are too costly to buy new and are often custom-manufactured. Further, some electric motors and generators are of obsolete vintage and cannot be replaced; for others, a replacement is not readily available, particularly as motor or generator size increases. And in many cases, end user facilities cannot be without electric motors or generators for even a few days. Ironically, due to the lack of availability of a burn-off oven, the motor or generator would be scrapped whole, rather than having the valuable natural resources within it, including copper and steel, segregated for recycling. In analyzing the additional waste that would be sent to the landfill, it does not appear that EPA even considered that this would also lead to disposal of the motors or generators themselves.

As a result, repair facilities will be forced to find other less effective and environmentally unfriendly ways to perform this valuable work, such as resorting to the archaic method of burning the windings off with an open flame or using chemicals to clean the parts. These techniques, however, will pose greater risks to employees and have a greater environmental impact than pyrolizing the small quantities of materials needed to utilize burn-off ovens. See 42 U.S.C. § 7429(a)(2) (directing EPA to consider other environmental impacts in setting standards). The open flame method damages insulation in the steel core of the motors and generators, reducing energy efficiency. Also, advances in technology in the past three decades have created varnishes/resins that would necessitate chemical methods for winding removal to be so aggressive as to physically degrade motor or generator components such as steel and copper, rendering the motor or generator less energy efficient and quite possibly unusable. Both of these methods place repair personnel at increased risk due to fumes and heat from the open flame technique and chemical burns from the chemical method. In light of this information, we believe

that EPA should revisit its analysis to ensure that it has adequately considered that there are no reasonable alternatives available.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 5

Comment: EPA Incorrectly Assumes Abrasive Blasting is a Generally Feasible Substitute for Burn-off Ovens.

In the analysis results, EPA states:

Based on the high costs of controls relative to the costs of alternative waste disposal methods, we concluded that all units within the incinerators, burn-off ovens and small remote incinerators subcategories would shut down rather than comply with the beyond-the-floor limits. Facilities with incinerator units and small remote incinerator units would use alternative landfill disposal and facilities with burn-off ovens would use abrasive blasting.[75 FR 31958]

Abrasive blasting is not a suitable alternative for cleaning parts where precisely machined holes and geometries could be damaged at high pressures (resulting in the expense of more frequent replacement and materials usage), or where lower pressures are unable to effectively remove residual polymeric materials (resulting in loss of performance and product quality, or usability). Chemical cleaning as an alternative also has its drawbacks: chemicals may not be effective for the removal of polymers that are specifically formulated to be chemical-resistant for given applications, and chemicals that are effective may present unfavorable environmental and occupational safety considerations. For most highly machined parts there are no

environmentally and technically acceptable alternatives to the use of cleaning ovens. EPA should reconsider the anticipated suitability of across-the-board abrasive blasting as an alternative to the currently effective use of ovens to clean such parts.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 6

Comment: The other alternative not noted by EPA but widely used is chemical cleaning. Cleaning tanks, filtering systems, bulk chemical tanks for storing material will have to be purchased. The cost for waste disposal for used chemicals and waste paint will have to be

calculated as well as the additional manpower required to perform the work. Handling and working around these chemicals will pose health and safety issues for the operators which was one of the reasons most industries have moved away from this type of cleaning method.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket. Further, see preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Donald R. Schregardus
Commenter Affiliation: Department of Defense
Document Control Number: EPA-HQ-OAR-2003-0119-2023.1
Comment Excerpt Number: 2

Comment: In the preamble of the proposed rulemaking, EPA asserts that many sources will cease using burn-off ovens for drum and rack reclamation and will instead employ abrasive blasting for coating removal. Abrasive blasting is too aggressive for removal of electrical varnish from electric motor components and would not be effective in removing the varnish from the gaps and crevices in armatures. Compliance with the proposed CISWI emission standards and compliance monitoring requirements for burn-off ovens will be cost prohibitive for reclaiming electrical motor components. In order to reuse the motor components after the CIS WI compliance date, the existing electrical varnish will need to be removed using a trichloroethylene vapor degreaser.

The mass of electrical varnish currently removed from all electric motor components with the burn-off oven process at a particular DoD facility is 100 lbs. over a typical calendar year. The oven is used about twice per month on average. No motor component materials other than varnish undergo pyrolysis in the burn-off oven. This oven is equipped with an afterburner to control particulate emissions, but has no other control devices. No source test data is available for this particular burn-off oven; however, the total criteria pollutant and HAP emissions from the oven at this production rate are less than 20 lbs. per year (.01 tonlyr). Prior to 1995, this facility used a trichloroethylene vapor degreaser to effectively remove the electrical varnish from the motor components. While the vapor degreaser had cleaned the components better than the burn-off oven, it was removed in order to reduce HAP emissions and worker exposure. The annual trichloroethylene emissions from the vapor degreaser at equivalent production levels typically exceeded 100 gallons per year (0.6 tons/year HAP emissions).

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Mike Atwood
Commenter Affiliation: CARDONE Industries Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1974
Comment Excerpt Number: 3

Comment: FR page 31967 various paragraphs

In addition to the impacts listed here including:

68 million gallons of water

214,000 tons of landfill waste

271 gWh of electricity

56 Tbtu/yr of fuel

Please include, just for CARDONE, the following rough estimates per year if we shut down our burn off ovens:

250,000 gallons of hazardous liquid waste from the alternate process of washing parts. 25,000 gallons of hazardous chemicals (detergents) for the washing process.

One to two million dollars in capital equipment costs for the washers.

15 million cu ft natural gas to heat the washers. (added emissions)

Transport over the road of the above 25,000 gallons of hazardous chemicals and 250,000 gallons of hazardous waste including the emissions generated, the Risk managed and the energy required by the TSDF treating the waste along with the landfill space taken.

We do not see the emissions savings benefits, for our operations that EPA is stating and we would suggest that more time and research needs to be done so that the requirements for burn off ovens are based on actual facts.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Stephen R. Gossett
Commenter Affiliation: Eastman Chemical Company
Document Control Number: EPA-HQ-OAR-2003-0119-2115
Comment Excerpt Number: 17

Comment: EPA has not adequately considered the costs facilities will incur if burn-off ovens are shutdown.

In the docket document "Compliance Cost Analyses for CISWI Units", EPA presents its cost-effectiveness estimates. On page 9 of the document, EPA states:

"The nationwide average cost effectiveness for all units to choose the lowest cost option between complying and using an alternative disposal method was estimated as follows: $57,700/ton for burn-off ovens, $6,000/ton for waste-burning kilns, $7,700/ton for energy recovery units, 2,500/ton for incinerators, and -$26,600/ton for small, remote units."

Even EPA's estimates illustrate the high costs ($57, 700/ton) of subjecting these trivial units to the CISWI regulation relative to the other subcategories. However, Eastman believes this

estimate is far underestimated. Again, from page 9 of the CISWI cost analyses document, EPA states:

"For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of

$118,250 per year to utilize an abrasive blasting service."

EPA has failed to recognize that the purpose of having on-site burn-off ovens is so that facilities can quickly clean parts and re-use them. It a facility has to send parts to an off-site facility for cleaning, the facility will have to stock additional parts so that it will not lose production time waiting on the parts to be returned from the cleaning facility. These expensive parts such as dies and extruder screws would add substantially to EPA's cost estimates. We have estimated that shutdown of the three burn-off ovens at our Tennessee facility would cost at least $350,000 per year to cover the costs of redundant parts and for off-site treatment of the parts.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Edward E. Quick
Commenter Affiliation: Celanese International Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2189.1
Comment Excerpt Number: 2

Comment: EPA's proposal will effectively eliminate use of burn-off ovens, with no feasible alternative yet identified for application in polymer production processes.

The preamble to the proposed rule (pg 31956) states:

We have determined that most facilities with units in the incinerators, small remote

incinerators or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated...

Later (pg 31958) language in the preamble suggests that abrasive blasting is an alternate means of cleaning parts for the units that cannot achieve the proposed emission limits.

Extrusion dies contain numerous precisely machined holes (typically ranging from 2-6 mm in diameter). This hole geometry must be precise to ensure proper extrusion and quality control of the product. Abrasive blasting is not capable of removing the remaining polymer in the holes of the extrusion die without causing permanent damage to the die. Therefore, abrasive blasting is not a practical method of cleaning extrusion dies. Furthermore, the technical requirements for our polymers (toughness, resistance to wear and chemicals) make chemical cleaning impracticable.

We recognize that these limitations may not exist for other applications of burn-off ovens, and therefore encourage EPA to identify other methods of die cleaning that are practical and cost effective.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 4

Comment: Cost and Environmental Impact Analyses- With regard to costs, the RIA does not accurately reflect the costs or the potential environmental impacts from the transfer of wastes to MSW landfills from remote facilities. For facilities inaccessible by vehicle traffic (see discussion under #1), the use of aircraft and/or marine vessels would be necessary to transfer the waste. The costs developed in the RIA appear to only consider on-road trucking costs (which appear low considering the costs do not reflect higher costs associated with operating in Alaska). Moreover, with the use of aircraft and/or marine vessels, there would be additional significant air pollution emissions to be generated (not otherwise generated) and these do not appear to be quantified or compared to the emissions reductions achieved by the shutting down of a solid waste incineration unit. To adequately evaluate these impacts, these costs and additional environmental impacts must be included and compared in the analyses.

AOGA members have performed preliminary analyses for a typical small remote incinerator and estimate additional costs of $30,000 to $40,000/ton of waste disposed to comply with the CISWI rule due to the additional shipping costs imposed (aircraft use, marine vessels, etc). In other words, for a unit burning up to one ton of waste per day these additional transportation costs could as high as $14 million per year. This result contradicts the RIA conclusion (Appendix B and Table 9b) of a net savings for transfer of the waste from a shutdown small remote incinerator to a MSW. In conclusion, we believe the net benefits analysis presented in the RIA is fundamentally flawed and inaccurate.

Response: See preamble Section V. for the response on Control Technology Assumptions for the Floor and Beyond-the-Floor and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Dan H. Williams
Commenter Affiliation: Sealed Air Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2256.1
Comment Excerpt Number: 5

Comment: In the proposed rule EPA has set the emission limits in such a way that instead of being exempted, burn-off ovens will be eliminated. As stated by EPA in the preamble (75 FR 31956 and 31958):

"As part of our impacts analysis (discussed in section V. below), we evaluated whether existing facilities would choose to cease burning solid waste in incineration units after

promulgation of the final CISWI standards. We have determined that most facilities with units in the incinerators, small remote incinerators or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-thefloor levels are adopted."

"Based on the high costs of controls relative to the costs of alternative waste disposal methods, we concluded that all units within the incinerators, burn-off ovens and small

remote incinerators subcategories would shut down rather than comply with the beyondthe-floor limits. Facilities with incinerator units and small remote incinerator units would use alternative landfill disposal and facilities with burn-off ovens would use abrasive blasting."

EPA incorrectly concluded burn-off ovens will be replaced by abrasive blasting. EPA failed to consider whether abrasive blasting is capable of removing waste materials from crevices and other indirectly accessible components and parts, nor did EPA consider whether blasting would damage or destroy the parts being cleaned. EPA's cost analysis only considered sand blasting, when more expensive specialty abrasive materials and techniques, and even hand cleaning in some cases, may be required to protect parts being blasted or to remove the waste material.

The admission by EPA that the proposed standards will essentially eliminate a previously exempted subcategory, because these sources can not meet the proposed standards without very expensive controls that may not even be feasible to install, is an absurd result, and the exemption for burn-off ovens should be maintained.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 10

Comment: In Section C of "Compliance Cost Analyses for Existing CISWI Units", EPA states:

Certain CISWI units may have waste disposal alternatives other than combustion available to them. These alternatives may prove to be less costly than the controls and monitoring required for compliance with the proposed CISWI standards. For example, facilities currently using burn-off ovens may be able to utilize sand blast chambers or some alternate technology to clean their parts....

For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of $118,250 per year to utilize an abrasive blasting service.

It must be emphasized that no such alternative disposal option exists for Drum Reclamation Units. As described above, Under U.S. DOT's Hazardous Materials Regulations, a condition of packaging reuse for hazmat service is that reconditioning includes: "Cleaning to base material of construction, with all former contents, internal and external corrosion, and any external coatings

and labels removed." 49 CFR 173.28(c)(1)(i). Oxidation in a drum reclamation furnace, followed by shot blasting, achieves the DOT standard. No alternative mechanical process exists for cleaning these drums.

Drum reconditioning businesses represented by RIPA could neither absorb the projected initial capital cost of retrofitting their furnaces, nor sustain the annual O&M expenses, which would vary greatly by state. As a consequence, it is likely that these operations would be regulated out of business. The resulting loss of capacity to safely manage emptied industrial shipping containers would ripple through the tens of thousands of companies throughout the U.S. that rely on steel drums for shipping products. In most cases, there are no good alternatives to a steel drum, based upon safety and environmental considerations. The indirect costs on these other industries are likely to be large. Moreover, the negative impact on the environment as emptied containers accumulate would be significant.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Late James R. Thornton
Commenter Affiliation: Northrop Grumman
Document Control Number: EPA-HQ-OAR-2003-0119-2245.1
Comment Excerpt Number: 2

Comment: EPA has not adequately addressed replacement of burn-off ovens with alternative cleaning technologies as a preferred means of achieving compliance with the proposed CISWI regulation.

Explanation: EPA states that it has "estimated compliance costs for all existing units to add the necessary controls and monitoring equipment, and to implement the inspections, recordkeeping and reporting requirements to comply with the proposed CISWI standards..." and has "also analyzed the costs of alternative disposal for the subcategories that may have alternative options to burning waste, specifically for the incinerators, burn-off ovens and small, remote incinerators." (75 FR 31967) NGSB has determined that the cost of add-on controls for its existing Steelman Model 4.56.54 BA-C Heat Cleaning Oven, described earlier in Comment 3, may be economically unreasonable and may force shutdown of the oven.

Because disposal and replacement of paint hooks and racks is not economically feasible, NGSB has evaluated alternative cleaning technologies for the reclamation of hooks and racks used in painting processes. The only feasible, alternative technology identified to date is "fluidized hot sand bed" parts cleaning, in which fluidized sand is heated to approximately 850 degrees Fahrenheit within a closed chamber and in which paint-laden hooks and racks are submerged. The extreme heat and abrasive action from the motion of the fluidized sand combine to remove the paint coating and scour the metal surfaces clean. The capital cost for one of these parts cleaners designed to fit the custom racks utilized by NGSB has been determined to be approximately $500,000, which is cost-prohibitive for NGSB and unreasonably burdensome. Furthermore, even though the manufacturers of such fluidized hot sand bed parts cleaners claim lower air emissions than from conventional burn-off ovens, it appears that the proposed CISWI regulation would consider both the fluidized hot sand bed parts cleaner and the conventional

burn-off oven as subject to the same emission standards and guidelines for burn-off ovens, since both devices would be "parts reclamation units", thus providing no regulatory incentive for affected facilities to upgrade to newer manufacturing technologies with lower air emissions.

Because the options of add-on controls to NGSB's conventional heat cleaning oven and replacement of the oven with a new fluidized hot sand bed unit are both cost-prohibitive, the least-cost alternative may be shutdown of the heat cleaning oven. However, shutdown of the heat cleaning oven is also not feasible, since painting is essential to NGSB's core business.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Charles Lim
Commenter Affiliation: Curtiss-Wright Electro-Mechanical Corporation (Curtiss-Wright)
Document Control Number: EPA-HQ-OAR-2003-0119-2405
Comment Excerpt Number: 3

Comment: Our electrical/mechanical maintenance part products cannot be treated by alternate means (shot blasting; landfilling) and going out of business is not an option, as EPA has suggested in the proposed CISWI rule Preamble.

Response: See preamble Section V. for responses on the rationale for subcategories, Control Technology Assumptions for the Floor and Beyond-the-Floor, and the "Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units" memorandum in the docket.

Commenter Name: Danny Bell
Commenter Affiliation: Steelman Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1520
Comment Excerpt Number: 4

Comment: I would like to share a couple of true stories that relate to cleaning parts and how they affect our health and environment. Recently I went to a job shop to have some work performed and as I turned into their driveway I noticed what I thought was a plume of smoke. After I entered the facility I realized that what I thought was smoke was a plume of sand from a sandblaster that was cleaning some painted parts, it was a windy day and the excess sand, along with the paint that was being removed, was traveling quite some distance. This cannot be safe to our environment. It also has to pose significant health risk. In your assessment you mention sand blasting as an alternative means of cleaning. How can this possibly be safer than using an oven that is designed to replace the very cleaning option you suggest? Burn-off ovens were designed as a more efficient and environmentally friendly alternative to this practice.

My second story is about chemical cleaning. In managing Steelman in some capacity for the last

30 years I have had two experiences with chemical cleaning. Years ago as part of an investment owned company we were required to do a phase 1 land study. In doing so it was discovered that around an old paint shop there were significant amounts of chemical agents in the soil and water table. The consulting company we utilized stated this was not unusual with companies that utilize chemicals for cleaning. Probably once a week or so someone would just take a five-gallon container and pour it out as opposed to properly disposing of the waste.

In 1999 we considered purchasing a facility that at one time rebuilt equipment for the oilfield. The exact same situation with an old paint shop was present on the facility we were looking to buy. The land phase study results showed significant chemical content in the soil samples around the paint shop. As a result we declined to purchase the land.

Once again I bring these two stories to your attention because in both cases these are the alternative cleaning methods you recommend as opposed to utilizing a cleaning oven. In both cases the environmental and health issues are far greater than those of our cleaning ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 5

Comment: Air impacts - overestimate reductions. EPA assumes that most burnoff ovens will be shut down rather than comply with the proposed rules and takes a credit for the emission reductions from those shutdowns. However, shutting down burnoff ovens does not eliminate the need for cleaning. We cannot divert this "waste" to a solid waste landfill. We need to reuse the hooks, grates and chains. If CNH were to shutdown our burnoff ovens, our options would be to upgrade, use alternative technologies, such as strip tanks or shot blasters, where possible, or out-source to to a vendor that does not shut down its burnoff ovens. We are still investigating options for upgrades. Some may reduce emissions and some may cause an overall increase due to increased energy use.

Use of the alternative technologies is not always possible or preferable. In many cases, industry began to use burnoff ovens because the previous option of chemical cleaning of these parts involved chlorinated or other HAP solvents and caustic solutions and was more environmentally unfriendly, resulting in greater potential for exposure to employees and generating a great deal more waste. Also, due to the size of some of the grates, a strip tank would need to be quite large increasing the risk and waste. Because it can damage certain parts, shot blasting is not always an option and it creates more waste. Both alternatives create air emissions and significant waste. Consequently, EPA has proposed a rule that creates a greater regulatory burden for a superior cleaning method and could push industry towards less environmentally friendly alternative. If this occurs there will be little air quality benefit.

Other than changing to an alternative technology, upgrading or outsourcing the cleaning of paint system components would be our options. We are still investigating the cost of upgrades and different technologies and whether they are feasible and was unable to complete this effort

during the allowed comment period. If CNH were to outsource to vendors who do not shut down, many of these vendors are located at a great distance from our facilities. This will require us to buy additional hooks, grates and chains to have spare parts on hand (at an additional cost and requiring more storage space) to accomodate the delays associated with cleaning off-site versus on-site. CNH believes that due to the distance and frequency, the transportation emissions generated to ship hooks, grates and chains to the paint removal vendors would dwarf the emissions from shut down of our burnoff ovens.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 33

Comment: EPA appears to believe most facilities will cease to use burn-off ovens if the proposed limits are promulgated, and instead use abrasive blasting. Many applications cannot have material contact with the components being cleaned due to the need to maintain precise machined surfaces, meaning abrasive blasting is simply not possible.

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 70

Comment: EPA has likely underestimated the cost of replacing burn-off ovens. As an alternative to the use of burn-off ovens, EPA estimated the costs of sandblasting. However, abrasive cleaning is not a viable option for machined parts since abrasion can damage the parts beyond repair. Retrofitting the burn-off ovens is also not an economically viable alternative, as EPA estimated capital costs [Footnote: EPA-HQ-OAR-2003-0119-0054.] of over $2 million to retrofit these units with add-on controls. The retrofit costs combined with lack of viability of sandblasting will likely result in facilities discontinuing use of burn-off ovens and either shipping off parts to be cleaned (requiring purchase of duplicate parts and resulting in transportation emissions and additional cleaning cost) or cleaning their parts with organic solvent (if allowed by other environmental regulations).

Response: See preamble Section V. for the response on rationale for subcategories-burn off ovens.

14.3 Social Costs

Commenter Name: John Hren
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0633
Comment Excerpt Number: 1

Comment: Since we are a money-based democracy, consider evaluating the individual and societal costs of not doing everything within reason to minimize toxicity. Has such a realistic cost assessment ever been computed and publicized? Even those who think they benefit

financially, are likely to be paying a heavy price and, of course, the less wealthy pay even proportionately more. Let's truly get realistic and be as forthright as possible. Avoidable pollution makes absolutely no sense.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 27

Comment: Those who benefit either economically or through the use of a product should be the ones that pay for that product. I should not be asked to subsidize the production of products for energy with my life or my health. When hazardous air pollutants are created that combine disposal or elimination, costs should be borne by those that benefit from the products.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 66

Comment: When kids grow up with asthma, or sometimes they don't grow up because some kids die from asthma, the industry has a name for these costs to our families and our communities. They cause these externalities. That means that they don't factor these into the budget, into the business model. Instead, they just pass these costs onto everyone else and we have to bear these costs, our communities, our children, our grandparents. This is where the EPA comes in . It's because of this economic model that you need someone to protect public health. That's why you guys are here, because it's your job to protect public health and to defend the

public against the industry who may not care about their health. And it's your job to put these health costs back into the equation to make them answer to public health. The industry -- the industry doesn't need protection; they have -- they have all the power -- almost all of it. You know, they have an awful lot of money and they can spend it on lawyers . But we do still have government regulatory agencies that still hold the power, but it's not -- you know, it's not easy and you -- you know, you guys will need to hang onto this. But you know, the -- the kids, the elderly, the folks who are just surviving who can't afford lawyers, they might not even be afford doctor visits, they might not be able to afford treatment for their illnesses. It's -- it's you guys' job to protect these people. That's why there is an Environmental Protection Agency, you know, because the industry is absolutely not -- you know, the industry isn't going to regulate itself. The industry is only going to be regulated by profit. That's what they're for, and I mean that's -- that's fine; that's how they work, you know, it's their job to make money, but someone else needs to oversee these industries and someone needs to make sure they follow the law.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 93

Comment: It has always been my experience that the EPA doesn't take into account -- when the developing standards, they don't take into account costs, that -- the costs that have to be made. However, since it has been brought up consistently throughout the day, I would like to add to that discussion; birth defects, asthma, bronchitis, heart attacks, cancer, premature death. These are some of the outcomes of being exposed to the air toxins that have been previously discussed, and I would like to see how much that costs. There is a cost associated with that . Last week, I was asked to go visit a young mother on the east end who lives next to a source that has already been cited for releasing some of the toxins previously mentioned. Because I spoke Spanish, they asked me to go talk to her and try to explain to her why her child was born with half a brain and suffered for six months and died. I really didn't have an answer for that . All I could do was share her -- her concern. She was also -- she was extremely upset, and I'd like to know how much that's worth. It was very difficult speaking with her, her trying to take care of her family, and still having two other children figuring out how -- what she was going to do living next to -- to the source, and if anybody was gonna do anything about it. I didn't know what to tell her, but it did prompt me to come and give a few comments today.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits. An estimate of these public health benefits are provided in the regulatory impact analysis.

Commenter Name: Bruce Coffee

Commenter Affiliation: Hurst Boiler Co.
Document Control Number: EPA-HQ-OAR-2003-0119-2103.1
Comment Excerpt Number: 3

Comment: The justification for the action is admirable, but short-sighted, as the detrimental effect of the loss of work and the decrease in quality of life caused by this action will more than offset the few lives and discomforts the proponents enumerate as justification AND ACTUALLY COST LIVES! One would have to believe, based on the justification, that most of these solid-fuel-burning sources are all placed in urban settings, in reality, most are in rural, low-population areas.

It has been widely discussed, researched and proven that UNEMPLOYMENT causes far more deaths, drug use, domestic violence, smoking, dependency, etc than this list. So, it will have the opposite effect than that they hope to achieve. According to the CDC reports that the deaths per 100,000 rose from an all-time low of 760 in 2007 to 838 in 2009 due to the economic downturn, essentially unemployment. That is an increase of 234,000. This occurred even as the emissions from boilers were decreased by a large percentage due also to the economic downturn. I believe this correlation essentially negates the justification and exposes the projection of mortality improvements as a myopic grasp that ends up being a rounding error. This is certain.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 9

Comment: The Regulatory Impact Analysis Should Include a Longer Time Horizon

EPA's regulatory impact analysis presents monetized benefits and annualized social costs for the year 2013 alone. Annualized social costs are based on estimates of annualized engineering-based compliance costs. Benefit estimates are based on emissions reductions in 2013 alone. Capital costs appear to be annualized over the life of the relevant investment at a 7% interest rate (20 years for major equipment, 2 or 4 years for items like fabric filters). The energy assessment is annualized over 5 years (although no justification is given for this). While this is an appropriate method for determining costs and benefits for 2013, it ignores several important longer-term issues.

For example, shutdown of existing units and increased numbers of new units are not accounted for. Shutdown of existing units due to the program would count as additional decreases in emissions and increased costs. Shutdown of units due to independent factors would not directly count as incremental decreases in emissions; however, this would result in spreading the compliance costs of these units over fewer years and fewer reduced emissions, and thus decrease the cost-effectiveness of the program. By contrast, the number of new units over time would probably add net benefits to the rule.

In addition to these sorts of effects, the short time horizon for the regulatory impact analysis ignores future cost decreases due to both innovation and learning, effectively freezing the cost estimates at current technology costs. With technological innovation, economies of scale, and learning, compliance costs may decrease with time.[Footnote: For example, fabric filters may cost $X right now, last two years, and generate $Y/year benefits. But as the regulation increases market share for the filters and incentivizes innovation, as the manufacturers learn more cost-effective filter production techniques, and as the polluters learn more cost-effective filter application techniques, in future years, maybe filters will only cost $1/2X and last for three years, but still generate $Y/year in benefits (or, possibly, $2Y, if the technology improves or if new applications have unexpected co-benefits).] Both the White House's Office of Management and Budget and the EPA's own Economic Analysis Guidelines stress the need to account for technological innovation and learning effects.[Footnote: WHITE HOUSE OFFICE OF MGMT. & BUDGET, CIRCULAR A-4 at 34 (2003); EPA, 240-R-00-003, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS at 5-7(2008 external review draft).] In particular, the OMB's Circular A-4 advises agencies: "The time frame for your analysis should cover a period long enough to encompass all the important benefits and costs likely to result from the rule." [Footnote: CIRCULAR A-4, supra note 50, at 15.] Due to the short time horizon of its regulatory impact analysis, EPA may have underestimated the net benefits of various alternative policies.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 43

Comment: Limits as stringent as the ones proposed would need to be based on substantial evidence proving a actual benefit in order to be justified. No such evidence or record is provided by EPA. 75 FR 31945-46

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

14.4 Economic Impacts

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 12

Comment: Because many basic chemical companies face stiff global competition, it will be difficult to pass through costs except during times when the market it tight.

Raising the cost of capital will also impact future investment and job growth in high-paying manufacturing jobs, further slowing the economic recovery of the chemical industry.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 43

Comment: Under CISWI other alternate materials that presently that we use as fuel would have to be disposed of differently -– again causing us to increase our use of fossil fuel, increase our costs, and put us at a much more competitive disadvantage with the rest of the world.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 64

Comment: I'm President of the Council of Industrial Boiler Owners. We're going to comment on the full suite of the four rules, the major source MACT, area source MACT, fuel waste -– fuel definition, and CISWI rules.

CIBO is a national trade association of industrial boiler owners, architect-engineers, related equipment suppliers, and universities representing 20 major industrial sectors since 19 -– we've been doing this since 1978.

CIBO works to promote sustainable energy supply and improved environment. CIBO membership represents industries as diverse as chemicals, paper, cogeneration, automotive, refining, brewing, combustion engineering, and food products. CIBO members also include more than a dozen universities and colleges -- the facility owners at universities and colleges.

We have worked on these rules with EPA to develop scientifically sound environmentally beneficial and technologically and economically achievable rules since the formation of the Industrial Combustion Coordinated Rulemaking in 1995.

As you are aware, the U.S. is trying to recover from the great recession, and many, many people have lost their jobs in the sectors of the economy that will be directly impacted by these rules. There is no doubt that sustained employment increases must be based on private sector job creation. As proposed, EPA's combination of four rulemakings is diametrically opposed to

supporting U.S. industrial competitiveness and domestic job growth. Without considerable change, it appears these rules will seriously undermine U.S. employment growth and economic recovery.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 69

Comment: I'm the Environmental Health and Safety Manager from American Woodmark. We're a kitchen cabinet –-kitchen and bathroom cabinet manufacturer with 11 manufacturing facilities across the country.

I've heard the reference to a breathing member of the community several times today; and I'm a member of that community as well as my family. And I want clean air as much as anybody else. However, we need to strike a balance.

In my position I often hear the comment, are they trying to regulate business out of this country. And our business has been cut in half over the last couple years as we are tied directly to the housing market. And we're also under increased pressure from the regulatory side from both OSHA and the EPA. And these new regulations do come at a price, despite what many of the speakers, I believe, felt here today. Industry does not have unlimited resources and funding.

Regulations such as this put a heavy burden on industry and will drive many manufacturers out of business and to other counties.

I urge you to, you know, to strike a balance with these regulations and work towards a cleaner environment but help -– you know, help us, you know, stay in business and stay in the country.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 83

Comment: This isn't about over-regulation or jobs. This really is about saving taxpayers and the U.S. Government millions –- actually billions of dollars a year in terms of missed school days, missed work days, emergency room visits, respiratory arrest.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jim Williams
Commenter Affiliation: Bradleys' Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1076
Comment Excerpt Number: 1

Comment: The proposed standards for burn off ovens will be devastating to this industry if passed. Our state as most others currently regulate the use of these ovens. Stricter standards will make these ovens uneconomical for our industry to support. In trying to understand the standard it looks like very expensive modifications will be required to modify our ovens.

This cost if feasible must be passed on to our customer every time a motor or generator requires rewinding. This could easily increase the cost by 50% of each rewind. Over the 4 decades I have been in this business I have seen economics significantly impact the replacement vs. repair aspect of our industry. 40 years ago a motor shop could rewind a 5 to 10 horsepower motor cheaper than replacing it. Todays labor costs are so high and overseas manufacturing costs are so low the replacement vs. repair horsepower is 100 to 250. The new standard will likely raise the replacement horsepower to 300 to 600.

This new standard will do two things. It will kill jobs because we will no longer be repairing the motors we do today, we will be replacing them. It will also push dollars overseas because new imported motors will replacing these motors.

The small motor shops in our industry consist of mostly 10 to 20 employees. Many of these shops will go out of business because motors of this size are their bread and butter. The modification costs of the ovens will be so high the small motor shop will not be able to afford it.

The proposed standard severely underestimates the number of burn off ovens in our industry. There are literally thousands of these ovens in our industry. The immediate affect will be devastating to this industry that consists of primarily family owned small businesses.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 26

Comment: Overall, we believe Boiler MACT and the other boiler rules are too restrictive. It will place an enormous burden on manufacturers. It will impose unjustified limits that will impose a

large unnecessary economic burden on the country. And the EPA has an opportunity to modify these requirements while being faithful to the legal obligation.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 11

Comment: At the end of the day, we've heard a lot about jobs or costs to industry. Here in Houston, we understand that very well. We hear it every time a regulation is proposed, every time a standard is strengthened, we hear about jobs, but I think there's also a very clear understanding amongst those that actually bear the burden of pollution in this region, that eventually those costs will get passed on to regular citizens . And the choice is not between having those costs or not having those costs; it's how those costs will be borne, and I don't think the EPA needs to have another hearing to ask citizens whether they would prefer to bear those costs in increased health expenditures or increase to consumer goods. I think the choice is clear, and I think the EPA is of finally starting to get that, that we need to protect public held to the maximum, that we need to lead industry to innovate, to figure out ways to add control measures that reduce energy use, but also reduce air emissions . And at the end of the day, folks will pay those higher costs for their consumer goods, but they'll be able to do so from a point of view where their -- where their health has been protected, and I think everybody in this region would much prefer to spend a little more on their consumer goods and spend a lot less on their -- on their health expenditures.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 14

Comment: I'm a member of the Pulp and Paper Research Council and I have worked at International Paper for the past 25 years. Here we make corrugated board which is made into corrugated boxes. These are used to package citrus produce to tomatoes televisions, et cetera . We have two containers and a sheet plant in the county of Hidalgo, Texas. In total, our plants provide 200 green jobs in our county. Many mills around the country with good and safe linerboard supply us. If these mills were to shut down on the impact of the border MACT rules, we would be forced to get our linerboard from China or South America. We have testimonial

that the linerboard is tainted with mercury or lead. The American public would not like to have these products packaged in these containers which contain mercury or lead . Last week, we received a box made in Mexico with linerboard from China and no one wanted to touch it for the fear it was tainted with mercury or lead. Do we want this product coming into the United States? This is the effect of the ruling of MACT and what it would hold.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 44

Comment: I think it can go without saying that often these things can go past the regulations that not everyone obeys the regulations; they do what they can to protect the bottom dollar, and in the long run, a healthy society will do more to -- without missing workdays or sick days -- sick days will do more for the economy than being allowed to burn more substances close to home . And with that said, I would just urge you to truly consider everyone's interest in this and not just economic interest for industry professionals. We don't vote for our lobbyists, for the lobbyists on Capitol Hill, and every other Capitol Hill in states, cities, and that sort of thing. So please take this semi-emotional testimony as an addendum to my vote to -- my vote of confidence in the government and your administration.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 48

Comment: Since the '70s, the government has taken a big step to increase air quality, in general, right? In every step that they've taken, the business community has come out and said that we're gonna lose thousands of jobs, it's going to ruin our business, in all of its stuff like that, and really, it hasn't -- like there hasn't been an economic downturn that you can really blame on environmental regulations. The economy is, though, a lot more flexible and able to accept environmental regulations in general, and in businesses are a lot more flexible than they realize . I mean, I -- it's just tougher for them to make changes so when -- when looking to make -- to change these rules, just keep that in mind when they come out here and tell you it's gonna ruin our business, we're going to -- thousands of people are going to be unemployed. If you look at the past, that really hasn't happened on a consistent basis.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 94

Comment: I'm a huge believer in -- everyone needs a job. I do realize the economy, that everyone needs to make a living. I'm a big believer in the ingenuity of the American businessman. Usually, what made this country great, and I truly believe that if you set that bar however you set it, they're going to meet it, and they're going to make a profit. That is what makes America great. And -- and I'm sure they'll be able to do it, and -- and do it well. And everywhere it's been my experience, and research has shown, where there is a good environment, there's always a good economy. Bad environment, always -- is -- is bad -- bad economics at the end of the day.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Brian N. Dobbs
Commenter Affiliation: Overturf Electric Motor Service
Document Control Number: EPA-HQ-OAR-2003-0119-1148
Comment Excerpt Number: 1

Comment: Please, take a moment to consider the impact on jobs, community and small business before this legislation is brought to action.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 8

Comment: We are concerned with EPA's admissions that this regulation will likely cause many units to cease operation due to the costs of controls required, that it will prevent the building of new units, and that it will increase costs to many other units that have to substitute purchased

fossil fuels for secondary materials currently burned as fuels. It certainly was not Congress's intent to regulate categories of sources out of existence -if these units are serving a useful purpose, and the increased use of fossil fuels runs counter to sound energy policy.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Mary Redmond
Commenter Affiliation: Ouachita Electric Service, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1787
Comment Excerpt Number: 1

Comment: THERE ARE 'MANY SHOPS' LIKE OURS ACROSS THE UNITED STATES THAT EMPLOY THOUSANDS OF EMPLOYEES. WE WORK ON ELECTRIC MOTERS. IN THE REPAIR OF THE MOTORS, IF THEY HAVE TO BE REWOUND, THEY HAVE TO GO INTO OUR BURNOUT OVEN (THAT IS ALREADY EPA APPROVED).

THE GOVERNMENT IS NOW TRYING TO PASS A REGULATION FOR SOLID WASTE INCINERATORS. ALL MOTOR SHOPS FALL INTO THIS CATEGORY. IT WILL BE DEVASTATING TO OUR INDUSTRY. AVERAGE COST OF COMPLIANCE IS $146,000. PER OVEN AND 89,000. ANNUALLY. IF THIS REGULATION PASSES, MOTOR SHOPS WILL START CLOSING THEIR DOORS. MANY WILL BE UNEMPLOYED.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 16

Comment: Michigan Biomass is particularly concerned by the EPA statements that facilities currently using TDF without the wire removed would have to comply with the proposed, more stringent emission limits being proposed and constitutes a double blow to existing renewable energy producers who might first be forced into CISWI compliance because of reclassification of their fuel, then out of business because they can't comply with the standards being proposed. This would result in the loss of jobs, economies, renewable energy production, and beneficial use of secondary materials. Such facilities would be forced to consider alternative fuels, such as coal or natural gas.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 17

Comment: The Economic Impact on the Owners of the Furnaces Will Be Far Greater Than EPA Estimated, and Are Excessive and Unnecessary to Reduce HAPs Emissions.

We believe that this rule will have a substantial affect on thousands of small manufacturers who cannot afford the costs of annual stack testing. We have also reviewed a memorandum from Brian Shrager, U.S. EPA, Kristen James and Jason Huckaby, Eastern Research Group concerning the subject of Burn-Off Oven Clarification Request Summary.

The information in this memorandum indicates that the average cost of a stack test would be in excess of $25,000.00. It also indicates that there are some tests which either could not be done, or which would be difficult to perform due to the temperature in the exhaust stack and/or due to its small diameter. How does the EPA intend to address this issue for these units? The average selling price of one of our furnaces is currently about $34,000.00. Under the Proposed Rule, the stack test would cost almost as much as the equipment.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Yvonne G. Boysen
Commenter Affiliation: Alexandria Armature Works
Document Control Number: EPA-HQ-OAR-2003-0119-2048
Comment Excerpt Number: 1

Comment: This proposed rule will force our company to shut down its operations if passed. With the business being slow and revenue down by almost 35% last year and continues to go down, we won't be able to afford the cost of having our burn-off ovens to be in compliant.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Bruce Coffee
Commenter Affiliation: Hurst Boiler Co.
Document Control Number: EPA-HQ-OAR-2003-0119-2103.1

Comment Excerpt Number: 1

Comment: We believe this action will be a job killer.

Hurst Boiler and Welding Co., Inc. Is a Georgia Company engaged in the design and construction of Industrial, Commercial, and Institutional Boilers, Area Sources, Process Heaters and Industrial Solid Waste Incinerators. We have approximately 300 employees. Our business will be directly and deleteriously affected by the proposed action. This is certain.

We build all types of boilers but the bulk of our work is targeted toward the solid fuel market. This includes coal and biomass units. We believe this will be the end for coal fired equipment altogether. Already difficult, companies will soon find it impossible to decide to improve their competitiveness by investing in a fuel-saving biomass boiler, as the increased capital expenditure will essentially kill many of the projects we have proposed. We are not sure but we could certainly predict that our workforce would be "down-sized"

Without the ability to incorporate this cost-saving fuel alternative, many of these companies will be hastened toward their demise in the hostile business environment we see today. It will be difficult to assess the number of businesses that will not be started, the number that will cease to exist and the number that will move off-shore as a result of this stifling action. At the very time when our country needs all of the breaks it can get to increase employment this action will cause many jobs to just never materialize, others to be lost and speed the day when China's economy overtakes our own. This is certain.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Richard A. Heppe
Commenter Affiliation: Emerson Motor Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-1908
Comment Excerpt Number: 1

Comment: If the burn-off-oven upgrades required in the subject docket become mandatory, most of the existing service centers will not have the required funds to meet these requirements or maintain them. The estimated average cost of compliance is estimated to approach $150,000 per unit with an annual cost approaching $90,000.

Most of the motor service centers will not be able to afford these costs and will be forced to close.

One could take the position that it is necessary to protect the environment and the end users will have to purchase new motors or send their motors to the handful of service centers that would comply with this regulation. The cost of this action is enormous. Loss of production will range in the hundreds of thousands to millions of dollars. In an era where the nation is trying to save jobs from going off shore, this is counter productive. It will also put industry at a competitive disadvantage in a global economy.

The motor manufacturers will be affected in a major way. We currently rely on the motor service industry to repair motors under warranty and those that need routine servicing. If many of the motor service centers close, the motors will have to be sent back to the factory for repair.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 3

Comment: We are concerned with EPA's admissions that this regulation will likely cause many units to cease operation due to the costs of controls required, that it will prevent the building of new units, and that it will increase costs to many other units that have to substitute purchased fossil fuels for secondary materials currently burned as fuels. It certainly was not Congress's intent to regulate categories of sources out of existence - if these units are serving a useful purpose, and the increased use of fossil fuels runs counter to sound energy policy. Such statements indicate acknowledgement of a lack of achievability of the proposed limits [pg. 31966].

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 4

Comment: EPA's estimate of the cost of complying with the CISWI rule for used oil burners would eliminate the use of used oil burners entirely. Moreover, if small businesses are no longer able to burn used oil (due to the excessive compliance costs), they will incur significant costs for replacement fuels and used oil disposal, as discussed in the attached comment.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1

Comment Excerpt Number: 4

Comment: AF&PA is also concerned with EPA's admissions that this regulation will likely cause many units to cease operation due to the costs of controls required, that it will prevent the building of new units, and that it will increase costs to many other units that have to substitute purchased fossil fuels for secondary materials currently burned as fuels.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Marie R. Martinko
Commenter Affiliation: The Society of the Plastics Industry Inc. (SPI)
Document Control Number: EPA-HQ-OAR-2003-0119-1968.1
Comment Excerpt Number: 6

Comment: EPA Assumes Most Will Eliminate Use of Burn-off Ovens as a Result of a Rule.

In the NPRM preamble, EPA states:

We have determined that most facilities with units in the incinerators, small remote incinerators or burn-off ovens subcategories will choose to cease operations once the proposed MACT floor limits are promulgated and that all units in these three subcategories will cease combusting waste if beyond-the-floor levels are adopted. [75 FR 31956]

If this is the case, then it presents a significant concern in that promulgation of the proposed rule would eliminate the availability of ovens in cases where no suitable alternatives have been identified or established for polymer applications. SPI shares concerns expressed by ACC that EPA would regulate a useful device out of existence in this manner, and without fully viable, cost-effective alternatives that are at least as protective for the environment for some metal parts reclamation. Reuse of metal parts is itself consistent with resource recovery objectives. It is not yet clear that EPA has a full picture of the ramifications of its proposal.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Linda J. Raynes
Commenter Affiliation: Electrical Apparatus Service Association, Inc. (EASA)
Document Control Number: EPA-HQ-OAR-2003-0119-1902.1
Comment Excerpt Number: 6

Comment: EPA Has Not Adequately Considered the Economic Impacts.

EPA candidly acknowledges that many would conclude that add on controls to meet even the MACT floor will be cost-prohibitive, and thus choose instead to shut down. Worse, if beyond-the-floor standards are adopted, EPA states that "all ... burn-off ovens would shut down and use alternative disposal." At the same time, however, EPA somehow concludes under the Regulatory Flexibility Act that "this action will not have a significant economic impact on a substantial number of small entities." 75 Fed. Reg. at 31,971.

The aggregate cost of pollution controls, as well as testing, and reporting, is unknown, but given that EPA has dramatically underestimated the number of affected units, it is certainly orders of magnitude higher than EPA predicts. More importantly, on an individual basis, the CISWI Rule is likely to put most of our members – more than half of which have fewer than 10 employees and average approximately 16 employees – out of business. EPA estimates that the cost of compliance for individual burn-off ovens would be $146,000, with annualized costs of almost $90,000. We believe that the cost of performing a single stack test would alone be close to (or even more than) the cost of many burn-off ovens.

Once again, it appears that EPA did not understand what it was proposing to regulate, and thus failed to appreciate the economic consequences of its actions. Our members simply cannot absorb (or pass on) these costs in the same manner as a large business like the Newport News Shipyard, which reports annual sales of more than $190 million. [See EPA-HQ-OAR-2003-0119- 0056, Table 1.]

In addition, it is important to understand that electric motors, and to a lesser degree generators, are prevalent throughout all sectors of the economy, and therefore the CISWI Rule would have broad and harmful economic impacts. The motors and generators that our members repair serve industrial, municipal, commercial, military, and governmental applications, including at critical infrastructure such as pumps for drinking water facilities and wastewater treatment plants. Many motors and generators are custom-made, and thus spares are not readily available when they break down, and replacements that may be available are costly.

Given that EPA apparently believes that there are practical alternatives to burn-off ovens and that there are only 36 such units in the entire country, it is clear that EPA has failed entirely to account for the real economic impacts of this rulemaking. 42 U.S.C. § 7429(a)(2) (directing EPA to consider costs in setting standards). Accordingly, we believe that EPA must revisit the CISWI Rule provisions as they apply to burn-off ovens to better analyze the economic implications of shutting down the motor and generator repair and rewind industry.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 20

Comment: Regulatory Challenges and Impacts

The boilers operated at Forest Products facilities are already regulated by a variety of environmental programs, and face even further regulation by additional programs being considered by EPA. The additional regulatory programs being considered by EPA will significantly increase capital and operational costs for the Forest Products Industry and jeopardize the long term viability of a healthy forest products industry [see DCN: EPA-HQ-OAR-2003-0119-1951.2 Appendix B - Cumulative Burden White Paper.]

AF&PA has studied the possible cumulative cost burden on forest products industry mills from the following regulatory actions, as illustrated in [see DCN:EPA-HQ-OAR-2003-0119-1951.2 Appendix C- Potential Air Regulations Affecting Forest Products 2010-2020]

* Boiler MACT revisions (for major HAP sources);

* Boiler GACT (for area HAP sources);

* CISWI revisions/new non-hazardous solid waste definition;

* Reopening other MACT standards for the pulp and paper and wood products sectors

* Regulation of hydrogen sulfide under section 112:

* Potential inclusion of industrial boilers in CAIR;

* Lowering of NOx, SO2, and ozone NAAQS;

* Lowering and full implementation of the PM2.5 NAAQS; and

* Additional retrofit controls to enable states to meet reasonable further progress milestones under the Regional Haze Rule.

The cost burden for our facilities with industrial boilers, if all of these regulatory actions occur, could be $17 billion in capital over the next three to eight years and $1.7 billion in annual operating costs, for a total annualized cost of $4 billion. This represents four times the annual profits for the forest product industry for the last two years. The anticipated control retrofits under the revised Boiler MACT are expected to comprise almost half of the cost impact. This analysis did not included the potential impact of the recently finalized PSD Tailoring rule which ignores the long standing principle of carbon neutrality which, like Boiler MACT, will discourage the use of biomass whether at existing boilers or new biomass boilers and potentially reverse the trend in how much of the forest product industry's energy comes from biomass [see DCN:EPA-HQ-OAR-2003-0119-1951.2 Appendix D for a report entitled "Cumulative Cost Burden Analysis of Air Regulations Potentially Impacting the Forest Products Industry" which outlines the details of this tremendous burden of Clean Air regulations.]

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 27

Comment: EPA states that their experience with regulations for municipal waste combustors, HMIWI, and CISWI has shown that negative growth results upon implementation of Section 129 standards. We are concerned that the stringency of the proposed regulation will cause units to shut down and result in an increase in landfilled solid waste, especially under the alternative approach to defining non-hazardous materials that are solid waste. In addition, we do not believe that it was the intent of Congress that these regulations should shut down industry. Based on Table 3-1 of the "RIA Report," it appears EPA has determined that any unit in the incinerator category that cannot currently meet the proposed standards will shutdown, as zero capital cost is estimated (we note that many of these units are already well controlled and meet the current CISWI limits). We are amazed that EPA admits without concern that useful devices are being regulated out of existence and landfill and transportation emissions will significantly increase.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 48

Comment: To comply with standards in the Proposed CISWI Rule the industry must invest at least $2 billion. This excludes potential spending by plants PCA estimates will close due to the inability to meet standards or due to the excessive financial burdens.

The combination of the industry's pre-existing financial commitment to provide reliable and efficient supply of cement to the United States' market, coupled with sustained harsh economic and financial realities, and the need to comply with the Pre-publication Portland Cement NESHAP standards may overwhelm the industry's financial capability to comply with the Proposed CISWI Rule.

The Proposed CISWI Rule could force two thirds of all existing alternative fuel using cement plants to discontinue burning these fuels.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 50

Comment: Cement industry decisions to invest in modernization of older kilns to remain world-class cost competitive may be impeded by rigid standards in the Proposed CISWI Rule imposed on new sources.

Compared to PCA's baseline, clinker capacity could be reduced by roughly 20 million metric tons under the Pre-publication Portland Cement NESHAP. High closure-risk plants suggest an additional 7 million metric tons of capacity could be lost.

Cement plant compliance to proposed EPA emission standards could add a minimum of $26 per ton to domestic cement production costs by 2020.

The increases in cement production costs could potentially lead to an overall cost to the construction industry of roughly $3 billion annually.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 51

Comment: United States' cement consumption is expected to reach 70 million metric tons in 2010. This is compared to near record levels of 128 million metric tons recorded in 2005. This decline reflects current economic adversities. With economic recovery, cement consumption is expected to reach 116 million metric tons in 2015, 131 million metric tons in 2020 and 147 million metric tons in 2025.

All market segments and all regions recorded significant declines in cement consumption through 2009. This reflects a peak-to-trough decline in cement volumes of nearly 59 million metric tons – the worst in United States' history.

Tightened lending standards, weak labor markets and rising foreclosures continue to hamper an oversupplied residential construction market. Nonresidential construction is experiencing the brunt of the financial credit crisis as many projects have been delayed or canceled. Coupled with rising vacancy rates and long project planning timelines, a long recovery for commercial construction is expected. Public construction markets have demonstrated dramatic weakness as state governments struggle with soaring fiscal deficits from falling tax revenues. With public construction accounting for roughly 50% of cement consumption, this sector will play an important role in determining the industry's outlook. These underlying fundamentals suggest a recovery in cement consumption during 2010-2012 could be extremely modest.

Beyond 2012 volume gains in cement consumption are expected to become more robust. A new highway bill is expected for 2013. In addition, substantive job gains during 2009-2012 will improve state fiscal conditions – leading to a revival in state construction spending. In the context of sustained economic growth residential and nonresidential construction is also expected to record significant gains. By 2013 it is likely that all three construction sectors

(public, residential and nonresidential) will record strong positive growth. Even with this, PCA believes the peak-to-peak recovery period (past peak 2005) will take eleven to twelve years.

Longer term, PCA expects the United States' economic growth rate will underperform consensus projections of 3% annually. As the United States' population ages, slower economic growth may materialize. The argument for slower, future long-term economic growth rates is anchored in future demographic changes and its likely impact on spending habits among age groups. The persistent and sustained aging of the population will slow consumer spending. PCA calculates that the aging of America will result in a 50 basis point reduction in growth of consumer spending and overall economic activity by 2020. PCA's long-term cement consumption projections are based on 2.4% real GDP growth. Upside risks are contained in PCA projections.

While economic adversities have depressed the near-term outlook dramatically, PCA's most recent long-term construction projections have been calibrated to discount the housing bubble encountered throughout much of the last decade. The excessive growth in the housing market increased cement demand in all sectors which artificially skewed long-term growth estimates. By discounting this growth, the long-term projections beyond 2015 are much less optimistic than previous long term projections.

PCA projects long-term cement consumption will reach 131 million metric tons by 2020 – reflecting growth of 17 million tons compared to 2007 levels and growing at a 1.0% compound annual rate. Roughly 78% of the growth in cement consumption is driven by growth in population. The remaining 19% is driven by gains in growth in per capita cement

Consumption [Footnote: The projected per capita growth rate is exaggerated by the current depressed market, lowering the jump-off point.] In comparison, during 1994-2007, cement consumption grew 29 million metric tons at a compound annual growth rate of 2.3%. During 1994-2007, 83% of the market growth was driven by population gains and 17% by gains in cement consumption per capita. [See Figure 2 for projected cement demand provided by commenter]

Long-term cement projections are calculated by combining Bureau of Census' (BOC) population projections with per capita cement consumption estimates to yield total cement consumption. Changes in per capita cement consumption are driven by projected economic activity at the state level and measured by real gross state product.

The anticipated increase in population will result in additional demand for housing, commercial buildings, public buildings and infrastructure – all boosting demand for cement consumption. Population in the United States is expected to grow by 35 million persons by 2020 and 48 million persons by 2025 compared to 2007 levels. According to the BOC April 2005 forecast, United States' 2007 population is estimated at almost 302 million persons and is

expected to reach 344 million persons by 2020 and 348 million persons by 2025 – reflecting a 16% increase over 2007 levels.

Nationally, per capita cement consumption is expected to reach .392 metric tons per capita by 2020, compared to .382 per capita recorded in 2007. This reflects an increase of slightly more than 3%. The projections fall well below those experienced during the previous 13 year period when per capita cement consumption grew by nearly 17.2%. Economic growth directly impacts growth in per capita cement consumption. Stronger economic activity leads to higher household formation, stronger fiscal conditions at the state level, and higher expected return on real

investments – leading to higher levels of residential, public, and nonresidential construction activity. Stronger long-term economic growth will encourage greater construction activity and hence cement consumption per capita. According to PCA estimates, per capita cement consumption grows 0.5% for every one percent increase in real GDP growth.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 54

Comment: Aside from domestic supply, the industry operates roughly 125 import terminals with an estimated capacity of 45 million metric tons. The ability and willingness to import cement is determined by demand conditions, prevailing global shipping rates, and the availability of ships to carry cement. Imports are viewed as swing supply, with volume increasing and decreasing depending upon the shortfall between domestic capacity and total United States consumption.

Imports have declined since 2006 from 36 million metric tons to roughly 6.9 million metric tons in 2009. The combination of weak demand and high international freight rates are largely responsible for this decline. In the context of weak demand conditions and low domestic utilization rates, PCA expects imports share will decline to 8.4% market share in 2010, compared to 28.2% market share in 2006. With a gradual economic recovery, higher utilization rates will emerge slowly and import shares are expected to remain near 5% through 2012. In the context of sustained growth and plant shutdowns accrued to the Pre-publication Portland Cement NESHAP, a recovery in utilization rates is expected to materialize, prompting import market shares to increase. From expected 2010 levels of 5.7 million metric tons, imports are expected to reach 20 million metric tons in 2015 (17% market share), 38 million metric tons in 2020 (29%) and 54 million metric tons in 2025 (nearly 37%). Such high import volumes will exceed current import capabilities and mandate an increase the import capacity equating to 42 new import terminals at prevailing terminal characteristics. Given increased port congestion and available port space, these potential expansions could carry high cost premiums [see submittal for Figure of baseline emissions with no emissions policy submitted by commenter.]

Domestic clinker production is expected to decline from 90 million metric tons in 2006 to less than 60 million metric tons in 2010. With the economic recovery, cement production is expected to reach 88 million metric tons in 2015 and 85 million metric tons annually during 2020-2025. These projections reflect PCA's estimates regarding domestic capacity, cement consumption, import volume, exports, and probable inventory changes.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 59

Comment: Industry's Financial Ability to Comply with CISWI Emission Standards

This expenditure is magnified in the context industry investment requirements needed to comply with EPA's Pre-publication Portland Cement NESHAP. Further, this expenditure comes at a time when the financial ability of the industry to meet these investment requirements has been greatly reduced by current economic conditions.

The cement industry is still in the midst of aggressive investment in domestic capacity to modernize and expand its kilns. The commitment to these investments were made in response to domestic shortage conditions that materialized during 2003-2006, an understanding that dependence on the free flow of foreign supply is dictated by uncertain international logistic conditions surrounding dry bulk carriers impacting freight rates, and in recognition of the longterm demographic trends that suggest strong demand requirements by the United States' economy. Furthermore, the $6.7 billion commitment to expand and modernize in the domestic

industry was undertaken before the current economic hardships were clearly understood. Capitalization and financial commitment to these projects are already in-place.

Furthermore, harsh demand conditions currently face the industry. Since 2005, cement consumption has declined by 53 million metric tons – or roughly 41%. These conditions are unlikely to abate soon. Utilization rates are likely to remain depressed for some time and hence the industry's financial performance will remain depressed. EPA's short three year compliance period suggests that compliance investments must begin soon. PCA estimates that total 2009 cement industry revenues at less than $7 billion. For CISWI covered cement plants revenues are estimated at roughly $3 billion. For 2009-2011, total industry revenues are estimated at $9.5 billion. The $2 billion in investment required to comply CISWI standards equates to more than 20% of industry revenues accumulated during the next three years.

The combination of the industry's pre-existing financial commitment to provide reliable and efficient supply of cement to the United States' market, coupled with sustained harsh economic and financial realities, investment needed to comply with Pre-Publication Portland Cement NESHAP may overwhelm the industry's financial capability to comply the Proposed CISWI Rule.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 61

Comment: CISWI Impact on United States' Construction Costs

[See submittal for CISWI scenario provided by commenter.]By itself, costs associated with the cement industry's compliance to CISWI standards could increase domestic production costs by a minimum of $26 per ton. This assessment

includes capital compliance investments dispersed over a 15 year time horizon, includes annual operating costs associated with the emission capture systems, and includes the increase in fuel costs for plants forced to stop burning cheaper alternative fuels. These estimates are based on a 90% utilization rate.

The ability of the cement industry to pass along costs to consumers of concrete is high. The price elasticity of demand for cement is extremely low. The EPA's ISIS model confirms this. PCA and the EPA's NESHAP ISIS model generally agree that a large portion of CISWI compliance costs will be passed onto cement/concrete consumers.

The largest consumer of cement/concrete is the public sector – accounting for 50% of cement consumption. High cement consuming public construction efforts include new highways, bridges, schools, public building as well as water, sewer and conservation projects. Of public construction activity, more than 90% are undertaken by state and local governments. PCA estimates that CISWI compliance costs could add as much as $1 to $1.2 billion annually to state and local governments' expenditures just to maintain existing roadways and bridges. The potential overall cost to the construction industry is estimated at roughly $3 billion annually.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: A. Preston Howard, Jr.
Commenter Affiliation: Manufacturers and Chemical Industry Council of North Carolina (MCIC)
Document Control Number: EPA-HQ-OAR-2003-0119-2043.1
Comment Excerpt Number: 1

Comment: Most of our State's industries are working hard to keep their plants open and keep their people employed in the current sagging economy. With unemployment figures hovering around 10%; federal, state, and local governments struggling to maintain fiscal stability; and severe limitations on capital project financing; it is difficult to imagine a more inopportune time for EPA to be imposing such a costly rule.

MCIC supports efforts to address serious health threats from air emissions and believes EPA can craft regulations that sustain both the environment and our competitive position in the world marketplace, while maintaining jobs for the more than 500,000 men and women that are currently employed in manufacturing here in North Carolina. Unfortunately, implementation of EPA's proposed Boiler MACT, as currently proposed, will work at odds with our collective efforts to reverse the current trend in job loss.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1
Comment Excerpt Number: 1

Comment: In a proposal on June 4, 2010, EPA named "drum reclamation furnaces" as operations that would become subject to the agency's proposed New Source Performance Standards and Emission Guidelines for Commercial and Industrial Solid Waste Incinerators. If implemented, this proposed rule force us to install pollution control equipment costing in excess of $500,000, and approximately $50,000 per year to operate and maintain. These costs would likely force the company to shut down our plant, thereby eliminating jobs for the 49 persons employed here.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Nikki Tsantrizos
Commenter Affiliation: Terragon Environmental Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2093.1
Comment Excerpt Number: 4

Comment: Adding the technical requirements (add-on controls) necessary to meet the proposed standards demands an investment in the order of one million dollars per unit. MAGS (Micro Auto Gasification System) is a small scale system designed to enable practical, cost-effective, and environmentally safe onsite treatment of waste for small human habitats. Given the relatively small price of our system, its capacity and intended use, adding such a cost to each unit would make the product unviable. If this rule should pass and MAGS should be subject to the proposed standards and regulations, Terragon would not be able to commercialize MAGS in the United States.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1
Comment Excerpt Number: 5

Comment: Importantly, EPA failed to note in the proposal that most drum reconditioning plants are small businesses, i.e. less than 50 employees and under $7 million in annual revenue. The fact is that if this proposal is adopted as is, we would have to shut down our furnace, and perhaps the entire plant. We simply could not afford these retrofit costs.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 1

Comment: The State is concerned about the cost of this proposal. The number of sources affected by the proposed CISWI Rule has been underestimated and, consequently, the associated economic and workload impacts have been underestimated.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Christopher S. Bond
Commenter Affiliation: United States Senate
Document Control Number: EPA-HQ-OAR-2003-0119-2127.1
Comment Excerpt Number: 1

Comment: Families and communities across Missouri depend upon the forest products industry for their livelihood. These are good people who work hard for modest wages across the 14 million

forested acres in Missouri. Seventy-four percent of the energy needs of their employing sawmills come from their wood by-products. Those operations that do not use their own woody byproducts sell them to others, providing up to 15% of a sawmill's income. This value as

a fuel or income source is often the difference between profitability and layoffs or closure.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Christopher S. Bond
Commenter Affiliation: United States Senate
Document Control Number: EPA-HQ-OAR-2003-0119-2127.1

Comment Excerpt Number: 4

Comment: EPA's proposed rules also threaten the ability of struggling families and communities to protect and create jobs. Many parts of rural Missouri, ideal places for the growth and use of biomass, are struggling mightily in the current hard economic times. Rural workers just cannot handle more bureaucratic and expensive regulations from Washington that kill jobs instead of create them. Experts estimate EPA's proposed regulations will cost the forest products industry $7 billion. Killing just one job unnecessarily is not only unfair to struggling workers, it is unconscionable. The administration can hardly claim it cares about job creation if it finalizes regulations as proposed by EPA in this case.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 11

Comment: RIPA's members are companies that provide essential, environmentally sound services to a wide variety of manufacturing, shipping, distributing and agricultural industries. An informal survey of RIPA's members reveals that furnace operations would likely cease at many, if not all, of its 32 furnace locations were the proposed standards and guidelines issued as final. RIPA estimates that over 1200 jobs would be directly lost within the reconditioning industry and several thousand more would be indirectly lost as suppliers and service providers shutter their operations. These job losses must be considered in assessing the economic impact of any final standards and guidelines.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 1

Comment: It is important to consider that manufacturers are attempting to fully recover from the steepest economic downturn since the 1930s and bring back the 2.2 million high-wage jobs lost during recent years. Red Hill Grinding Wheel Corp. strongly urges federal policy makers to create conditions that will lead to economic expansion and not stifle the industrial and manufacturing vitality necessary to create jobs and technologies that will continue to improve the

nation's air quality. Imposing unduly strict mandates on the manufacturing sector will not accomplish any of these objectives. These mandates hit small companies such as ours hard directly and indirectly. REMEMBER IT IS SMALL COMPANIES IN THIS COUNTRY THAT PROVIDE MOST OF THE JOBS.

New and overly stringent standards for industrial boilers that effect our customers could have an impact on Red Hill Grinding Wheels bottom line without demonstrated environmental benefits. Compliance costs associated with these harsh and inflexible proposed rules will cost U.S. manufacturing jobs and hurt global competitiveness, just as the economic recovery attempts to gain more traction. Further, as described below, the severity of the proposed standards may lead to the perverse effect of disincentivizing projects that otherwise would realize environmental improvements.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Ron Frye
Commenter Affiliation: Britton Electric Motor, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2218
Comment Excerpt Number: 1

Comment: The EPA proposed rule EPA-HQ-OAR-2003-0119 will be devastating to our small business and consequently put us out of business overnight. The cost for compliance would be $147,477. Per oven, with $88,861. In annual cost.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Russell Wanke
Commenter Affiliation: Thilmany Papers
Document Control Number: EPA-HQ-OAR-2003-0119-2117.1
Comment Excerpt Number: 1

Comment: Our business, like many others, encounters many challenges. However, none threaten the continued existence of our business like the proposed Boiler MACT and CISWI rules. Why are these proposed rules a significant threat?

We estimate it will take $45 million in capital to comply. This is equivalent to 4 to 5 years of our normal total capital spend. When taking into account that a portion of our capital must be spent just to maintain operations, the compliance capital is equivalent to nearly 10 years of "growth and improvement" capital. Simply put, the millions we spend to become compliant with the proposed rules will replace investment needed to maintain competitiveness with competitors around the world who are not subject to the proposed rules.

In addition to the capital investment required to become compliant, we estimate that the ongoing incremental annual operating costs of the mandated controls will be in the $4 to $6 million range. We will be unable to pass these additional costs on to our customers as we face European and Asian competition (where the EPA proposed rules of course do not apply).

Finally, our employees primarily heat their homes with natural gas, as does much of the Midwest. If these rules force industrial boilers to convert to using natural gas, prices for natural gas will skyrocket from the increased demand. This creates a double hit for citizens in the Midwest...loss of jobs in these manufacturing states and higher living expenses.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 2

Comment: The Costs of the Rule to Regulated Sources is Grossly Underestimated EPA estimates the CISWI rule will require a "total capital investment of $574 million with an associated total annual cost of $216 million." EPA estimated the rule will result in monetized benefits of "$240 million to $580 million (2008$, 3 percent discount rate) in the implementation year (2015)." EPA's estimate of monetized benefits of the proposed regulatory action at a 7 percent discount rate are $210 million to $520 million (2008$). 75 FR 31967-68.

Although EPA's estimates indicate that the total capital cost of the proposed rule will be $574 million, the total capital cost of the rule will be far in excess of that amount for all affected sources for installation of emissions controls required to meet the proposed standards. Major capital investments in add-on control technology will be required for continued operation of the ICI power house and energy base of the country.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Danny Bell
Commenter Affiliation: Steelman Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1520
Comment Excerpt Number: 2

Comment: The impact to the industries that utilize cleaning ovens is far greater than the EPA has considered. There are thousands of cleaning ovens in the market place as opposed to the numbers represented in the study that was completed. Implementation of the rule as written will have the following consequences:

Small companies may be forced to close due to cost prohibitive measures to meet compliance of the regulation.

Companies will use alternative cleaning measures which are the very reason cleaning ovens were introduced to the market place decades ago.

Oven Manufactures could be forced out of business as well.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 2

Comment: We believe that EPA's cost analysis seriously underestimates the impact these rules will have on the variety of units that have the potential of being regulated as CISWI units under the revised rule. EPA is proposing to remove several exemptions but does not include units that currently meet many of those exemptions in its analysis and does not include justification for removing many of the exemptions.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: James C. Jackson
Commenter Affiliation: Boise Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2150.1
Comment Excerpt Number: 2

Comment: Boise is very concerned that EPA's proposed CISWI rule is overly stringent and will result in very significant capital cost should our biomass boilers become subject to it. We would expect the capital cost to comply with the CISWI rule to be at least equal to and likely more than for the Boiler MACT rule which we have

very preliminarily estimated will have a capital cost of as much as $90 million for our five biomass boilers.

Boise has a further concern with the negative public stigma attached to our biomass boilers becoming "incinerators". Operating an "incinerator" has significant potential ramification concerning how our facilities are perceived by the public and the potential for more difficult permitting of changes to these units.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Joseph M. Cloutier
Commenter Affiliation: RE-Gen
Document Control Number: EPA-HQ-OAR-2003-0119-2455.1
Comment Excerpt Number: 2

Comment: RE-Gen urges, in light of the overwhelming support for biomass from every corner of government, that EPA adopt a rule that provides flexible approaches that appropriately address the diversity of boilers, operations, sectors, and fuels that could prevent severe job losses and countless dollars in unnecessary regulatory costs.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Curtis Lesslie
Commenter Affiliation: Ash Grove Cement Company
Document Control Number: EPA-HQ-OAR-2003-0119-2145.1
Comment Excerpt Number: 3

Comment: EPA appears to have expanded the term "combust" greatly to encompass the use of raw material ingredients simply to impose further restrictions on cement manufacturing in the US. What a travesty this would be, as it would increase imports from largely unregulated East Asian cement manufacturers while at the same time causing the land disposal of tens of millions of tons per year of materials in the US and increasing net environmental impacts from cement consumption.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 3

Comment: EPA states energy impacts for replacement of waste material energy input with fossil fuel to be equivalent to 56 TBtu/yr. The stated cost impacts do not appear to take the increased cost of fossil fuel into account. The cost of using the alternative fuels is obviously lower than

fossil fuel cost, or it would not be burned currently. At a cost differential of $4/MMBtu assuming natural gas would be the fossil fuel of choice (mandated based on proposed rules), the increased cost for fuel would be $224MM/yr. EPA stated this would be $216 MM/yr. 75 FR 31967.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Dennis Cones
Commenter Affiliation: Jackson Oven Supply, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1519.1
Comment Excerpt Number: 3

Comment: I would guess that half of the ovens out there are in very small businesses with less than 10 employees. These businesses are in tough times now making ends meet. These businesses more than likely will not survive the proposed changes.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Matthew L. Swan
Commenter Affiliation: American Quality Stripping, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2113
Comment Excerpt Number: 3

Comment: Regulation:

I believe that both incinerators and burn-off ovens need regulation but not at the same level. Currently burn-off ovens do have levels of local regulation and require PTI (permit to install) but to add such a massive level of costly regulation, testing and control equipment to a piece of machinery that essentially generates no more pollution that a light truck not only seems excessive but is detrimental to the industry. This level of cost increase would not only negatively impact the parts cleaning industry but would essentially eliminate a valuable service from the automotive, medical, small appliance and tractor industries driving their costs of operation up and increasing their level of scrape metals ultimately forcing product pricing up. Ultimately this would force many small operators out of business which in turn would cost the general economy sorely needed jobs.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Craig S. Campbell

Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 4

Comment: Lafarge fears that EPA's approach in these proposed rules will promote the movement of industrial activity away from the US and toward countries abroad. Industries, such as cement manufacturing, rely on the financial benefit of using non-hazardous secondary materials that would otherwise be landfilled to remain competitive within an international marketplace. Removal of these financial benefits puts the cement industry and many other industries at a global competitive disadvantage.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 5

Comment: The cost to comply will lead to facility closures, which the D.C. Circuit has recognized is contrary to congressional intent.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 5

Comment: We are concerned with EPA's admissions that this regulation will likely cause many units to cease operation due to the costs of controls required, that it will prevent the building of new units, and that it will increase costs to many other units that have to substitute purchased fossil fuels for secondary materials currently burned as fuels. It certainly was not Congress's intent to regulate categories of sources out of existence - if these units are serving a useful purpose, and the increased use of fossil fuels runs counter to sound energy policy.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Curtis Lesslie
Commenter Affiliation: Ash Grove Cement Company
Document Control Number: EPA-HQ-OAR-2003-0119-2145.1
Comment Excerpt Number: 5

Comment: Use of secondary materials in the US cement industry has increased over the years in an attempt to reduce the need for virgin raw material ingredients which results in reduced impacts on the environment due to less material being extracted, transported and processed while at the same time reducing productions costs to remain competitive with strong international competitors that have far fewer (if any) environmental regulations.

EPA must consider the overall environmental impacts of implementing these two proposals. It is clear that the environmental benefits of reusing/recycling secondary materials in lieu of disposal were underestimated and misrepresented in EPA's analysis, while the benefits of the proposals were overestimated.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 6

Comment: Should EPA subject coal refuse-fired EGUs to CISWI standards established based upon the evaluation of emissions from biomass units, EPA will ensure that such standards are not achievable in practice for these coal refuse-fired sources. Not only is this contrary to the statutory mandate imposed on EPA for establishing MACT standards, such regulatory approach would likely ensure the cessation in operation of many, if not all, units that currently produce energy by combusting coal refuse as a fossil fuel. Such sources, by EPA's own analysis, generate air emissions at substantially lower rates than other coal-fired EGUs and are vital to the reclamation of thousands of acres of formerly-mined lands currently causing severe acid mine drainage.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Audrey L. Van Dyke
Commenter Affiliation: CNH America LLC (CNH)
Document Control Number: EPA-HQ-OAR-2003-0119-2404
Comment Excerpt Number: 6

Comment: Economic impact analysis - underestimated number of sources. The economic impact is underestimated because EPA underestimated the number of sources.

Economic impact analysis - did not include all alternatives. The economic impact is underestimated because EPA assumed units would upgrade or send "waste to a landfill or shut down" and did not properly consider the cost of alternatives. As described above, three possible alternatives are upgrading, changing to alternative cleaning technologies or outsourcing the cleaning of paint system components. We are still investigating the cost of upgrades and different technologies and whether they are feasible and was unable to during the allowed comment period. CNH has located the closest vendors who can clean our components (have ovens large enough and can handle our volume). We requested quotes and the cost to outsource this cleaning would be approximately $2,400,000 per year. Those costs are likely low as these vendors will have to upgrade their ovens to comply and will pass on those costs to us.

Economic impact analysis - did not consider supply chain impact. Vendors that supply painted parts to CNH will also either have to upgrade, change to an alternative technology or outsource their cleaning technologies and will likely pass those costs onto CNH increasing our costs and ultimately to consumers of our products furthering the economic impact.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 13

Comment: Estimates of employment impact derived from Morgenstern et al.: The Regulatory Impact Analysis uses two techniques to estimate the changes in employment due to the proposed rules. The first is a longstanding method used by EPA in many previous analyses. This technique looks at the output decrease in the relevant sectors and uses an estimate for jobs per unit of output to calculate a projected decrease in employment. This “demand effect” technique for projecting changes in employment is described in the Economic Analysis Resource Document issued by the Office of Air Quality Planning and Standards in April of 1999.[Footnote: OFFICE OF AIR QUALITY PLANNING AND STANDARDS, EPA, OAQPS ECONOMIC ANALYSIS RESOURCE DOCUMENT at 5-42 to 5-43 (1999).] It contains an implicit assumption that the result of environmental regulations will be price increases and that these price increases will result in lower sales for regulated entities.

However, this type of employment projection is incomplete. The agency correctly identifies that there are at least two types of employment effects from environmental regulations which are not included in the “demand effect” calculation: the “cost effect” and the “factor shift effect.” 69 [Footnote: RIA at 4-6 to 4-7.] The “cost effect” recognizes that, for a given level of output, expenditures on reducing pollution often require additional employees. The “factor shift effect” recognizes that production can be more or less labor intensive after compliance with an environmental regulation.

The size of each of these effects and the direction of the "factor shift effect" are all empirical matters and will likely vary from industry to industry and from regulation to regulation. In order to estimate these effects, EPA uses econometric estimates from a 2002 paper by Morgenstern et al. [Footnote: Id. at 4-7.]This paper estimated the employment effects of spending on environmental policies across a number of industries.[Footnote: Richard D. Morgenstern, William A. Pizer & Jhih-Shyang Shih, Jobs Versus the Environment: An Industry Level Perspective, 43 JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT 412, 412 (2002).] As the RIA recognizes, the point estimates do not perfectly correspond to the analysis that EPA is doing. The range of industries analyzed is not the same and the paper uses older data.

Nevertheless, this technique at least recognizes and has the possibility of capturing effects that the traditional techniques of estimating employment effects cannot. This makes the estimates derived from the Morgenstern paper at least as valuable as the traditional techniques of estimating employment effects. The adoption of this technique by EPA could attract additional interest in this area and encourage economists to publish new studies on the topic with newer data.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 19

Comment: EPA's contractor, Eastern Research Group, Inc. (ERG) sent a letter to EPA on April 28, 2010 that presented its analysis of "Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units." (Docket ID: EPA-HQ-OAR-2003-0119-0057) On page 2, ERG explains to EPA that

"For waste-burning kilns, we assumed that these units would likely be complying with the final and proposed Portland Cement NESHAP limits prior to, or in absence of,

complying with the proposed CISWI emission limits. As a result, for the pollutants that are covered by the Portland Cement NESHAP that are also CAA section 129 pollutants,

the baseline emissions should reflect the Portland Cement NESHAP limits. We compared the available test data to the proposed Portland Cement NESHAP limits for pollutants that overlap the nine section 129 pollutants. If the measured value was lower than the proposed Portland Cement NESHAP limit, then the test data were used.

Otherwise, if the measured data were greater than the proposed Portland Cement NESHAP limit, then the Portland Cement NESHAP limit was applied as a baseline concentration for that unit." (Emphasis added.)

EPA's analysis (prepared by ERG) clearly assumes compliance with the proposed Portland Cement NESHAP as the emissions baseline for cement kilns. So there is no question that the

annual $1.3 million per unit cost of cement kilns' compliance with the Sec. 129 CISWI standards is in addition to the annual $2.1 million per unit cost of meeting the Sec. 112 standards. And EPA's attempt to use these cost figures to dismiss the steep economic downsides of the SWI and CISWI rules disintegrates upon correct application of the Agency's own data.

In fact, the annual cost of CISWI compliance for cement kilns would be $3.4 million per unit per year, a 38.2% increase over PC NESHAP compliance cost!

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 23

Comment: Subjecting coal refuse-fired EGUs to CISWI standards that cannot be achieved in practice by these sources would also likely result in the closure of many, if not all, facilities with units that currently produce energy by combusting coal refuse as a fossil fuel, because compliance with the Proposed Rule would not be economically feasible. As a result, the areas in which these facilities are located would no longer realize the economic benefits associated with the operation of such facilities. In particular, because a majority of ARIPPA facilities operate under long-term power purchase agreements to supply alternative energy to utility companies at fixed prices, these facilities must absorb the compliance costs associated with environmental regulations. To the extent that the costs of compliance exceed the financial viability of these sources, they cannot continue to operate.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 25

Comment: Industry data on estimated labor force directly employed by the CFB coal refuse alternative energy industry total 1304 employees or an average of 69 workers per plant. Estimates of those indirectly employed or affected by our alternative energy industry total 3798 workers or an average of 199 workers per plant.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 34

Comment: EPA is correct in its assumption that, when faced with the compliance costs (even if no air pollution control devices are needed), many of these ovens would simply shut-down and facilities would seek other alternatives. However, these alternatives are also costly and not

necessarily better for the environment. Given the trivial emissions from these ovens, this outcome would be unfortunate and unjustified.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 34

Comment: Lafarge believes that EPA has significantly underestimated the impact of the proposed actions in this rulemaking on water and solid waste, secondary air emissions, energy, and costs. These underestimates are based on two general assumptions made by EPA:

(1) all cement kilns will be subject to and complying with the proposed new PC NESHAP emission limits when they become subject to the CISWI limits; and

(2) all existing cement kilns currently using non-hazardous secondary materials will continue to do so under the CISWI rules because it is more cost-effective for them to do so.

As Lafarge discussed in Section VI, EPA has not fully explained how the implementation of NESHAP and CISWI will work. It seems unreasonable that cement kilns would be forced to comply with the proposed NESHAP emission limits if they combust "solid waste" and are subject to CISWI. Section 129(h)(2) provides that "no solid waste incineration unit subject to performance standards under this section and section 111 of this Act shall be subject to standards under section 112(d) of this Act." As stated in Section VI, this could be interpreted to mean that kilns combusting solid waste would become immediately subject to CISWI upon final promulgation of the NHSM and CISWI rules (currently scheduled to be finalized in December 2010). If cement kilns were forced to apply MACT controls to comply with the new NESHAP rules, it is unlikely that they would then install additional MACT controls to comply with SO2, NOx, CO, Cd, and Pb limits in the CISWI rule. A more reasonable assumption is that kilns currently using non-hazardous secondary materials designated as "solid wastes" would continue to use these materials until the new CISWI emission limits became effective, then discontinue their use and continue to be subject to the new NESHAP standards.

This seems to contradict the first assumption and EPA's earlier statement that it expects the number of sources in a source category subject to CISWI to decline over time. In the docket for this rule (document EPA-HQ-RCRA-2008-0329-0528), EPA claims that "Despite the potential for whole tires to be diverted to land disposal as a result of the proposed rule, EPA's assessment of the cost data for cement kilns (the main users of whole tires) suggests that cement kilns will continue to burn whole tires following promulgation of the rule". EPA's cost data assumes that compliance with the NESHAP will cost $2.1 million annually and compliance with the CISWI will cost $1.3 million annually.

If EPA assumes that cement plants will be required to comply with the proposed NESHAP standards prior to the CISWI standards, then the $2.1 million annual cost is already being accrued when the CISWI standards become applicable. Additional controls associated with NOx, CO and other pollutants not specifically controlled by NESHAP controls will add cost to the baseline $2.1 million annual compliance cost. Therefore, there is not a clear economic incentive for cement kilns to opt for CISWI unless EPA proposes an implementation strategy that offers the cement industry the option of complying with either NESHAP or CISWI.

These comments would result in a couple of possible conclusions:

(1) If all kilns are required to comply with the proposed NESHAP standards regardless of whether they are CISWI sources, then kilns using non-hazardous secondary materials designated as "solid wastes" would be forced to install MACT to comply with the proposed NESHAP rule (at least those kilns that believe they can meet the limits and it is economically viable to do so), and would continue to use non-hazardous secondary materials until the CISWI standards become applicable. Once this occurs, they would stop using non-hazardous secondary materials.

(2) If EPA establishes a hybrid implementation strategy then kiln operators would have to assess whether it was technically possible and economically viable to opt in under the CISWI standards (this assessment would be similar to determining whether a kiln wanted to use hazardous waste fuel and be subject to HWC NESHAP vs PC NESHAP). This would likely result in some sources opting for CISWI and some sources opting for NESHAP. However, even if a source opts into CISWI in the near term, when that source undergoes a modification or reconstruction, it would have to opt out of CISWI and back into NESHAP, as the proposed "new source" CISWI standards are not technically achievable.

In either case, cement kilns would eventually discontinue the use of non-hazardous secondary materials.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 35

Comment: In contrast to the total lack of benefits, cement kilns complying with the CISWI rule will incur significant costs. EPA provides estimates for costs to comply with the CISWI rule for each subcategory and each facility. These estimates are based upon a determination

of the additional floor controls that will have to be installed plus costs for emissions testing, annual required control device testing and inspection, and monitoring, reporting and recordkeeping requirements. For cement kilns, the only required additional controls

are for improvement or installation of fabric filters and for "tuning" the combustion system to reduce CO emissions.

Based upon EPA's analysis of annualized control costs for CISWI compliance, the total

cost for compliance with the CISWI rule for all subcategories is $243,992,243 vs. estimated benefits of $240 million to $580 million (2008$, 3 percent discount rate) in the implementation year (2015) [Footnote: 75 FR 31967.] For cement kilns, EPA estimates the total annualized cost at $46,702,607 (versus $0 in benefits). Of that total, for cement kilns, the single highest cost item is to install or upgrade fabric filters. EPA assumes that installation and upgrades of fabric filters are not for control of PM, but for control of cadmium and/or lead emissions. As has been noted previously, CISWI kilns are assumed by the Agency to be meeting the PM standard of Subpart LLL. Summing the costs to either install a new fabric filter (for some cement facilities that currently have ESPs) or upgrade a fabric filter to further reduce cadmium and lead, the total is $35,110,433. Thus, 75% of the total compliance costs for cement kilns are related to installation of further controls for lead and cadmium. This calculates to a cost of $6,068,594 per ton of cadmium and lead (combined) removed. This is based upon EPA's database, which does not include expected reductions of cadmium and lead due to cement kilns' compliance with the

Subpart LLL PM standard. If the adjusted values calculated by SYA are used, the per ton cost of reduction increases to $7,258,485.

Further, the cost effectiveness figures listed in EPA's compliance cost analysis (Table 9. Cost Effectiveness of MACT Floors: Overall and by Subcategory [Footnote: Compliance Cost Analyses for CISWI Units, Memo from Jason Huckaby, Amber Allen, Kristen James, ERG to Charlene Spells, Toni Jones, Ketan Patel, EPA, April 28, 2010, EPA-HQ-OAR-2003-0119-0054.pdf] are very misleading, showing the cost per ton of pollutant to be removed for cement kilns at only $5,991 per ton for all pollutants reduced. In reality, the overwhelming mass of pollutants that EPA assumes will be reduced from cement kilns is comprised of CO (99%). EPA assumes that only 6 cement facilities would require a mere combustion "tune-up" to control 7,724 tons of CO. EPA calculates the annualized cost for this tune-up to be a total for all kilns

of $9,480, or $1.23 per ton of CO reduction. However, by lumping all tons of all pollutants into one "bucket" to calculate cost effectiveness, EPA has allowed the low per ton cost for CO reduction to camouflage the extremely high cost per ton for compliance with the cadmium and lead standards, thereby creating the false impression of favorable cost effectiveness of the proposed rule. By eliminating CO (which is not a HAP and has relatively minor effects on human health and the environment) from the calculation, the cost per ton of hazardous air pollutant removed becomes $648,516 per ton!

The remaining costs for the cement kiln subcategory are for initial and annual stack testing, leak detectors for new fabric filters, and reporting, recordkeeping, and monitoring costs. These costs are significant, accounting for more than $10,000,000 per year for the cement kiln subcategory.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 36

Comment: Other Costs of Compliance are Not Included in EPA's Analysis

EPA does not include costs to meet the HCl standard, as EPA has assumed that no additional costs are associated with installation of technology to meet the Subpart LLL standard. As noted earlier, it is impossible to know if the standard can be achieved and what the compliance costs would be since no kiln has ever installed a scrubber for the purpose of HCl reduction. EPA also has not considered the cost of the additional lime that may be necessary to reduce HCl emissions and the additional costs associated with scrubber operation and disposal of additional wastes. EPA must address these technology issues as well as the costs associated with achieving a very low HCl standard for cement kilns.

EPA also has made the assumption in the proposed CISWI rule that a few electrostatic precipitators (ESPs) will be able to meet the Subpart LLL standard. EPA did not include

costs to install fabric filters for two facilities since the data for those facilities show compliance with the cadmium and lead standard. In both instances however, other kilns equipped with ESPs at the same facility did not meet the cadmium and lead standard and thus were listed as requiring fabric filter upgrades. As a technological matter, it is highly unlikely that one kiln at a plant can meet a cadmium or lead standard while the other

cannot when both kilns use the same raw materials and fuels and use the same PM control technology. In addition, ESPs are unlikely to be able to meet the PM standard for

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Subpart LLL. Therefore, EPA's cost analysis should include an additional approximately $3,430,000 in annual costs for the cement kiln subcategory to account for the additional fabric filters for these two facilities.

EPA also has failed to account for additional permitting costs for facilities to comply with the CISWI rules. Installation of additional control technology (e.g., new baghouses) will require regulatory permitting. In addition, the change from Subpart LLL compliance to CISWI will also require modification of Title V permits, instrumentation, training and more. These may add as much as another $250,000 in annualized costs per facility for the cement kiln subcategory, and they are not included in EPA's analysis

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 36

Comment: EPA has not Adequately Considered the Costs of Forcing Burn-Off Oven Shut Down

EPA has not adequately considered the costs facilities will incur if burn-off ovens are shutdown: In the docket document "Compliance Cost Analyses for CISWI Units," EPA presents its cost-effectiveness estimates. On page 9 of the document, EPA states:

"The nationwide average cost effectiveness for all units to choose the lowest cost option between complying and using an alternative disposal method was estimated as follows: $57,700/ton for burn-off ovens, $6,000/ton for waste-burning kilns, $7,700/ton for energy recovery units, 2,500/ton for incinerators, and -$26,600/ton for small, remote units."

Even EPA's estimates illustrate the high costs ($57,700/ton) of subjecting these trivial units to the CISWI regulation relative to the other subcategories. However, CIBO believes this estimate is far underestimated. Again, from page 9 of the CISWI cost analyses document, EPA states:

"For burn-off ovens, sandblasting was considered as an alternative disposal method. As shown in Table 7C, an estimated operational cost of $53.75 over 2000 hrs per year for each burn-off oven was assumed, with an additional 10 percent assumed for contingency costs. The result was an estimated flat rate of $118,250 per year to utilize an abrasive blasting service."

EPA has failed to recognize that the purpose of having on-site burn-off ovens is so that facilities can quickly clean parts and re-use them. It a facility has to send parts to an off-site facility for cleaning, the facility will have to stock additional parts so that it will not lose production time waiting on the parts to be returned from the cleaning facility. These expensive parts such as dies and extruder screws would add substantially to EPA's cost estimates.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 37

Comment: EPA Has Failed to Account for Impacts Due to Cessation of Certain Solid Waste Use

EPA neglected to analyze potential impacts to human health and the environment if cement kilns elect to stop utilizing AFRs rather than become subject to the CISWI Rules. As noted above, cement facilities would have to bear significant additional costs related to permitting, recordkeeping, compliance testing, and other compliance burdens, in addition to incurring great

uncertainty with respect to the achievability of some of the standards. EPA notes that: "...many existing CISWI owners and operators may find that alternate disposal options are preferable to compliance with the proposed standards." [Footnote: 75 FR 31966.] There is a significant likelihood that many or even all kilns may abandon the use of alternative fuels and raw materials, a critical element of their sustainability initiatives, if AFRs are defined as solid waste, which would trigger regulation under the CISWI rule.

EPA must quantify the environmental and economic impacts if cement kilns were to abandon the use of AFRs dues to the CISWI and SWI rules. The Agency also must assess the impacts of destroying or crippling the extensive AFR supply programs that have been developed over the last couple of decades. The most poignant example is TDF. TDF represents the single most important non-hazardous alternative fuel used in cement kilns. In 2007, 48.4 million tires were used as fuel in US cement kilns [Footnote: Materials Characterization Paper in Support of the Proposed Rulemaking: Identification of Nonhazardous Secondary Materials That Are Solid Waste – Scrap Tires, EPA, April 2, 2010, http://www.epa.gov/epawaste/nonhaz/define/pdfs/tires.pdf.] This represents 20,328,000 MMBtu/year of fuel [Footnote: Assuming each tire weighs 30 lbs and has 14,000 Btu/lb heat value.] In order to replace this amount of fuel, a total of approximately 847,000 additional tons of coal would have to be burned [Footnote: Assuming 12,000 Btu/lb heat value.] This additional coal will impose additional costs and cause a number of significant adverse environmental impacts, none of which EPA has bothered to analyze. The following discussion presents worst-case impacts that would be caused by the loss of TDF at cement kilns. The potential magnitude of the adverse effects of these rules is significant. Neglecting to analyze the impacts to human health and the environment that would be imposed by the combined effects of the SWI and CISWI rulemakings is a serious failure by EPA to engage in reasoned decisionmaking.

Direct Environmental Impacts and Costs to Cement Kilns for Loss of TDF Fuel Are Significant

As noted above, using TDF in cement kilns provides a number of positive environmental benefits and has no negative effects. When used to replace coal, TDF creates significant reductions in both NOx and SO2 emissions. As an example, SYA estimates that, in 2008, replacing coal with scrap tires provided cement kilns with a 35% reduction in NOx emissions and a 30% reduction in SO2 emissions. Based upon EPA's baseline inventory of NOx and SO2 emissions and assuming 44% (2008 data) of all kilns use TDF [Footnote: North American Cement Industry, Annual Year Book, 2009, Portland Cement Association], the loss of TDF in cement kilns would cause an annual increase in emissions as follows [See submittal for Table 2 – Nox and SO2 Emissions from CISWI Cement Kilns With and Without TDF provided by commenter]

The increase in NOx and SO2 emissions that would have to be abated is dependent upon each facility's air permit, but it is reasonable to assume that additional costs for cement kilns to control NOx and SO2 emissions would be necessary if cement kilns abandoned the use of TDF. To be conservative, EPA should assume that all of the increase in emissions would have to be controlled [Footnote: The costs for control of both NOx and SO2 represent worst-case assumptions. Facilities may not be required to abate additional NOx and SO2 emissions, depending upon the location and terms of their air permit.] For NOx, controls such as selective non-catalytic reduction (SNCR) or selective catalytic reduction (SCR) may be required. Using EPA's data for costs for SNCR and SCR of $1,700 per ton and $4,200 per ton of NOx controlled [Footnote: Alternative Control Techniques Document Update - NOx Emissions from New

Cement Kilns, EPA, November 2007, p.103.] the range of control costs is $41,136,600 to $101,631,600. Note that in the RIA for the CISWI rule EPA notes costs for SNCR can range from $5,300/yr to $436,000/yr. Industry believes that SNCR and SCR costs are even higher than EPA's figures [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009.] Thus, EPA's calculated maximum control costs may be significantly understated.

For SO2, additional controls may be necessary and would include the installation of wet scrubbers. Based upon EPA's background data for the Proposed Revisions to Portland

Cement New Source Performance Standards (40 CFR Part 60, Subpart F; Federal Register Vol. 73, No. 116, June 16, 2008), the range of control cost is $670 to $6,700 per ton of SO2 removed. Therefore, the range of maximum additional annual control cost for SO2 for cement kilns using coal instead of TDF would be $937,387 to $9,373,870 per year.

Replacement of TDF with coal also may influence cement kiln emissions and costs for control of mercury. The average bituminous coal used for fuel exhibits significantly higher levels of mercury than TDF, [See submittal for Table 3 – Mercury Concentration of Coal and TDF provided by commenter.]

The CISWI rule assumes that all cement kilns will be complying with the Subpart LLL standard for mercury. To achieve this standard, many, but not all kilns will require the installation of a carbon injection system. For those facilities assumed by EPA to already have carbon injection, the replacement of coal with higher levels of mercury than TDF will require the facility to use additional carbon. For those facilities that would not have had to install carbon injection, the change from TDF to coal may require the facility to install a carbon injection system in order to comply with the mercury standard. These potential additional costs to the cement industry have not been analyzed by EPA. In EPA's Subpart LLL proposed rule, EPA notes that capital costs for carbon injection are $3.118 per ton of clinker and annual costs are $0.7525 per ton of clinker. Thus, for a nominal 1,000,000 ton per year kiln system, additional capital costs of approximately $3,118,000 and additional annual costs of $752,500 would be incurred for each facility that must install activated carbon injection (ACI). Note that these costs may be well understated, as industry believes that the true costs of ACI for cement kiln applications are at least four times higher than EPA estimates [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing, Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009, Appendix 11, page 9.]

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 42

Comment: Promulgating the rule as proposed would lead to inappropriately high costs

for the affected sources, and does not take into account the economic impact as required by the CAA.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 44

Comment: EPA's CISWI Regulatory Impact Analysis Does Not Even Discuss the Cement Industry

Based upon the discussion above, SYA has found that EPA's RIA does not adequately analyze or thoroughly determine the true impacts of the combined SWI and CISWI rules. A major shortcoming is that the RIA does not include a discussion of the impact on the cement industry from the CISWI rule. The RIA limits its discussion to three industries: Wood Product Manufacturing, Paper Manufacturing, and Chemical Manufacturing. The RIA states that it has included in the analysis "selected industries that are affected by the

proposed rule," and "The industries were selected based on high facility population counts within 3- digit NAICs industries reported in the combustion facility survey. The purpose is to give the reader a general understanding of economic aspects and industry trends to provide additional context for the economic impact analysis." However, for the waste-burning kiln subcategory, which will be dramatically impacted by these rules, EPA has failed to provide a thorough or even adequate discussion of the industry and the rules' specific and unique environmental and economic effects. The cement industry has been severely harmed by the current economic slowdown and the SWI and CISWI Rules have a strong potential to critically and adversely impact the ability of the cement industry to

remain competitive and preserve jobs in the global cement market. It therefore is imperative that EPA completes a thorough and accurate analysis of the rule's impact on the cement industry.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 48

Comment: The proposed unachievable limits would lead to the closure of existing units.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 66

Comment: The stringency of the proposed standard will cause units to shut down. EPA states that the regulation of municipal waste combustors and hospital and medical infectious waste incinerators (HMIWI) under section 129 has resulted in a number of units shutting down. Based on Table 3-1 of the RIA, it appears EPA has already determined that any CISWI that cannot currently meet the proposed standards will shut down, as zero capital costs are estimated for those units (we note that many of these units are already well controlled and meet the current CISWI limits). We do not believe that Congress intended for section 129 to be interpreted in such a way as to shut down viable and necessary industrial processes.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 73

Comment: It appears that EPA‘s cost analysis is limited to control costs and fails to consider or compare the costs associated with CISWI units no longer burning materials and instead sending them to landfills. EPA also has failed to consider the environmental impact of transporting and landfilling all of the materials that are presently incinerated.

It also appears that EPA has not considered the impacts of increased fuel costs for these units that no longer burn solid waste due to the increased use of traditional fossil fuels. EPA notes, “As discussed earlier, there could be instances where owners and operators of energy recovery units and waste burning kilns decide to cease burning waste materials. In these cases, the energy provided by the burning of waste would need to be replaced with a traditional fuel, such as natural gas. Assuming an estimate that 50 percent of the energy input to energy recovery units and kilns are from waste materials, an estimate of the energy that would be replaced with a traditional fuel if all existing units stopped burning waste materials is approximately 56 TBtu/yr. Since we do not anticipate any new CISWI units to be constructed, there would be no energy impacts associated with control of new units.” [Footnote: 75 FR 31967.] However, EPA does not recognize that other fossil fuels could be used to offset the waste

material heating value, such as coal. EPA also does not appear to include in their estimated impacts the amount of replacement fossil fuel for units that stop burning waste materials. Incremental increased cost for replacement fossil fuel is not mentioned when

discussing annual cost impacts of the proposed rule in the Federal register notice or support documents. EPA needs to explicitly explain the actual projected impacts of the

imposed limits on affected units and accurately account for the increased fuel costs.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket. Further, see preamble Sections V. and VI. for the discussions on the projection of new units.

Commenter Name: Frank V. Avent III
Commenter Affiliation: Halifax County Economic Development Commission
Document Control Number: EPA-HQ-OAR-2003-0119-2461
Comment Excerpt Number: 1

Comment: The purpose of this letter is to express our opposition to the proposed rules for emissions standards for Industrial, Commercial, and Institutional Boilers and Process Heaters, Industrial, Commercial, and institutional Boilers and Commercial and Industrial Solid Waste Incineration Units which were published on June 4. 2010.

With an unemployment rate of 12 .5% and an economy struggling to recover from the national recession, we are deeply concerned of the impact of these proposed rules on industrial and commercial employers in Halifax County. The "Boiler MACT" rule alone could impose millions of dollars in capital costs for facilities in Halifax County. Boiler MACT sets emission limits for air pollutants from industrial boilers and process heaters used by a wide range of manufacturers, universities, hospitals, small municipal power plants, state facilities and many others. Our conversations with industrial leaders reveal that the capital requirement of meeting these rules could result in the closing of facilities and the loss of important jobs in our community.

We request that the Environmental Protection Agency consider a method to set emission standards that is based on best-performing units can actually achieve and a more targeted regulatory approach that directs investment and resources to the real sources of health and environmental risk.

As EPA moves toward implementation of a Boiler MACT rule, please consider sustainable approaches that protect the environmental and public health while fostering economic recovery and jobs.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

Commenter Name: Brian Backler
Commenter Affiliation: Wisconsin Metal Cleaning Corp.

Document Control Number: EPA-HQ-OAR-2003-0119-2470
Comment Excerpt Number: 1

Comment: Wisconsin Metal Cleaning Corporation services companies in need of removal of various coatings from production parts and fixtures throughout southeastern Wisconsin and parts of northern Illinois. The sole purpose of our company is to clean metal to a bare state, so that it can be painted. We accomplish this 95% of the time with burn-off ovens. Currently we own four ovens and we consider them to be the most critical part of our paint stripping process. Without them, we would not exist. To update them to the new standards being mandated would be, at the least, financially prohibitive, and at the worst could potentially put us out of business. To ask a small business such as ours to invest an initial $600,000 and then an annual $89,000 would force us to either shut the doors or charge our customers so much more for our services that they are forced out of business. We provide a very necessary service to any company that applies a coating to their product, and to put us out of business would greatly affect the manufacturing sector. Too many manufacturers are relocating to foreign countries already -- we don't need to give them another reason to leave.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators and the Compliance Cost Analyses for Commercial and Industrial Solid Waste Incineration (CISWI) Units in the docket.

14.5 Emission Impacts

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 10

Comment: We also note that the actual stack test for facility I.D. FLAscend, Unit I.D. "CP-L" did not test for Cd, HCl, Pb, Hg, or SO_x, because the customer did not have any constituents in the material being processed which would have formed these compounds. The actual stack tests for Facility I.D. OHWhirlpoolClyde and INWabashNational855 also show no tests for Cd, HCl, Pb, or Hg, most likely for the same reason. However, Table 3 shows emissions for all of these compounds which were presumably either extrapolated or assumed from a stack test on a different unit. In fact, it appears that only two units were actually tested for Cd, HCl, Pb, Hg, or Dioxins/Furans. These were the units with Facility I.D. KSCNHWichita and NDCNHAmerica. The data from the tests of these two units [see DCN:

EPA-HQ-2003-0119-1767.9] were then averaged and extrapolated to the remaining 34 units on the list. These numbers are not an accurate representation of the potential emissions from these other units, which, if actually tested for such compounds, would most likely have shown no such emissions at all. As stated previously, if the materials processed do not contain Cd, Cl, Pb, Hg, or sulfur, then it is not possible for these units to emit compounds containing these materials.

Response: See preamble Section V. for the response on rationale for subcategories- burn off ovens. Further, units at KSCNHWichita and NDCNHAmerica are subcategorized as incinerators in the final analysis, See preamble for a discussion of EPA data validation and inclusion of new data received since proposal.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 19

Comment: Over the past several decades, forest products industry manufacturing facilities have dramatically reduced their environmental footprint. Modernization of manufacturing processes and expanded pollution control and prevention measures have produced these results. Having already achieved significant reductions in releases, recent incremental reductions in air emission releases have approached the practical limits of what is possible using existing technology.

Pulp and paper mill air emissions, since 1995, have been substantially reduced. These reductions continued in 2008. Compared to 2006, sulfur dioxide releases decreased 14.6 percent, nitrogen oxides were unchanged, and total reduced sulfur (TRS) releases were reduced 18.6 percent.

??At wood products facilities, nitrogen oxide releases (per 1000 board feet of product produced) have been reduced by 29 percent since 2000. However, between 2006 and 2008, these releases increased by 12.8 percent, reflecting a 39 percent reduction in collective AF&PA member production levels for this period due to the sustained drop in housing market starts [See submittal for diagram provided by commenter.]

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 56

Comment: Baseline Cement Plant Emission Projections

Emission data on a plant-by-plant basis across the nine pollutants covered by the Proposed CISWI Rule is partial, and in some cases, the quality of data is suspect. PCA's search for cadmium emissions data for cement kilns was more than ten years old and covered only 13 plants. Analysis of cadmium emissions, therefore has been omitted from this report. Other CISWI emissions data used in this report were compiled from several sources including: (1) EPA's ISIS model used for NESHAP, (2) EPA's National Emission Inventory database, (3) PCA SN3048 - Air Emissions Data Summary for Portland Cement Pyroprocessing, (4) PCA SN3050 - Air Emissions Data Summary for Portland Cement Pyroprocessing Operations Firing Tire-Derived Fuels, (5) PCA's annual Labor/Energy Input Survey. Units of measurement for the toxic

air pollutants available from these various sources often did not map directly to emission limit units in the Proposed CISWI Rule, therefore conversions were required. These conversions used an estimated exhaust gas flow rate. [Footnote: Source: PCA's Innovations in Portland Cement Manufacturing). Conversion examples include pounds to mg/dscm (milligrams/dry standard cubic meter) or tons to ppmv (parts per million volume).]

For mercury emissions, PCA used the EPA plant-by-plant study on Hg emissions from the cement industry, reflecting 2006 information, for 100 cement plants. (EPA: The Toxics Release Inventory (TRI) 2006) [Footnote: EPA: The Toxics Release Inventory (TRI) 2006.]

A follow-up study was performed reflecting 2007 information for some 50 cement plants. Historical benchmarks on plant-by-plant Hg emissions reflect the most recently available data for each plant.

Total emissions are largely driven by domestic production. With the decline in production arising from economic adversity, emissions for all categories are expected to decline in 2010 as compared to 2005 levels. With the revival of cement production, total cement emissions for all categories increase through 2020. PCA combines capacity, EPA emission data, utilization rates, and production estimates to calculate potential emissions. Using the EPA's data on individual cement plant emissions, PCA converts total plant emissions to a per ton of cement production basis. The conversion is performed using existing 2005 and 2007 plant capacities and applying national utilization rates that prevailed in 2005 (93.8%). All plants were assumed to operate at the same national utilization rate. National averages of emissions per ton of cement production were assumed for all plants not in existence in 2005. Projected emissions by plant were derived by applying the emission per metric ton produced at each plant and then applying the projected national capacity utilization rate for each plant. Emissions from all plants were then summed. This analysis was performed for all emissions covered by the Proposed CISWI Rule.

I. CISWI Compliance Scenario

1. The CISWI Standard

EPA's CISWI standard targets solid waste incineration. CISWI compliance standards are aimed at units that combusts any commercial or industrial solid waste material at all, regardless of whether the material is being burned for energy recovery, to be regulated as a solid waste incineration unit. These rules were developed under the guidance of § 129 in the RCRA. Under this rule, some cement kilns could be classified at solid waste incinerators. The rule reverses decades of environmental cleanup success and CAA designations of TDF as an encouraged fuel CAA § 112.

The EPA uses a methodology called MACT to set compliance limits. According to the methodology where control of the feed of HAP was feasible and technically assessable, it ranked sources by their ability to control HAP feed and their ability to control emissions of HAP that are fed to the combustion device (measured as system removal efficiency). In doing so, this methodology assessed the efficiency of controlling both the HAP inputs to a hazardous waste combustion unit, and the efficiency of control of the unit's outputs. The EPA then selected the best performing achievable practice as standard in setting the MACT floor for emissions. EPA applies the "achieve in practice" standard on a pollutant-by-pollutant basis.

EPA application of the MACT approach on a pollutant-by-pollutant basis fails to consider emissions limitation achieved in practice and is based on a control technology that works

reasonably well for one source of emissions but that may not exert firm degree of control for another emission within the kiln under realistic operating conditions. EPA's pollutant-bypollutant methodology results in a final standard that has never been achieved by any cement kiln facility.

PCA assumes all alternative fuel burning plants will first be subject to the more rigid Proposed CISWI Rule standards rather than the recently imposed Pre-publication Portland Cement NESHAP standards. The CISWI emission compliance scenario includes all assessments regarding cement consumption and capacity changes contained in the baseline scenario.

Potential impacts on cement capacity, domestic cement production, imports, and total U.S. cement emissions are estimated in the context of an assumed EPA imposed policy. PCA assumes the Proposed CISWI emission policy commences in 2015. EPA's proposed CISWI emission limits for existing plants are as follows:

* Mercury (Hg) emissions are limited to .024 milligrams per dry standard cubic meter (mg/dscm).

Hydrochloric Acid (HCL) emissions are limited to 1.5 parts per million volume (ppmv) [Footnote: EPA's own NESHAP report suggests the lowest measureable level for HCl is 3.0 ppmvd. "In order to account for measurement variability, we multiplied the highest reported minimum detection level for the analytic method by a factor of three which results in a level of 0.9 ppmv. This represents the lowest level that can be reliably measured using this test method, and we therefore believe that it is the lowest level we can set as the MACT limit taking the appropriate measurement variability into account. Converting this level to a dry basis at 7 percent oxygen results in a floor of 3 ppmvd for both new and existing sources." - EPA Method 321 Detection Limits and Minimum Quantification Limit, July 26, 2010] Particulate Matter (PM) emissions are limited to 60 mg/dscm.

* Nitrogen Oxide (NOx) emissions are limited to 1,100 ppmv.

* Sulfur Dioxide (SO_x) emissions are limited to 410 ppmv.

* Dioxin/furans (D/F) emissions are limited to 2.1 nanograms per dry standard cubic meter (ng/dscm).

* Carbon Monoxide (CO) emissions are limited to 710 ppmv.

* Lead (Pb) emissions are limited to .0027 mg/dscm.

* Cadmium (Cd) emissions are limited to.0003 mg/dscm.

The EPA's proposed emission limits are considerably more severe for "new solid waste burning kilns". New greenfield plants that are commissioned after 2015 are assumed to be subject to the tighter standards. Major modifications to existing plants could force a reclassification of a plant from an existing source to a new source. EPA's proposed emission limits for new sources are as follows:

* Mercury (Hg) emissions are limited to .024 milligrams per dry standard cubic meter (mg/dscm).

* Hydrochloric Acid (HCL) emissions are limited to 1.5 parts per million volume (ppmv).

Particulate Matter (PM) emissions are limited to 1.8 mg/dscm

* Nitrogen Oxide (NOx) emissions are limited to 140 ppmv

* Sulfur Dioxide (SO_x) emissions are limited to 3.6 ppmv

* Dioxin/furans (D/F) emissions are limited to .00035 nanograms per dry standard cubic meter (ng/dscm).

* Carbon Monoxide (CO) emissions are limited to 36 ppmv

* Lead (Pb) emissions are limited to .00078 mg/dscm

* Cadmium (Cd) emissions are limited to .0003 mg/dscm

2. Cement Plants Covered by CISWI

According to PCA's Labor/Energy data, sixty one plants used alternative fuels in their kilns on a sustained basis during 2006-2008. Of these, 16 plants' alternative fuel usage accounted for less than one percent of their total fuel consumption and are excluded from the analysis in this report. This report includes only the remaining 45 plants that burn alternative fuels accounting for more than 1% of their total fuel usage. In the context of regulation uncertainty, PCA assumes no additional cement plants will begin burning alternative fuels. Alternative fuels include scrap tires, solvents, waste oil and other solids. Coal, petroleum coke, middle distillates, residual oil, liquids/gases and gasoline are considered primary fuels and plants burning only these fuels are not considered subject to CISWI standards.

3. CISWI Methodology

The Proposed CISWI Rule must be analyzed in the context of the Pre-publication Portland Cement NESHAP. The Proposed CISWI Rule presents cement plant executives with two options including; (1) continue to burn alternative fuels and invest in compliance technologies, or (2) discontinue the burning of alternative fuels, avoid CISWI compliance, and then become subject to NESHAP standards.

Which option is chosen will be based on cement industry executives weighing the potential marginal change in compliance costs compared to NESHAP compliance costs against the potential fuel costs savings resulting from the continued burning of alternative fuels.

Several layers of analysis were performed to determine emission control policy impacts on the domestic cement industry. First, emission control technologies were applied to each plant's expected emissions. Expected emissions by plant were calculated using the same method identified in the baseline scenario. Five emission control technologies were applied to bring plants into compliance including enhanced baghouse/ESP controls, ACI systems, wet scrubber systems, selective non-catalytic reduction systems (SNCR), and kiln burner design enhancements. Technology efficiencies were assumed in the capture of emissions by each system. Regardless of costs, if a plant failed to meet the standard, it was assumed to be forced to

stop burning alternative fuels and would then fall under the Pre-publication Portland Cement NESHAP.

In the second layer of analysis, plants capable of meeting the CISWI standard were subjected to cost analysis. PCA assumes a 15 year horizon for the capitalization of fixed costs. For plants with less than an estimated 15 years left in quarry life, fixed emission compliance costs are capitalized over the longest period possible. Annual operating costs for the compliance systems were also included in the analysis. Finally, these estimates are based on a 90% utilization rate.

Next, PCA compares the compliance costs in the Proposed CISWI Rule against the compliance costs of the Pre-Publication Portland Cement NESHAP. This results in the incremental increase in investment to comply with CISWI over the existing NESHAP standards. Finally, these incremental changes in CISWI compliance costs were weighed against the potential fuel cost savings arising from alternative fuel usage. If the marginal increase in compliance costs to comply with the Proposed CISWI Rules are more than offset by fuel savings, then plants are assumed to continue burning alternative fuels and comply with CISWI. Plants lacking this return are assumed to discontinue burning alternative fuels and would then fall under NESHAP rules.

4. Emissions Control Technology Assumptions

Sparse evidence exists regarding the actual effectiveness of emission control technologies applied to cement kilns. Due to uncertainties regarding emission control efficiencies, PCA has assigned its own estimates regarding emission capture efficiencies. Considerable effort was undertaken by PCA to yield fair and realistic emission capture efficiencies. PCA's emission capture assumptions are typically less optimistic than those assumed by the EPA.

Technology assumptions were made regarding the effectiveness of various emission control systems, including activated carbon injection (ACI), wet scrubbers, baghouse/ESP systems, selective catalytic reduction systems (SNCR) and regenerative thermal oxidizer systems (RTO). Cooling and burner design reconfiguration of existing systems is also included for the reduction of Dioxin/furan and carbon monoxide emissions. No other systems or technology measures are considered in the context of this analysis.

Please note that the emissions captured by the various technologies are often based on theoretical estimates of capture efficiencies and may not reflect actual operating efficiencies. Furthermore, it should be noted that the emission capture efficiencies used in this report may differ from the estimates indicated elsewhere in the PCA comments [see submittal for table of technology assumptions regarding the recapture of emissions.]

Mercury (Hg) Emission Control Assumptions: The bulk of mercury emission capture is likely to occur through the use of ACI systems, wet scrubber systems, or a combination of both. According to some experts, ACI systems are preferred. PCA estimates that ACI systems can potentially capture 75% of Hg emissions. The EPA estimates the capture efficiency at 90%. Wet scrubber systems alone are believed to be less effective than ACI systems. PCA estimates that wet scrubber systems could potentially capture 50% of Hg emissions. The EPA estimates the capture efficiency at 80%. Use of an ACI system coupled with a wet scrubber is expected to

capture 85% of mercury emissions. The EPA estimates the capture efficiency at 98%. Keep in mind, most research regarding Hg emission control and capture has been targeted at coal burning utilities and form the basis of EPA's high emission capture assumptions. The chemical dynamics inside a cement kiln, however, are far different than those of a utility furnace.

Particulate Matter (PM) Emission Control Assumptions: The bulk of particulate matter emission capture is likely to occur through the use of baghouses and enhancements to existing baghouses. Baghouse systems potentially capture nearly all particulate matter emissions. Although PCA accepts the EPA's estimate of 99% emission capture it notes this optimal efficiency can only be achieved during stable kiln operations.

Hydrochloric Acid (HCl) Emission Control Assumptions: The bulk of hydrochloric acid emission capture is likely to occur through the use of wet scrubber systems. PCA and the EPA

agree that wet scrubber systems will likely capture 99.9% of all hydrochloric acid emissions. PCA notes that the EPA has not considered that the capture of mercury in a wet scrubber may result in the added concentration of mercury in the by-products generated by wet scrubbers.

Sulfur Dioxide (SO_x) Emission Control Assumptions: Several strategies could be employed to address SO_x emissions including the use of wet scrubber systems, lime injection and hydration systems, as well as calcinatory slip steam systems. PCA assumes the bulk of sulfur dioxide capture is likely to occur through the use of wet scrubber systems. PCA assumes that wet scrubber systems will likely capture 80% of all sulfur dioxide.

Nitrogen Oxide (NOx) Emission Control Assumptions: The bulk of nitrogen oxide emission capture is likely to occur through the use of SNCR. PCA assumes that SNCR systems will capture at most 90% of all nitrogen oxide emissions. It should be noted, the performance of an SNCR system is very variable, almost as variable as the pyroprocessing systems on which they are installed. NOx reduction is dependent on how much NOx is generated. The more NOx available, the more NOx is reduced. In a perverse way, a plant with relatively low NOx may have less reduction than a plant with a higher NOx. Observed NOx reductions at US cement plants range from 65-90%.

Carbon Monoxide (CO) Emission Control Assumptions: The bulk of carbon monoxide emission capture is likely to occur through enhancements to burner systems and strict adherence to good combustion practices. PCA assumes that these enhancements will likely capture 99% of all carbon monoxide emissions.

Dioxin/Furan (D/F) Emission Control Assumptions: The bulk of dioxin/furan emission capture is likely to occur by achieving cooler exhaust temperatures to the baghouse. Enhancements to baghouse design including the use of ACI will likely capture 99% of all dioxin/furan emission.

Lead (Pb) Emission Control Assumptions: The bulk of lead emission capture is likely to occur through the use of baghouses and enhancements to existing baghouses. Baghouse systems capture nearly all lead emissions. PCA assumes 99% of all lead emission are captured.

Cadmium (Cd) Emission Control Assumptions: PCA's search for cadmium emissions data for cement kilns was more than ten years old and covered only 13 plants. Analysis of cadmium emissions, therefore has been omitted from this report. It is likely that the bulk of cadmium emission (99%) will be captured through the use of baghouses and enhancements to existing baghouses. Since nearly all CISWI plants will require investment in baghouse systems to capture other emissions, omission of cadmium in this analysis is unlikely to result in any significant skewing of the conclusions.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1

Comment Excerpt Number: 62

Comment: CISWI Impact on Emission Projections

The Proposed CISWI Rule will lower emissions from alternative fuel burning cement kilns. These reductions are achieved by use of emission capture control technologies as well as from decisions by cement producers to discontinue burning alternative fuels. Compared to the baseline scenario, reflecting no emission controls and a sustained strategy to increase alternative fuel usage in the context of rising fossil fuel prices emissions are reduced as follows:

* HCl emissions are reduced from an estimated 511 ppmv in 2015, 510 ppmv in 2020 and 508 ppmv in 2025 in the baseline to 349 ppmv in 2015, 348 ppmv in 2020 and 185 ppmv in 2025.

* PM emissions are reduced from an estimated 3830 mg/dscm in 2015, 3807 mg/dscm in 2020 and 3795 mg/dscm in 2025 in the baseline to 2348 mg/dscm in 2015, 2341 mg/dscm in 2020 and 1462 mg/dscm in 2025.

* NOx emissions are reduced from an estimated 37,132 ppmv in 2015, 36,817 ppmv in 2020 and 36,694 ppmv in 2025 in the baseline to 26,276 ppmv in 2015, 26,188 ppmv in 2020 and 12,387 ppmv in 2025.

* SO_x emissions are reduced from an estimated 17,382 ppmv in 2015, 17,200 ppmv in 2020 and 17,142 ppmv in 2025 in the baseline to 8,089 ppmv in 2015, 8,062 ppmv in 2020 and 3,187 ppmv in 2025.

* Dioxins/Furans emissions are reduced from an estimated 2.74 ng/dscm in 2015, 2.73 ng/dscm in 2020 and 2.72 ng/dscm in 2025 in the baseline to 2.39 ng/dscm in 2015, 2.37 ng/dscm in 2020 and .53 ng/dscm in 2025.

CO emissions are reduced from an estimated 38,991 PPMV in 2015, 38,807 PPMV in 2020 and 38,677 PPMV in 2025 in the baseline to 26,841 PPMV in 2015, 26,751 PPMV in 2020 and 13,421 PPMV in 2025. Pb emissions are reduced from an estimated 4.43 mg/dscm in 2015, 4.38 mg/dscm in 2020 and 4.37 mg/dscm in 2025 in the baseline to 2.19 mg/dscm in 2015, 2.19 mg/dscm in 2020 and 1.13 mg/dscm in 2025.

Response: See the "Revised Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units" and "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandums in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 8

Comment: The benefits that EPA claims for the CISWI rule are derived almost entirely from emissions estimates for boilers and process heaters, of which there are thousands of units [Footnote: The number of cement kilns in EPA's impact analysis is dwarfed by the number of boilers and other combustion units.] EPA's CISWI preamble discussion of the regulatory impact

analysis claims the standards will create overall emission reductions, but fails to explain that none of those reductions are predicted to come from cement kilns [Footnote: As explained further in Appendix 1, EPA claims no emission reductions from cement kilns that might comply with the CISWI standards because cement kilns are already stringently regulated under the Sec. 112 Portland Cement NESHAP standards. As a result, there is no available incremental reduction in emissions.] Equally damaging is the fact that the Agency's analysis does not take into account the increased emissions that will result from burning coal instead of scrap tires in cement kilns. In this way, EPA has doubly failed to properly account for the negative impact of its proposed actions:

The Agency has claimed that the rule as proposed will produce environmental benefits but has failed to disclose that, in fact, none of those benefits will come from cement kilns.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 9

Comment: A complete and accurate analysis would show the emissions (and human health and environmental) impacts on a unit-specific or subcategory-specific basis. It also would analyze the incremental impacts by comparing the environmental performance of units that already are regulated under a Sec. 112 MACT standard vs. what that performance would be under a Sec. 129 standard. Instead, EPA's analysis looks only at the effects of being regulated under Sec. 129 vs. not being regulated at all. By failing to analyze the impact of the CISWI rule on a unit-specific and incremental basis, EPA makes it seem as though the rule will produce across-the-board emission reductions and environmental benefits. But the reality is that none of the emission reductions and none of the benefits of the rule will come from regulation of cement kilns under the CISWI standards. And by attempting to force cement kilns into the CISWI rule, which will destroy existing markets for the safe reuse of secondary materials, EPA will actually harm the environment.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 11

Comment: A complete and accurate analysis would show the emissions (and human health and environmental) impacts on a unit-specific or subcategory-specific basis. It also would analyze the incremental impacts by comparing the environmental performance of units that already are regulated under a Sec. 112 MACT standard vs. what that performance would be under a Sec. 129 standard. Instead, EPA's analysis looks only at the effects of being regulated under Sec. 129 vs. not being regulated at all. By failing to analyze the impact of the CISWI rule on a unit-specific and incremental basis, EPA makes it seem as though the rule will produce across-the-board emission reductions and environmental benefits. But the reality is that none of the emission reductions and none of the benefits of the rule will come from regulation of cement kilns under the CISWI standards. And by attempting to force cement kilns into the CISWI rule, which will destroy existing markets for the safe reuse of secondary materials, EPA will actually harm the environment.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 14

Comment: All of the health benefit that EPA claims in the CISWI rule is from reductions in emissions of PM and PM precursors. EPA has noted that burning scrap tires in cement kilns results in lower PM emissions from the mining, processing, and transportation of coal. But EPA does not disclose or analyze the fact that, by significantly reducing the number of cement kilns that burn scrap tires, the proposed rule will increase coal consumption and cause a measurable increase in related PM emissions. This is yet another reason why EPA's impact analysis should consider units or subcategories separately. Because the RIA lumps together all units, it inappropriately camouflages the fact that the rule would cause direct emissions from certain types of units and indirect emissions to increase.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 14

Comment: The controls necessary to meet EPA's stringent proposed emissions limitations for CO will result in increased energy usage along with increased emissions of other pollutants

EPA's proposed CO emissions limit arbitrarily and capriciously fails to recognize the dependency between CO and other emissions, which makes this rule impossible to implement in either process heaters or boilers. Requiring such extraordinarily low CO levels will have an adverse impact on other emissions such as NOx, PM, greenhouse gases (GHG) and even HAPs. Reducing CO to extremely low levels will require increased excess air levels which reduce efficiency, increasing the amount of fuel that must be fired and therefore increasing the total mass of other pollutants (i.e. HAPs, GHGs, NOx, SO_x, PM, etc.). For example, CO and NOx emissions are both dependent on the residence times and temperatures of the flue gas in the firebox, but in different ways. For most boilers and process heaters achieving low NOx emissions, there is insufficient time at temperature to oxidize CO to 1 ppm. As CO decreases, NOx increases and vice versa, so emissions control in any fired equipment is a trade-off between the two.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 26

Comment: High temperatures in combination with sufficient residence time results in complete combustion of alternative fuels (AFRs). The products of complete combustion are CO_2 and water. However, incomplete combustion can lead to increased levels of carbon monoxide

(CO) and other organic products of incomplete combustion. In the Preamble of the June 16, 2008 Federal Register proposing amendments to the current standards of performance for Portland cement plants, EPA observed that cement kiln systems are designed such that fuel combustion is efficient and CO emissions are minimized [Footnote: 73 FR 34083.] Hence, the use of alternative fuels is unlikely to have an impact upon CO emissions.

Furthermore, a recent research project found that "...[c]o-processing of alternative fuels and raw materials, fed to the main burner, kiln inlet or the precalciner does not seem to influence or change the emissions of persistent organic pollutants (POPs)". [Footnote: World Business Council for Sustainable Development, Formation and Release of POPs in the Cement Industry, Second Edition, January 23, 2006.] Therefore, combustion of alternative fuels derived from secondary materials should not result in an increase in regulated air pollutants.

With respect to non-volatile metals emissions, high quantities of small particles of raw materials at the inlet to the cement kiln system provide significant surface area for semi-volatile metals (SVMs) such as lead and cadmium to adsorb or condense within the kiln

system. The particles are then either retained by the system or collected in the air pollution control device (APCD) as cement kiln dust (CKD) which is re-introduced into the system as kiln feed, otherwise reused, or managed in a manner that does not emit metals to the atmosphere. The technology for controlling metals emissions from cement

kilns, as EPA recognizes, is particulate matter control via the APCD. The Portland cement industry has collected and provided to EPA a significant amount of data over the years showing system removal efficiencies (SREs) of kiln systems, which predict the fate of metals and has demonstrated that approximately 99.9 percent of SVMs are captured within the CKD or clinker in the kiln system [Footnote: Cement Kiln Recycling Coalition, An Evaluation of Non-Enumerated Metals for Cement Kilns that Burn Hazardous Waste, November 6, 2003, provided to EPA during development of HWC MACT rule.] Thus, for even those AFRs that contain metals in concentrations that are higher than traditional fuels or raw materials, cement kiln systems have adequate controls to minimize emissions.

Volatile metals, such as mercury (Hg), can remain in the vapor phase throughout the cement kiln system due to the high process temperatures and can be emitted with a relatively low system removal efficiency. Whether or not mercury emissions increase with the use of AFRs depends entirely upon the relative concentration of mercury in the virgin fuel or raw material that is being replaced. For example, the use of tire-derived fuel (TDF) as an alternative to coal typically results in lower Hg emissions.

Cement kiln APCDs, used to control emissions of particulate matter, are usually fabric filter type dust collectors, the performance of which are not impacted by slight changes in inlet dust loadings. APCD inlet loadings, which are composed of finely ground process materials entrained in the gas stream, are not a function of whether AFRs are used in the kiln. Particulate matter (PM) emission rates from cement kiln systems are insensitive to the use alternative fuels or raw materials.

Dioxin/furan formation in cement kilns is a function of time and temperature at the inlet to the APCD, and is not a function of fuel type. Numerous studies have shown that there is no significant difference in the emissions of dioxin/furans from kilns using conventional fuels versus alternative fuels. For example, a Portland cement plant in Germany conducted testing for dioxin/furans with conventional fuels as well as with used oil, tires, and other waste-derived fuels and found no significant difference in

Emissions [Footnote: Karstensen, K, Formation, Release and Control of Dioxins in Cement Kilns, Chemosphere 70, 2008.] The US Portland Cement Association also studied dioxin/furan emissions as they relate to the use of TDF in cement kilns and determined that the use of TDF decreased their emissions [Footnote: Richards, John; Goshaw, David; Speer, Danny; and Holder, Tom, Air Emissions Data Summary for Portland Cement Pyroprocessing Operations Firing Tire-Derived Fuels, SN3050, Portland Cement Association, Skokie, Illinois, USA, 2008.]

Cement kilns have an inherent natural scrubbing capability that helps to minimize hydrogen chloride (HCl) and other acid gas emissions. This scrubbing is mainly due to the presence of the limestone that is the major ingredient in the cement process. However, some emissions of HCl can occur. The use of AFR may influence the emissions of HCl , but there is no direct correlation between the chlorine content of AFR and emissions of HCl.

With respect to sulfur dioxide (SO2) emissions from cement kilns, they are derived from sulfur in the fuels and raw materials. So, depending upon the AFR that is used, SO2 emissions may increase or decrease; and, as with HCl, emissions of SO2 do not directly correlate with the sulfur content of the AFR. EPA recognizes that the use of TDF in cement kilns typically results in a reduction of SO2 emissions [Footnote: Tire-Derived Fuel Frequent Questions, http://www.epa.gov/wastes/conserve/materials/tires/faq.htm.] Data has been collected showing

SO2 emissions decreasing by 20% to 50% or more when using TDF instead of coal. [Footnotes: Health Consultation - CEMEX, Incorporated, Lyons, Boulder County, Colorado, Agency for Toxic Substances and Disease Registry, Table 2, Page A-3 and Air Emissions From Scrap Tire Combustion, EPA-600/R-97-115, October 1997.] TDF typically has a sulfur content much lower than coal.

In cement kilns, NOx emissions can be derived from fuel combustion via two primary mechanisms:

1. The oxidation of molecular nitrogen present in combustion air (thermal NOx); and

2. The oxidation of nitrogen compounds in fuel (fuel NOx).

Sometimes, the raw material feed may also contain nitrogen compounds, which may lead to the generation of "feed NOx," which is similar to "fuel NOx." Because of the very high temperatures in cement kilns, thermal NOx is the dominant mechanism for NOx

formation. The use of some alternative fuels, such as TDF, can actually lower NOx emissions. TDF use can reduce NOx emissions by over 30% depending on the kiln type,

age, fuel combustion location, and the plant's ability to optimize the manufacturing process. An EPA-sponsored study on NOx reductions reported that TDF added to the raw

material feed end of some preheater or precalciner kilns can reduce NOx emissions over 30%, and EPA also found that when mid-kiln injection of whole scrap tires was used, there was an average NOx reduction of 33% and 40% for selected long dry and wet kilns,

respectively [Footnote: NOx Control Technologies for the Cement Industry, U.S. EPA, Office of Air Quality Planning and Standards, Ozone Policy and Standards Group, September 19, 2000.] EPA also has confirmed that the use of TDF results in lower NOx emissions when compared to many U.S. coals, particularly the high-sulfur coals [Footnote: Management of Scrap Tires, EPA website, http://www.epa.gov/wastes/conserve/materials/tires]In fact, in some instances, the use of TDF has been incorporated into cement plants' air

permits or within state or local regulations where it is specifically listed as a control mechanism for NOx emissions. [Footnotes: Mojave Desert Air Quality Management District, Rule 1161(C)(1)(a)(iv), Portland Cement Kilns; Proposed Rulemaking, 25 PA. Code Chs. 121, 129 and 145, Control of NOx Emissions from Cement Kilns, 38 Pa.B. 1838, April 19, 2008; South Coast Air Quality Management District, Best Available Retrofit Control Technology Assessment, TXI Riverside Cement, Revised Draft, August 8, 2008; South Coast Air Quality Management District, Final Environmental Assessment: Proposed Amended Rule 1112.1 – Emissions of Particulate Matter and Carbon Monoxide from Cement Kilns, SCAQMD No. 091027JJI November 13, 2009.] EPA's own emission-reduction strategies model incorporates TDF as a method for NOx reduction in cement kilns [Footnote: Industrial Sector Integrated Solutions Model, EPA, prepared by ARCADIS U.S., Inc., December 23, 2008, EPAHQ-OAR-2002-0051-2007.pdf]

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 27

Comment: The proposed CISWI rule includes Table 13: Emissions Reductions for MACT Compliance and Alternative Disposal Options For Existing CISWI Using the 'Primary Approach" Emission Limits Concurrently Proposed Under RCRA which details the emissions reductions that would be achieved under the proposed rule using the concurrently proposed definition of solid waste under RCRA [Footnote: 75 FR 31963.] Background document data reveals that EPA's calculations for emission reductions from waste-burning cement kilns are non-existent for the following pollutants:

* mercury

* PM

* dioxins/furans

* NOx

* SO2

For these pollutants, the total emission reductions are zero tons per year. This is extremely important because in this rule EPA has regarded PM, NOx, and SO2 emissions as the pollutants responsible for the highest cost to human health and the environment. EPA highlights their importance by assigning costs only to the reduction of these three pollutants. But none of the reduction of emissions of the pollutants that EPA has deemed most important will come from cement kilns that would be subject to this rule.

Of the nine pollutants regulated by the CISWI Rule, EPA has predicted that emission reductions from cement kilns will occur for only four of the pollutants. Of those pollutants, over 99% of the reductions would be from a single specie – carbon monoxide (CO). Of the 53 cement kilns EPA anticipates being subject to this rule, the estimated reduction in CO will occur at only 6 facilities, with 3 of those facilities accounting for 88% of total CO reductions. [Footnote: Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units, Table 5. Emission Reductions, memo from Jason Huckaby, Amber Allen, Kristen James, ERG to Charlene Spells, Toni Jones, Ketan Patel, EPA, April 28, 2010.]

CO, however, is not a hazardous air pollutant and the potential impacts of CO emissions on human health and the environment are relatively small and EPA has not

even bothered to quantify benefits for CO reductions in this rule. In general, the benefits per ton for CO control/reduction are far lower than for the other air pollutants because: 1) CO is not linked to excess mortality at typical ambient concentrations; and 2) CO does not contribute significantly to atmospheric formation of other pollutants that are linked to excess mortality (e.g., PM & ozone).

In summary, EPA's estimated emission reductions from cement kilns complying with the CISWI rule are almost entirely related to carbon monoxide emissions from a

small number of facilities. Cumulatively, the emissions reductions EPA has predicted for cement kilns would, at most, have minimal positive impact on human health and the environment.

Response: See the "Revised Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units" and "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandums in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 29

Comment: EPA's cement kiln database contains cadmium and lead emission test results that were collected prior to installation of controls to meet the 2009 Subpart LLL PM standard. Because PM control is also the technology for controlling cadmium and lead emissions, EPA's baseline cadmium and lead emissions are overstated. EPA has assumed PM baseline emissions at the LLL standard of 15.33 mg/dscm for all cement kilns. In EPA's CISWI database [Footnote: MACT Floor Analysis for the Commercial and Industrial Solid Waste Incinerators Source Category, Memo from Jason Huckaby, Amber Allen, Kristen James, ERG to Charlene Spells, Toni Jones, Ketan Patel, EPA, April 26, 2010, Table B-16, EPA-HQ-OAR-2003-0119-0059.pdf], the average PM emissions for kilns (before installation of Subpart LLL controls) that do not meet the lead and/or cadmium proposed standard is 47.6 mg/dscm, about three times higher than the PM baseline.

However, EPA did not adjust the baseline data for cadmium and lead to account for the additional control of PM that will be necessary to meet the Subpart LLL standard.

That is, while EPA used a baseline for PM emissions facilities that assumed compliance with Subpart LLL, the Agency did not synchronize the database to proportionately adjust the baseline emissions of lead and cadmium that would be linked to the lower PM standard.

Because EPA's estimated cadmium and lead emissions are not truly representative of the expected emissions, we have calculated the actual baseline to properly account for the reduction of cadmium and lead emissions that correlates to EPA's estimated reduction in PM emissions. Because PM data was not provided for all facilities, only a partial calculation can be made of the actual baseline emissions (after installation of Subpart LLL PM control) for cadmium and lead. Using the data from Table 16 of EPA's MACT Floor Analysis [Footnote: Ibid]., SYA performed calculations assuming that cadmium and lead emissions will be reduced by the ratio of the proposed CISWI PM standard to the PM emissions from Table B-16. (Conservatively, this was done only for those facilities with PM emissions greater than 15.33 mg/dscm and that do not meet the CISWI cadmium or lead standards). SYA reasonably assumed that the metals remain as a constant proportion within the mass of emitted PM. Thus, a reduction in PM directly reduces the metals emissions by the same relative amount. [See submittal for Table 1 – Revised Estimate for Cadmium and Lead Reductions provided by commenter.] Table 1 shows the revised estimated reductions in lead and cadmium emissions from cement kilns:

Because PM data was not provided for all sources, the actual reductions probably are even lower than those included above.

Response: See the "Revised Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units" and "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandums in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 33

Comment: EPA's assumption of the benefits derived from this rule is based primarily upon reductions in PM2.5 and PM2.5 precursor emissions as calculated in EPA's regulatory impact analysis (RIA) [Footnote: Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, Draft Report, April 2010.] The PM2.5 reductions are the result of emission limits on PM, on PM2.5 precursors such as NOx and SO2, as well as emission limits on other pollutants. EPA's analysis uses the same benefit-per-ton method as applied in the Subpart LLL RIA.

The value of the benefits was applied by EPA only to PM2.5 emissions and to PM2.5 precursors, NOx and SO2. No benefits were calculated from the reductions of any other pollutants.

As has been noted previously, the emission reductions for cement kilns complying with the floor standards of the CISWI rule are minimal. For the pollutants that EPA deemed

most important to human health and the environment, the Agency has estimated the CISWI rule will produce no reductions for PM, NOx, or SO2 for the cement kiln subcategory. All emission reductions and benefits estimated by EPA are derived from other, non-cement kiln CISWI subcategories. [See submittal for Figure 1 – Breakdown of Monetized Benefits for the Proposed CISWI NSPS and Emissions Guidelines by Subcategory provided by commenter,] as reproduced from Figure 6-4 of EPA's RIA, demonstrates that EPA knows that regulating cement kilns under the CISWI rule will provide no benefits.

Response: Data, resource, and methodological limitations prevented EPA from estimating the monetized benefits from reducing mercury and other HAP emissions. Even if we were able to monetize the public health benefits of reducing exposure to mercury and other HAPs, it is likely that the PM benefits would continue to dominate the total monetized benefits due to the size of the exposed population and the severity of the associated health effects. Despite our inability to provide monetized benefits of HAP emission reductions, the total monetized benefits exceed the estimated costs of the rule by a substantial margin, even when taking uncertainty into account.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 36

Comment: In the preamble to this rulemaking (75 Fed. Reg. 31967), EPA estimates that from the 214,000 tons of additional solid waste landfilled each year, approximately 38 tons of

PM, 16 tons of HCl, 32 tons of SO2, 1,742 tons of CO, 90 tons of NOx and 3 lbs of mercury will be generated. These numbers represent the emissions from flaring about 187,000 tons of methane generated by the landfill.

If the non-hazardous secondary materials currently used by the cement industry (30 million tons annually) are added to EPA's estimate, the EPA's numbers become: 5,326 tons of PM, 2,243 tons of HCl, 4,486 tons of SO2, 244,206 tons of CO, 12,617 tons of NOx, and 420 pounds of mercury.

EPA also failed to estimate the GHG impacts associated with landfilling these added tons of solid waste. Using EPA's estimates of methane generation (at a CO2e of

25x), the potential GHG contribution is 4,675,000 tons of CO2e. Using Lafarge's estimates of methane generation from the materials unusable by the cement industry, the GHG contribution is 624 million tons of CO2e

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 38

Comment: EPA Has Failed to Account for Impacts Due to Cessation of Certain Solid Waste Use

EPA neglected to analyze potential impacts to human health and the environment if cement kilns elect to stop utilizing AFRs rather than become subject to the CISWI Rules. As noted above, cement facilities would have to bear significant additional costs related to permitting, recordkeeping, compliance testing, and other compliance burdens, in addition to incurring great uncertainty with respect to the achievability of some of the standards. EPA notes that: "...many existing CISWI owners and operators may find that alternate disposal options are preferable to compliance with the proposed standards." [Footnote: 75 FR 31966.] There is a significant likelihood that many or even all kilns may abandon the use of alternative fuels and raw materials, a critical element of their sustainability initiatives, if AFRs are defined as solid waste, which would trigger regulation under the CISWI rule.

EPA must quantify the environmental and economic impacts if cement kilns were to abandon the use of AFRs dues to the CISWI and SWI rules. The Agency also must assess the impacts of destroying or crippling the extensive AFR supply programs that have been developed over the last couple of decades. The most poignant example is TDF. TDF represents the single most important non-hazardous alternative fuel used in cement kilns. In 2007, 48.4 million tires were used as fuel in US cement kilns [Footnote: Materials Characterization Paper in Support of the Proposed Rulemaking: Identification of Nonhazardous Secondary Materials That Are Solid Waste – Scrap Tires, EPA, April 2, 2010,

http://www.epa.gov/epawaste/nonhaz/define/pdfs/tires.pdf.] This represents 20,328,000 MMBtu/year of fuel [Footnote: Assuming each tire weighs 30 lbs and has 14,000 Btu/lb heat value.] In order to replace this amount of fuel, a total of approximately 847,000 additional tons of coal would have to be burned [Footnote: Assuming 12,000 Btu/lb heat value.] This additional coal will impose additional costs and cause a number of significant adverse environmental impacts, none of which EPA has bothered to analyze. The following discussion presents worst-case impacts that would be caused by the loss of TDF at cement kilns. The potential magnitude of the adverse effects of these rules is significant. Neglecting to analyze the impacts to human health and the environment that would be imposed by the combined effects of the SWI and CISWI rulemakings is a serious failure by EPA to engage in reasoned decisionmaking.

Direct Environmental Impacts and Costs to Cement Kilns for Loss of TDF Fuel Are Significant

As noted above, using TDF in cement kilns provides a number of positive environmental benefits and has no negative effects. When used to replace coal, TDF creates significant reductions in both NOx and SO2 emissions. As an example, SYA estimates that, in 2008,

replacing coal with scrap tires provided cement kilns with a 35% reduction in NOx emissions and a 30% reduction in SO2 emissions. Based upon EPA's baseline inventory of NOx and SO2 emissions and assuming 44% (2008 data) of all kilns use TDF [Footnote: North American Cement Industry, Annual Year Book, 2009, Portland Cement Association], the loss of TDF in cement kilns would cause an annual increase in emissions as follows [See submittal for Table 2 – Nox and SO2 Emissions from CISWI Cement Kilns With and Without TDF provided by commenter]

The increase in NOx and SO2 emissions that would have to be abated is dependent upon each facility's air permit, but it is reasonable to assume that additional costs for cement kilns to control NOx and SO2 emissions would be necessary if cement kilns abandoned

the use of TDF. To be conservative, EPA should assume that all of the increase in emissions would have to be controlled [Footnote: The costs for control of both NOx and SO2 represent worst-case assumptions. Facilities may not be required to abate additional NOx and SO2 emissions, depending upon the location and terms of their air permit.] For NOx, controls such as selective non-catalytic reduction (SNCR) or selective catalytic reduction (SCR) may be required. Using EPA's data for costs for SNCR and SCR of $1,700 per ton and $4,200 per ton of

NOx controlled [Footnote: Alternative Control Techniques Document Update - NOx Emissions from New Cement Kilns, EPA, November 2007, p.103.] the range of control costs is $41,136,600 to $101,631,600. Note that in the RIA for the CISWI rule EPA notes costs for SNCR can range from $5,300/yr to $436,000/yr. Industry believes that SNCR and SCR costs are even higher than EPA's figures [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009.] Thus, EPA's calculated maximum control costs may be significantly understated.

For SO2, additional controls may be necessary and would include the installation of wet scrubbers. Based upon EPA's background data for the Proposed Revisions to Portland

Cement New Source Performance Standards (40 CFR Part 60, Subpart F; Federal Register Vol. 73, No. 116, June 16, 2008), the range of control cost is $670 to $6,700 per ton of SO2 removed. Therefore, the range of maximum additional annual control cost for

SO2 for cement kilns using coal instead of TDF would be $937,387 to $9,373,870 per year.

Replacement of TDF with coal also may influence cement kiln emissions and costs for control of mercury. The average bituminous coal used for fuel exhibits significantly higher levels of mercury than TDF, [See submittal for Table 3 – Mercury Concentration of Coal and TDF provided by commenter.]

The CISWI rule assumes that all cement kilns will be complying with the Subpart LLL standard for mercury. To achieve this standard, many, but not all kilns will require the installation of a carbon injection system. For those facilities assumed by EPA to already have carbon injection, the replacement of coal with higher levels of mercury than TDF will require the facility to use additional carbon. For those facilities that would not have had to install carbon injection, the change from TDF to coal may require the facility to install a carbon injection system in order to comply with the mercury standard. These potential additional costs to the cement industry have not been analyzed by EPA. In EPA's Subpart LLL proposed rule, EPA notes that capital costs for carbon injection are $3.118 per ton of clinker and annual costs are $0.7525 per ton of clinker. Thus, for a nominal 1,000,000 ton per year kiln system, additional capital costs of approximately $3,118,000 and additional annual costs of $752,500 would be incurred for each facility that must install activated carbon injection (ACI). Note that these costs may be well understated, as industry believes that the true costs of ACI for cement kiln applications are at least four times higher than EPA estimates [Footnote: PCA Comments on the NESHAP from the Portland Cement Manufacturing, Industry; Proposed Rule (Docket Number: EPA-HQ-OAR-2002-0051), September 4, 2009, Appendix 11, page 9.]

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Control Technology Assumptions for the Floor and Beyond-the-Floor. Further, see the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

14.6 Secondary Impacts

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 1

Comment: I am the Senior Director for Air Quality Programs at the American Forest and Paper Association.

Thank you for the opportunity to briefly highlight our initial reaction to EPA's proposed four boiler-related rules published on June 4th. I am making this statement on behalf of AF and PA, which represents the pulp paper and packaging industry and forest land owners as well as the American Wood Council, which represents over 60 percent of the wood products industry.

We in the forest products industry are proud of our environmental stewardship using renewable resources -– our forests -– to make products that businesses and families use every day while we sustain green jobs and continue to shrink our environmental footprint.

My written statement provides more details, but our primary concern is that EPA's rules as drafted would be unsustainable for the forest products industry. Indeed, EPA's proposals would create serious disincentives for the use of biomass and thereby increase use of fossil fuels, which we believe is counterproductive and contrary to the President's own energy policy.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 10

Comment: If boilers, kilns, and incinerators burning solid waste cannot achieve the limits and cannot afford to install the multiple, costly controls required by this rule, they will stop burning these valuable secondary materials and many of these materials will be disposed in landfills, thus increasing greenhouse gas emissions and increasing our reliance on fossil fuels. This is not the intent of the Clean Air Act or the Resource Conservation and Recovery Act, nor is it consistent with the goals of the President and Congress in steering our country toward greater use of alternative fuels.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Ronald W. Gore
Commenter Affiliation: ADEM
Document Control Number: EPA-HQ-OAR-2003-0119-1524.1
Comment Excerpt Number: 1

Comment: The proposed rules impose severe emission restrictions on the combustion of biomass. Since many facilities may not be able to afford the controls required to meet the proposed MACT limitations, it appears that the proposed rules will drive these facilities towards the combustion of natural gas to meet energy requirements. Since biomass is a renewable source of energy, this appears to run contrary to the current Administration's stated desire to move away from fossil fuels and towards renewable sources of energy.

Alabama, along with other States, is facing mandatory renewable energy targets in the future. For obvious reasons, wind, solar, geothermal, and many other renewable sources are not viable in Alabama. Biomass appears to be the primary alternative. Our State may not be able to meet its goals if biomass usage is discouraged.

Additionally, given the current Administration's desire to regulate Greenhouse Gas emissions, it is perplexing to the Department that the EPA would drive facilities away from utilizing what may be considered a 'carbon neutral' fuel. Furthermore, when combined with the recently

proposed solid waste definition, it appears that the fate of wood residuals may be landfills, where it will decay into methane, which has a CO_2 equivalence of 25.1.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig T. Kenworthy
Commenter Affiliation: Puget Sound Clean Air Agency
Document Control Number: EPA-HQ-OAR-2003-0119-1844.1
Comment Excerpt Number: 3

Comment: We offer comments from a policy perspective. The preamble to the proposed rule explains that EPA believes many businesses will stop doing the activities in question rather than be subject to this rule and states that "Based on tipping fees and availability, we (EPA) would expect most, if not all, of this diverted waste be sent to a local landfill". It also states that future cost impacts for new CISWI units were not evaluated because the EPA expects no new CISWI units will be built. It may be EPA's larger goal to eliminate incineration practices, but the impacts analysis in the preamble to the proposal seems limited and would benefit from further analysis. The assumption that any solid waste currently burned (although yet to be defined) could just be landfilled and is, therefore, a cost of doing business, is inconsistent with elements of the solid waste planning work by state and local government. Many of those plans are pursuing efforts to reduce the amount of waste sent to a landfill. Since the solid waste definitions are not finalized and the source population EPA assumed for this proposal may be inaccurate, we would suggest a more thorough review of the impacts analysis for this proposal.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michael R. Shoemaker
Commenter Affiliation: Wenck Associates, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1840.1
Comment Excerpt Number: 5

Comment: The EPA fails to consider greenhouse gas emissions as another impact of the proposed rule. The additional energy required to meet the standards in addition to the energy that would be produced by energy recovery units produces greenhouse gases that the EPA is currently working to regulate. Furthermore, the energy recovery units may use alternative energy sources that are biogenic in nature. Consequently, the greenhouse gas emissions would be treated differently than those produced by coal or natural gas needed to replace that energy supply.

The additional impact of greenhouse gases associated with increased energy use and reduced biogenic energy sources should be considered for presenting a complete analysis of the benefits and impacts of the proposed rule.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 14

Comment: The Use of Cleaning Furnaces are Superior to and "Greener" than Alternate Methods of Parts Cleaning. Cleaning Furnaces Keep Thousands of Tons of Chemicals and VOCs Out of the Environment Each Year.

Even for customers who can clean their parts using abrasive blasting or chemical cleaning, the ultimate environmental impact of either of these alternative methods is greater than the impact from use of pyrolysis furnaces. Chemical cleaning will result in greater air emissions that may not be regulated by EPA. Chemical cleaning will also result in chemical waste that must be handled and disposed of properly. Similarly, abrasive cleaning results in large amounts of waste that must be handled and disposed of properly. Handling and disposal of these materials

involves transportation, meaning an increase in greenhouse gas emissions. Handling and disposal of these materials also involves use of landfills or other waste handling capacity. Landfills are often located in areas of low socio-economic status, so EPA's proposed regulations could have a negative impact on environmental justice concerns.

Further, for equipment that cannot be chemically or abrasively cleaned, the proposed regulations will create an even larger environmental footprint. Paragraph D on page 31967 states that EPA believes most burn-off oven operators may elect to discontinue operation and instead send their coated equipment to a landfill. Because most of the equipment cleaned in pyrolysis furnaces is metal, failure to reuse the equipment will require production of more metal equipment, which in turn will require more raw metal. More raw metal means more mining and more use of virgin natural resources. Failure to reuse metal has a severely negative environmental impact, not only in terms of greenhouse gas emissions, but also in terms of waste water generation.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Gary Mellow
Commenter Affiliation: Michigan Biomass
Document Control Number: EPA-HQ-OAR-2003-0119-1841.1
Comment Excerpt Number: 14

Comment: In FR 75 at page 31966 EPA states that it expects to see additional CISWI unit closures under these proposed rules, including units that would be newly-affected by the proposed rules, which could include viable renewable power facilities such as Michigan's wood-fired power plants.

Of great concern is the deleterious affects the proposed rules will have on industries that depend on the secondary, beneficial uses of these materials, such as power plants. Michigan's wood-fired power plants provide a cost effective, environmentally sound option for the disposal of wood waste and other NHSM such as TDF. Emission limits proposed in these rules, in conjunction with proposed rules on NHSM, will lead to closure of these facilities or, at a minimum, force them to consider switching to other fuels, which in most cases will be fossil fuels that are contrary to national renewable energy and clean air initiatives. The potential outcome is a "net negative" with more NHSM going into landfills, the loss of jobs and local economies resulting from the closure of existing, viable facilities, and the loss of renewable energy resources and their environmental benefits.

Michigan's wood-fired power industry provides $68 million annually for local, mostly rural economies and supports 1200 well-paying jobs. They power they generate – approximately 1 million megawatt hours annually – would have to be replaced by other energy sources, in all likelihood fossil fuels such as coal and natural gas. Were it not for these facilities, forest residues would be left on forest floors, creating significantly more greenhouse gas emissions and inhibiting maintenance of healthy forests. "Urban woods" such as clean construction waste and broken crates and pallets would end up in landfills where they would generate additional greenhouse gases and result in the need for more and bigger landfills.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 19

Comment: We do not believe EPA has properly evaluated the economic and other impacts of the Proposed Rule under Section 129 of the Clean Air Act, which requires that the agency consider the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements. The above-described economic impact and costs and the previous discussion of how the regulation may force many companies to use other, less environmentally safe approaches to achieve the same goals have not been adequately considered by EPA, in part because EPA may not have been aware of this information. The costs of the regulatory approach being taken by EPA and the failure to consider non-air quality health and environmental impacts is inconsistent with the statute. Prior case law precedent in the context of developing MACT standards argues in favor of EPA (i) reconsidering and reevaluating the development of the Proposed Rule regarding the furnaces and, (ii) if EPA decides not to remove the furnaces from the rule, then performing an evaluation of costs and other impacts of the Proposed Rule [See, e.g., Arteva Specialties v. United States Envtl. Prot. Agency, 323 F.3d 1088 (D.C. Cir. 2003)].

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Fred Gordon
Commenter Affiliation: Herman Miller, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1971.1
Comment Excerpt Number: 1

Comment: Applying emissions standards which are practicably unachievable to small energy recovery boilers such as ours will circumvent the opportunities to reuse, recycle and/or reclaim the fuel value of the types of residual wood materials we have described above. This would be an environmental step backwards. It would prevent the best use and reuse of these biomass materials. Strictly regulating energy recovery units such as ours will effectively force manufacturers to landfill viable raw materials and stifle additional innovation and environmental progress.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Kevin P. Bundy
Commenter Affiliation: Center for Biological Diversity
Document Control Number: EPA-HQ-OAR-2003-0119-1949.1
Comment Excerpt Number: 1

Comment: Of special concern to the Center is the growing prevalence of biomass combustion, primarily for energy generation, throughout the United States. Proponents of biomass energy often claim that combustion of trees, agricultural waste, wood waste, and urban woody debris is "carbon neutral," and that greenhouse gas emissions associated with this combustion have no effect on global warming. As the Center and

other organizations have pointed out in detailed comments on EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks (1990-2008), these blanket assertions regarding the "carbon neutrality" and purported climate benefits of biomass energy generation are scientifically baseless. Those comments, and the exhibits submitted therewith, are incorporated herein by reference [Footnote: Ctr. for Biological Diversity, et al., Comments Re: Inventory of U.S. Greenhouse Gas Emissions and Sinks (1990-2008) (submitted April 14, 2010), regulations.gov Docket ID No. EPA-FRDOC-0001-8227 (attached as Ex. 1)]. Since those comments were filed, additional studies and reports questioning broad assertions of carbon neutrality have been published [Footnote: See Thomas Walker, et al., Manomet Center for Conservation Sciences, Biomass Sustainability and Carbon Policy Study (June 2010) (attached as Ex. 2); Mary S. Booth and Richard Wiles, Environmental Working Group, Clearcut Disaster: Carbon Loophole Threatens U.S. Forests (June 2010) (attached as Ex. 3); Giuliana Zanchi, Joanneum Research, The Upfront Carbon Debt of Bioenergy (May 2010) (attached as Ex. 4)].In addition to greenhouse gases, biomass-burning facilities also emit other pollutants, including hazardous air pollutants like mercury [Footnote: See, e.g., Daniel Obrist, Atmospheric Mercury Pollution Due to Losses of Terrestrial Carbon Pools? 85 BIOGEOCHEMISTRY 119 (2007) (attached as Ex. 5); Hans R. Friedli et al., Mercury in Smoke from Biomass Fires (2001) (attached as Ex. 6)]. More particularly, we understand that industry representatives have

submitted, and are likely to submit, comments in each of these dockets asking that sources combusting biomass be treated differently from sources burning other fuels. Some of these comments seek either broad exemptions, or less stringent forms of regulation, under sections 112 and 129 on the basis that biomass combustion is purportedly "carbon neutral," renewable, or otherwise environmentally beneficial.

EPA should reject these invitations to indulge in impermissible policy judgments that go beyond the text and purpose of the Clean Air Act. EPA has no authority under either section 112 or 129 to promote one type of combustion over another as a policy matter by imposing inequitable regulatory burdens on sources burning different fuels. Hazardous pollutants are hazardous pollutants, and they pose a danger to human health and the environment regardless of the fuel that produces them. Nothing in sections 112 or 129 authorizes EPA to waive or otherwise weaken MACT standards because either the agency or a regulated source category believes a fuel to have other desirable characteristics. By the same token, EPA should reject industry arguments that work

practices or other alternative standards should be adopted for biomass facilities in place of MACT. There has been no demonstration that MACT is not feasible for these facilities within the meaning of section 112(h)(2).

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Bruce Coffee
Commenter Affiliation: Hurst Boiler Co.
Document Control Number: EPA-HQ-OAR-2003-0119-2103.1
Comment Excerpt Number: 2

Comment: These actions will greatly increase the growth in demand for Natural Gas, a fossil fuel. In spite of the fuel crisis of a couple of year ago, and the Enron Crisis of a decade ago, this action will have the unintended consequence of driving more energy control into the hands of a few. From recent experience, we know that the price of Natural Gas can "sky-rocket" and catch companies mid-stream and drive many to bankruptcy. This is certain.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Bruce Coffee
Commenter Affiliation: Hurst Boiler Co.
Document Control Number: EPA-HQ-OAR-2003-0119-2103.1
Comment Excerpt Number: 4

Comment: At a time when we should be increasing our sustainability by decreasing our dependence on fossil fuels, this is a major step backwards for the country. This will have a

detrimental effect on development of the very fuels we need to use most to slow the flow of wastes into our landfills.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Susan Parker Bodine
Commenter Affiliation: Used Oil Management Association (UOMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1948.1
Comment Excerpt Number: 5

Comment: If used oil is considered a waste, then the incidence of improper disposal likely will increase, harming our Nation's waterways.

These adverse economic and environmental consequences are not compelled by section 129 of the Clean Air Act, and would violate the goals of the Used Oil Recycling Act.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 5

Comment: If boilers, kilns, and incinerators burning solid waste cannot achieve the limits and cannot afford to install the multiple, costly controls required by this rule, they will stop burning these valuable secondary materials and many of these materials will be disposed in landfills, thus increasing greenhouse gas emissions and increasing our reliance on fossil fuels. This is not the intent of the CAA or the Resource Conservation and Recovery Act (RCRA), nor is it consistent with the goals of the President and Congress in steering our country toward greater use of alternative fuels.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 5

Comment: As EPA noted, this rule will cause the cessation of a large majority of these ovens, including Whirlpool's. Six Whirlpool facilities rely on burn-off ovens. Whirlpool selected pyrolysis as a safer and environmentally friendlier alternative to previous methods. The

aggressive sand/shot blasting alternative noted by EPA will cause higher tooling damage and replacement due to wear. Solid waste volumes to landfills would increase.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 6

Comment: If boilers, kilns, and incinerators burning solid waste cannot achieve the limits and cannot afford to install the multiple, costly controls required by this rule, they will stop burning these valuable secondary materials and many of these materials will be disposed in landfills, thus increasing greenhouse gas emissions and increasing our reliance on fossil fuels. This is not the intent of the Clean Air Act or the Resource Conservation and Recovery Act, nor is it consistent with the goals of the President and Congress in steering our country toward greater use of alternative fuels.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Robert Karwowski
Commenter Affiliation: Whirlpool Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2106.1
Comment Excerpt Number: 7

Comment: The transport of hangers off-site will contribute to mobile HAP emissions. The HAP emissions from diesel fuel will offset reductions from the shutdown of burn off ovens.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: G. Vinson Hellwig
Commenter Affiliation: Michigan Department of Natural Resources and Environment (DNRE)
Document Control Number: EPA-HQ-OAR-2003-0119-2046.1
Comment Excerpt Number: 11

Comment: It may be that the proposed regulation will result in certain predictable unintended negative consequences. Our experience with the plastics extrusion industry suggests that some of the competitors in this industry have used hand-held propane torches to remove plastics from their tooling rather than permitted equipment such as burn-off ovens. The expected high costs of compliance noted in the CISWI preamble could result in increased emissions due to sources

abandoning use of permitted burn-off ovens in favor of propane torch burn-off of plastics. Michigan evaluated pollution prevention (P2) as an alternative for cleaning injection molding dies and parts for one injection molding facility proposing use of a burn-off oven. It was determined that the various potential P2 cleaning alternatives including abrasive blasting, lasers, solvents, thermal shock, dry ice blasting, and aqueous ultrasonic cleaning were not feasible for the parts used at the facility.

The CISWI preamble and the cost analysis memo in the docket listed abrasive blasting as the likely alternative to compliance with the CISWI regulation. The abrasive blasting alternative may not be feasible for the plastics extrusion industry as well as certain other industry sectors currently using burn-off ovens. This is suggested by the results of Michigan's evaluation of P2 measures for the plastics extrusion industry. The proposed regulation may therefore be expected to result in more unpermitted torch cleaning of injection molding tooling due to the high cost of compliance. As a result, overall emissions may increase rather than decrease for the plastics extrusion industry.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 18

Comment: Impact of Recently Proposed CISWI, Boiler, and Solid Waste

Definition Rules on the Forest Products Industry

The Forest Products Industry comprises many types of operations, including manufacturing facilities that produce an assortment of wood, pulp, and paper products. These manufacturing facilities require significant energy resources. A large number of these facilities operate industrial boilers that combust one or more fuel types that

provide heat and power for facility operations. The cost of energy is one of the more significant operating costs at these facilities and thus the boilers must be operated with as much flexibility as possible and with the most cost effective fuel resources available, which often includes the combustion of fuels generated on-site (including nonhazardous secondary materials) in order to offset or replace purchased fuels from off-site.

There are over 900 industrial boilers at the 400 pulp and paper mills in the U.S. (includes both area and major sources), and these boilers burn a variety of fuels, including fossil fuels such as coal, oil, and natural gas, alternative fuels such as tire-derived fuel and petroleum coke, and biomass materials such as bark, sawdust, agricultural materials, and wastewater treatment residuals. Pulp and paper mills also rely on cogeneration of energy for process heating, product drying, and electric power. Combined heat and power operations make efficient use of the fuels burned, in that the heat produced is used both to produce electricity and to provide steam for process operations. There are over 800 boilers and process heaters at wood products facilities (includes both area and major sources), and the majority of these boilers burn biomass, much of

it generated on-site through debarking logs used to make wood products or through recovery of sanderdust, sawdust, and wood trim generated by the process.

The Forest Products Industry is a Leader in Sustainability and

Renewable Energy

Of late, many forest products facilities are reducing their consumption of fossil fuels and increasing their use of biomass. In 2008, 66 percent of the total energy used by AF&PA member pulp and paper mills was generated from renewable sources. At wood products facilities, 74 percent of energy used was produced from biomass sources. The Forest Products Industry leads all other industries in the use of renewable energy and utilization of industry-generated residue materials. In other words, our industry has a strong degree of energy independence.

For the forest products industry, "sustainability" is not a buzzword or a marketing slogan -- it is our foundation. We are, and must be, committed to ensuring that our resources will be as plentiful and available to future generations as they are today; to preserving and growing our contributions to the economy; and to fostering the well-being of the communities where we live and work. We responsibly produce essential products to meet basic human needs from renewable and recyclable resources.

We sustainably use a renewable resource, as trees provide our raw materials and energy. The industry grows more trees (4 million daily) than are harvested. We practice sustainable forest management, and today America has more forestland than 50 years ago. Demand for forest products keeps millions of acres of land sustainably forested for future use while providing habitat for wildlife and recreational opportunities

for the community, enhancing our air and water resources and sustaining the economy of the region. Finally, our industry has combated illegal logging around the world and supports only responsible/sustainable use of forest resources.

We produce and use more renewable energy than any other industrial source – and more than all the solar, wind and geothermal power combined. Paper, pulp and wood products mills generate 65 percent of their energy needs from carbon-neutral, renewable biomass – equivalent to 200 million barrels of oil annually. The forest products industry is the nation's leader in the use of co-generation technology (also called "combined heat and power"). Nearly all paper and wood products mills produce the majority of their electricity using co-generation technology (see DCN: EPA-HQ-OAR-2003-0119-1951.2 for Appendix A - June 2010 AF&PA Sustainability Report.)

We led the way on the modern concept of recycling – even the "chasing arrows" symbol now used around the world was a product of our industry. Our industry also reuses more paper in new products than is sent to landfills. We are committed to raising the level of paper recovered in the U.S. for recycling and in fact far exceeded our goal of 60 percent by 2012 (63.4 percent) three years ahead of time – enough paper to fill a 530- mile-long freight train.

We are also reducing greenhouse gases. In addition to our significant use of carbon-neutral renewable biomass, our member source from sustainably managed forests. Forests and forest products absorb and store CO_2 equivalent to 10 percent of annual U.S. carbon emissions. Wood building materials not only indefinitely sequester carbon, but also require less energy to produce, transport, construct and maintain than the alternatives. Paper recycling reuses a renewable resource that sequesters carbon and helps reduce greenhouse gas emissions. Greenhouse gas

reductions result from avoided methane emissions and reduced energy required for a number of paper products. Recovering paper also extends the fiber supply. Efficiency gains and increased use of renewable energy have allowed us to reduce our direct greenhouse gas emissions by 36% since 2000 (see DCN: EPA-HQ-OAR-2003-0119-1951.2 for Appendix A - June 2010 AF&PA Sustainability Report, page 6.)

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 28

Comment: The stringency of the proposed regulations will cause some units to shut down and this will result in an increase in landfilled solid waste. In the preamble to the proposed rule (page 31967) EPA states that it estimated an additional 214,000 tons/year of material would be diverted to landfills. This added burden to landfills reduces their active lifetime and increases greenhouse gas emissions (e.g., methane).

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 30

Comment: It appears that EPA has calculated only control costs for energy recovery units, and has not included costs for facilities to discontinue burning materials deemed solid waste in these units. Facilities will have to weigh the compliance costs of Boiler MACT or GACT and CISWI to determine whether it is more cost effective to stop burning waste or to comply with CISWI. EPA has not considered the impacts of increased landfilled waste and increased fuel costs for these units.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 49

Comment: The Proposed CISWI Rule standard potentially reverses decades of environmental cleanup success and CAA designations of tire-derived fule (TDF) as an encouraged fuel. The cement industry is a large consumer of scrapped tires. With the potential partial discontinued use of alternative fuels by the cement industry, scrapped tire stockpiles could increase to 586 million tires by 2025, compared to a baseline estimate of 110 million tires.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 55

Comment: United States' Kiln Fuel Composition Characteristics

The cement industry has made large strides in improving fuel efficiency over the past two decades. On average, the industry currently uses roughly 4.1 million BTUs of fuel per equivalent metric ton. This compares to roughly 4.5 million BTUs per equivalent metric ton in 2000, indicating an improvement in fuel efficiency of roughly 9% over the past decade.

During 2007-2009, an average of 12% of total fuel consumption in BTUs was composed of alternative fuel sources. Of these alternative fuel sources, approximately one-third were tire-derived, almost 40% were from solvents, 3% were from oil, and 25% were from other solid wastes and miscellaneous alternative fuel sources. TDF is a significant energy source due to its relatively higher BTU value. A decrease in its use would most likely lead to lower fuel efficiency and higher emissions rates [Footnote: The EPA states on its website (epa.gov/epawaste/conserve/materials/tires/tdf.htm#cement) "based on over 15 years of experience with more than 80 individual facilities, EPA recognizes that the use of tire-derived fuels is a viable alternative to the use of fossil fuels. EPA testing shows that TDF has a higher BTU value than coal. The Agency supports the responsible use of tires in portland cement kilns and other industrial facilities.]

As for primary fuels during this period, coal and coke represented over 80% of total fuel consumption in BTUs, whereas natural gas represented around 3.5%. These are supplemented by middle distillates, gasoline, residual oil, and liquefied propane gas (LPG) [see submittal for chart of U.S. cement plan fuel consumption 2005.]

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 60

Comment: CISWI Impact on Alternative Fuel Practices by the Cement Industry

The Proposed CISWI Rule will force two thirds of all cement plants to eventually discontinue the use of alternative fuels. The Proposed CISWI Rule's emission standards will force cement plants to opt between compliance or discontinue alternative fuel usage. The decision to discontinue the use of alternative fuels is expected to be based on two factors. First, some plant's emissions are sufficiently high that even with the installation of emission capture systems they will not be able to meet CISWI standards. Second, even if a plant can technically meet the CISWI standards, the compliance investment required may not be justified on a financial basis. In either case, PCA assumes the discontinued use of alternative fuels.

According to PCA's Labor/Energy data, sixty one plants used alternative fuels in their kilns on a sustained basis during 2006-2008. Of these, 16 plants' alternative fuel usage accounted for less than one percent of their total fuel consumption. Since the reliance of these plants are relatively small, each of these plants are assumed to discontinue burning alternative fuels rather than incur CISWI compliance costs.

Among the remaining 45 plants that burn alternative fuels PCA estimates that 18 plants could be forced to discontinue the use of alternative fuels due to the inability to meet "existing facilities" CISWI standards or because the compliance investment required may not be justified on a financial basis. Fifteen of these plants are estimated to discontinue the use of alternative fuels due to financial criteria. An additional, three of these plants cannot meet "existing facilities" emission standards in the Proposed CISWI Rule based on assumptions regarding existing technology and the ability to capture emissions.

A total of 52% of all cement kilns covered by CISWI are at least 35 years old and may require substantial investment and modification to insure efficiency and remain "world-class" competitive. Such investments could result in existing plants being reclassified as new sources

and subject to more severe emission standards. Given this, the technical ability to meet the standards in the Proposed CISWI Rule as well as industry compliance costs could be underestimated if this impact is not taken into consideration. PCA assumes that all plants require a major upgrading or maintenance investment within 35 years of initial plant launch. This suggests that all plants commissioned between before 1985 could be subject to a major reinvestment – and could result in an EPA reclassification of the plant as a "new source" within five years after the CISWI standard has been imposed. This represents 24 plants and nearly 25 million metric tons of capacity. Plants originally commissioned during this time period, but which have had significant capacity changes have been excluded from this analysis. Even with no new greenfield plants, our analysis suggests the effective emission standards facing the industry will be tightened as the industry pursues normal investment to maintain efficiency and competitiveness. For NOx, as an example, the effective emission standard is lowered from 1,100 ppmv to 140 ppmv by 2020 – representing a dramatic tightening of the standard facing the industry. Among these plants, PCA estimates an additional 7 plants will discontinue burning alternative fuels [See submittal for table of cement plants burning alternative fuels provided by commenter.]

CISWI Impact on Scrap Tire Stockpiles

Three hundred and eleven million scrap tires were generated in 2009 according to the Rubber Manufacturers Association (RMA). The amount of tires scrapped annually is determined by the number of vehicles on the road and vehicle miles travelled. Historically, 1.24 tires are scrapped per vehicle on the road. Based on United States Census projections of population growth, licensed drivers and the number of vehicles per driver, PCA estimates the number of scrap tires produced annually will increase by an average of roughly 2.8 million each year - reaching over 356 million scrapped tires per year by 2025.

Scrapped tires generated are used as alternative fuel, used in products or placed in landfills. Since 2005 roughly 55% of scrapped tires were used as alternative fuels, 33% used in other products and 24% used in landfills. Totaling these uses equates to 112% and is explained by a reduction in stockpiled tires. In 2005 stockpiled tires was estimated at 188 million by the RMA. PCA estimates 2009 stockpiles as 125 million tires.

The cement industry is the largest consumer of TDF, consuming nearly 60 million tires annually and accounting for nearly 40% of all scrapped tires used as fuel. Recent adverse economic conditions has forced a decline in domestic cement production and as a result prompted a temporary cyclical decline in TDF consumption. As the economy recovers, cement production and its consumption of TDF will recover.

The recovery in cement consumption of TDF attributed to stronger production levels is expected to be supplemented by changes in cement kiln fuel characteristics in the years ahead – favoring alternative fuels. A gradual and sustained recovery in world economic conditions leading to synchronized world growth is expected to emerge in 2013 and beyond. Much of this growth will be fueled by conditions among lesser developed economies. Indeed, the Energy Information Agency (EIA) expects world economic growth will average 3.2% during 2010-2030. In the context of these world growth conditions, it is likely that oil prices will record sustained gains. Indeed, the EIA expects oil prices will reach $105 per barrel in 2015, $132 per barrel in 2020 and $156 in 2025. Given these increases and potential substitution effects, all fossil fuel prices, including coal, are expected to increase. PCA uses EIA fuel price projections. Lacking EIA guidance, PCA employs rough cross-elasticity of demand estimates to project other fossil fuel prices.

While alternate fuels are influenced by overall fuel prices, supply of these fuels are dictated by producer and consumer activity of end-products, (e.g., such as tires). The disparity in price drivers between fossil fuels and alternative fuels suggests a change in the relative fuel costs – favoring alternative fuels. Such a potential implies an incentive for change in kiln fuel characteristics in favor of alternative fuels at the expense of coal [see submittal for chart of U.S. cement plant fuel consumption provided by commenter.]

PCA estimates the current average fuel cost differential between primary and alternative kiln fuels at roughly $15 per ton. As fossil fuel prices increase, the cost differential margin will increase to an estimated $16 per ton in 2015, $18 per ton in 2020 and $20 per ton in 2025. The potential widening in price differentials between primary and alternative kiln fuels suggests cement companies will increasingly rely upon alternative fuels. This point has been borne out by long term trends in cement kiln alternative fuel usage.

Based on the likelihood of the eventual widening in the differential between primary and alternative cement kiln fuels, PCA expects alternative fuel usage will increase in proportion to primary fuels. In 2008, alternative fuels accounted for nearly 11% of total cement kiln fuel consumed. This share is expected to reach 12% in 2015, nearly 15% in 2020 and nearly 17% in 2025. These gains are expected to come at the expense of coal.

With the economic slowdown resulting in production declines, TDF usage for all industries is expected to decline. This suggests the proportion of tires going into landfills will increase and the stockpile of scrapped tires will increase as well. PCA estimates the stockpile of tires will increase from 188 million tires in 2005 to 243 million tires in 2010, with further increases in tire stockpiles materializing as long as industrial production remains depressed – reaching a cyclical peak of 330 million tires in 2012. Sustained declines in tire stockpiles are expected materialize during 2015-2025 reducing stockpiles to 312 million tires in 2015, 274 million in 2020, and 110 million in 2025. The cement industry's consumption of scrapped tires plays an important role in reducing the scrapped tire stockpile. According to this scenario, existing cement kilns using TDF fuel continue - allowing 63 million scrapped tires would be consumed by the cement industry in 2015, 78 million in 2020 and nearly 75 million in 2025 [see submittal for figure showing total scrap tires in stockpiles provided by commenter.]

The Proposed CISWI Rule would significantly reduce the amount of scrapped tires consumed by the cement industry. Under the Proposed CISWI Rule, PCA estimates cement industry scrapped tire consumption would decline to 29 million tires in 2015 and roughly 23 million tires during 2020-2025. Holding all other assessments included in our baseline analysis constant, scrapped tire stockpiles would reach 357 million tire in 2015 nearly 530 million tires in 2020 and nearly 590 million tires in 2025. The Proposed CISWI Rule potentially reverses decades of environmental cleanup success and CAA designations of TDF as an encouraged fuel.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Ned Rockecharlie
Commenter Affiliation: Industrial Container Services (ICS)
Document Control Number: EPA-HQ-OAR-2003-0119-2100.1
Comment Excerpt Number: 2

Comment: Our plant operates under stringent environmental, health and safety regulations at the federal, state and local levels. We provide a safe, professionally managed outlet for millions of emptied containers that otherwise would be disposed at landfills or scrap yards. Reuse of steel drums instead of making new drums or recycling the steel significantly reduces energy consumption and greenhouse gas generation that otherwise would occur.

Our empty steel drums are reconditioned by passing through a drum reclamation furnace. U.S. Department of Transportation's ("DOT")Hazardous Materials Regulations mandate "Cleaning to base material of construction, with all former contents, internal and external corrosion, and any external coatings and labels removed." 49 CFR 173.28(c)(1)(i). Thermal treatment in a drum furnace and shot-blasting the charred drum is required to meet the DOT standard. There are no alternative technologies.

If this proposal is adapted as is, it would mean that the thousands of emptied steel drums we now process would be handled in a less safe and less environmentally responsible manner.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Nikki Tsantrizos
Commenter Affiliation: Terragon Environmental Technologies
Document Control Number: EPA-HQ-OAR-2003-0119-2093.1
Comment Excerpt Number: 3

Comment: The new rule promotes Polluting Environmental Behavior. If on site waste treatment is not possible, waste that is generated at point A will have to be transported to point B (either a landfill or municipal incinerator) where it will be dumped or incinerated at a large scale facility. If it is landfilled, it will be left to leach into the earth while generating toxic levels of methane and other harmful emissions. If it is incinerated at a MSWI, it will be burned in a highly polluting machine, generating high levels of toxic air pollutants. In any case, when you add the ecological impact of the transportation (up to 50 miles before you can be considered a remote incinerator) and the treatment itself, the impact is significantly higher than treatment at the source. Our system has very clean emissions (by European Union Standards) and is truly the best available technology for the treatment of organic waste. Improved waste practices will come from acting locally and safely in order to avoid the impractical and often environmentally damaging impacts of large scale waste management systems.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Christopher S. Bond
Commenter Affiliation: United States Senate
Document Control Number: EPA-HQ-OAR-2003-0119-2127.1
Comment Excerpt Number: 3

Comment: Ironically, EPA's imposition of standards so expensive that they force forest-product

facilities to abandon their use of biomass to power their operations would drive those that survive to more carbon-intensive energy sources such as coal, predominant in Missouri, or propane. Not only would facilities release more carbon from their energy sources, but the carbon from the biomass byproduct would still be released into the atmosphere after it is discarded.

Thus, EPA's proposal threatens both the administration's goal of encouraging renewable, lower-carbon fuels and reducing carbon emissions.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 5

Comment: The proposals' promotion of materials diversion to landfills to avoid triggering the proposed CISWI requirements is problematic on several levels. First, EPA estimates that 214,000 tons of material would be diverted to landfills annually, an estimation the State questions. Even if the estimation were accurate, there is no assessment of whether or not landfills have the capacity to handle the volume of these additional materials. Second, EPA admits that it did not account for any secondary impacts associated with alternate disposal of diverted energy recovery. EPA

should consider the greenhouse gas generated by landfilling this material as well as the gas generated by producing and then burning the materials that replace the landfilled materials.

Colorado is concerned about the significant potential for mismanaged and illegal disposal of

wastes, especially considering the "other ingredients" category of materials resulting from facilities that choose not to upgrade to meet the more stringent CISWI requirements, but simply eliminate those fuels or ingredients, leaving the waste generators searching for disposal options.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: David M. Kiser
Commenter Affiliation: International Paper (IP)
Document Control Number: EPA-HQ-OAR-2003-0119-1963.1
Comment Excerpt Number: 5

Comment: The proposed rule has consequences directly at odds with other energy, regulatory and societal priorities and objectives and, as such, requires major modification before finalization.

As a nation, we have stated goals of energy conservation, limiting our greenhouse gas emission footprint, recycling and decreasing our dependence on foreign sources for energy. The Energy Act of 2005 and the Energy Independence and Security Act of 2007 promote the use of biomass for energy purposes. In addition, the global economy is just starting to come out from under the shadow of the worst economic recession in decades. The economy is fragile and job preservation and growth are vital for the economy to recuperate and grow. All of these are laudable goals and objectives to have as a nation. However, this suite of proposed rules, including but not limited to the CISWI rule, are inconsistent with these objectives.

As shown, the CISWI rule discourages businesses from burning alternative materials by establishing emission limits that are significantly tighter than MACT standards for the same type of biomass fired stoker boilers [See submittal for table comparing CISWI and Boiler MACT

emission limits for PM-HAP, CO, and HCl provided by commenter.] CISWI standards will also require much higher capital requirements for our boiler designs as previously stated.

The stringency of the emission limits and the costs required to meet those limits create a clear disincentive to continuing burning secondary materials.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michael I. Holzman
Commenter Affiliation: M.I. Holzman & Associates, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2102.1
Comment Excerpt Number: 5

Comment: In the cases of the new biomass power plants proposing to use C&D wood fuel (draft permits for two examples are provided in Attachment A [see submittal for example permits provided by commenter]), these plants will be better controlled than existing municipal waste incinerators used extensively in the region, and will include fluidized bed or advanced spreader stoker combustors, dry scrubbers with baghouses for hydrogen chloride and other acid gas control, activated carbon injection for mercury and other metals control, selective non-catalytic or catalytic NOX reduction systems, and depending on the combustor design, oxidation catalysts for CO and VOC control. In addition, the existing dedicated whole-tire power plant in CT, the only facility of its type in the U.S., includes an electrostatic precipitator, baghouse, wet scrubber and selective non-catalytic reduction (see Attachment B for copy of operating permit [see submittal for example operating permit provided by commenter]). Surely, the combination of controls at these facilities should be considered representative of MACT. Compliance with the emission limits as proposed for energy recovery units would effectively remove a legitimate option of managing such materials such as wood from C&D debris and scrap tires in a beneficial manner (energy recovery with minimal environmental impacts). Removing these management

options will only result in additional land disposal impacts, often located in states that are outside the original point of generation.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Marilyn Crockett
Commenter Affiliation: Alaska Oil and Gas Association (AOGA)
Document Control Number: EPA-HQ-OAR-2003-0119-2238.1
Comment Excerpt Number: 5

Comment: Human Health and Safety and Wildlife Issues- Moreover, if waste were to be transferred via aircraft and/or marine vessel, due to the extreme weather, there will be long periods of time during which waste must be stored on-site to accumulate an adequate volume to minimize aircraft and/or marine vessel trips and/or work around the harsh Alaska climate to

allow for safe travel. This storage introduces significant additional costs for on-site storage facilities and operations that are not considered or addressed in the RIA. Of higher concern are health and safety risks introduced by storing the waste on-site. These risks are elevated with storage time.

For example, AOGA members are deeply concerned for the health and safety risk (both to humans and wildlife) of attracting wildlife (e.g. bears, foxes) to human inhabited facilities with the waste storage on-site. These risks (and additional costs to mitigate these) need to be addressed in the RIA and weighed against the benefits of the proposed CISWI standard. AOGA also would like the opportunity to review these analyses with EPA to ensure these reflect the range of practical issues and costs needing addressed to adequately assess the risks and benefits.

Additionally, the vast majority of oil and gas operations in Alaska are conducted from gravel pads which are required to be limited in size to avoid destruction of sensitive environmental areas such as wetlands. Therefore, no unused space exists on these pads. If this rulemaking results in the shutdown of existing incinerators, gravel pads will need to be expanded to accommodate the necessary storage (assuming that the regulating agencies such as EPA and the Army Corps of Engineers would approve such expansions). EPA appears not to have considered this need in the RIA. We believe this consideration is clearly prescribed under Section 129(A)(2) of the Clean Air Act.

Conflict with the Endangered Species Act (ESA) and Apparent Lack of Consultation with the US Fish and Wildlife Service (USFWS) - Under the section 7(a)(2) of the ESA, EPA is required to consult with the USFWS to ensure that any action EPA authorizes, or carries out, is not likely to jeopardize the continued existence of a listed species (e.g., polar bear). This rulemaking would result in additional storage of food wastes, a polar bear attractant, which is prohibited by the USFWSapproved wildlife interaction plans. The result would be increased bear-human interactions, including deterrence activities, possibly including lethal take in defense of life. This foreseeable outcome of the rulemaking clearly requires consultation.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 13

Comment: The business of collecting and processing emptied steel drums for reuse is one of the original green industries in the United States. Many of the firms engaged in this business have been in continuous operation for over a century, and a study by Franklin Associates shows the services they provide to literally tens of thousands of companies throughout the U.S. that use steel drums to transport various products reduces energy consumption, solid waste generation and greenhouse gas emissions [Footnote: "Life Cycle Inventory of Single-Trip and Multi-Trip Steel Drum Systems in the U.S., Europe, and Japan," Franklin Associates, January 1999.] This is because energy does not have to expended to transform the collected package into usable scrap (e.g., shredding, baling) or for smelting, melting, and reforming the material into new, usable

products. Reusable industrial packagings are simply reconditioned (e.g. cleaned, reformed and tested) in highly efficient processes so that they can be reused over and over again.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Curtis Lesslie
Commenter Affiliation: Ash Grove Cement Company
Document Control Number: EPA-HQ-OAR-2003-0119-2145.1
Comment Excerpt Number: 1

Comment: Ash Grove is an American owned business headquartered in Overland Park, Kansas. Ash Grove is the fifth largest cement manufacturer in the United States with cement plants in nine states across the country. A pioneer of the limestone and cement industries, the Company was incorporated in Missouri in 1882 and has been majority owned and controlled by the Sunderland family since 1913. The nine cement plants in the Ash Grove system are some of the most efficient and best maintained in the country and have

an annual production capacity of more than 8.0 million tons of cement. The quality portland and masonry cements produced at these plants are used in the construction of highways, bridges, commercial and industrial complexes, residential homes, and a myriad of other structures.

All of the kilns operated by Ash Grove (except those that are HWC MACT kilns) would potentially qualify as CISWI units based on the expansive definition of solid waste included in the SWI proposal. For cement kilns, the use of whole tires or chipped tires represents a significant source of fuel and in some cases, tire derived fuel is a NOx control technique representing RACT or BACT and use of whole tires is required by some of our operating permits. Not only is the direct replacement of virgin fossil fuels important, but also the fact that by encouraging the use of whole tires as fuel, they are much less likely to be illegally disposed. Imposing regulations that would force the land disposal of perfectly useful high quality fuels and secondary raw material ingredients would result in the extraction, transport and use of more coal and virgin raw materials.

Alternative raw materials currently represent a significant portion of the total raw material mix for nearly all of Ash Grove's kilns. At Ash Grove alone, alternative raw materials can potentially replace nearly a million tons per year of virgin raw material ingredients that are directly replaced through the substitution of secondary material from other manufacturing processes that would otherwise be needlessly land disposed. We find this aspect of the SWI and CISWI proposals particularly troubling, as it turns decades of advances toward industrial reuse and recycling on its head. Over the last two decades, Ash Grove has invested millions of dollars in environmental permitting and specialized handling equipment to allow use of these materials at our kilns. We have embraced the principles of sustainable manufacturing that were encouraged by many, including EPA's own Resource Conservation Challenge. Ash Grove has hosted EPA sponsored visits from Chinese cement manufacturing delegations where these sustainable practices were acknowledged by as practices that should be adopted by other countries to reduce the environmental impacts from cement manufacturing; these proposed rules appear to indicate sustainable manufacturing practices can only be accomplished by kilns located outside the US.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 1

Comment: Proposed rulemakings for the Identification of Non-Hazardous Secondary Materials that are Solid Wastes (NHSM) (75 Fed. Reg. 31844, June 4, 2010) and the

Commercial and Industrial Solid Waste Incineration Units (CISWI) rules will stifle sustainable development in the US by encouraging manufacturing units such as cement kilns to move away from using sustainable materials and fuels and toward greater use of fossil fuels and nonrenewable natural resources. This is particularly unfortunate considering that the materials and fuels at issue are by definition non-hazardous.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Joseph M. Cloutier
Commenter Affiliation: RE-Gen
Document Control Number: EPA-HQ-OAR-2003-0119-2455.1
Comment Excerpt Number: 1

Comment: RE-Gen founders have establish a sister company Renewable Energy Fuels, LLC to deliver a biomass fuel solution to the market. Renewable Energy Fuels, LLC's core fuel product is woody biomass derived from the tops and limbs of trees which are currently being left it the woods. This supply is harvested via certified and sustainable measures. Renewable Energy Fuels, LLC's initiatives will improve the health of our forests and further enhance and stabilize our logging, lumber and forest products markets.

RE-Gen LLC's core business will create new manufacturing, sales and service jobs. Renewable Energy Fuels, LLC will preserve jobs that are diminishing in Maine's logging industries and create new work loads and jobs to utilize the currently wasted woody biomass fuel source. RE-Gen LLC's and its clients initiatives to develop a number of distributive biomass CHP plants, along with thermal and thermal/chilling plants will improve economic development initiatives to retain and recruit employers in state as well as create new plant development and operation jobs.

RE-Gen is concerned that the EPA's proposed rules will:

Diminish our country's energy security

Affect our efforts to meet our nation's state Renewable Standard Portfolios

Reduce our ability to grow energy jobs through new companies like RE-Gen, LLC and Renewable Energy Fuels, LLC

Stall or diminish the ability for RE-Gen and/or its clients to develop projects.

Result in the closure of existing plants and possibly stop the growth of this industry

Derail the effort to strengthen the health of our forests and agricultural lands

Distract our fight to better climate change

We are especially concerned that the proposed changes make take affect as the Administration's support of biomass has been unwavering and involves almost every member of the Cabinet from the White House, USDA, DOE, Interior, Council on Environment Quality, EPA, DOJ, Treasury and Commerce. As well, in Congress biomass has been included in every single piece of renewable energy legislation beginning with the Public Utility Policy Act of 1978. Support for biomass is universal, bi-partisan, and spans the scope of virtually every major energy policy enacted by the Congress.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Kevin Van De Wega
Commenter Affiliation: State of Washington House of Representatives
Document Control Number: EPA-HQ-OAR-2003-0119-2215.1
Comment Excerpt Number: 1

Comment: We have strong concerns about the proposed emissions limits for biomass-powered boilers and incinerators, as no current boiler could meet these proposed standards. Such regulations would harm our vital forest products industry and hurt the prospects for expanding our nation's green energy production and the jobs it brings.

While we strongly support the goals of achieving strong protections for public health and high environmental performance, we are concerned that there will be unintended consequences with the current draft proposal. Without careful reconsideration these regulations may unnecessarily harm Washington's critical forest products industry -- and that of other states in the union -- and our burgeoning efforts to utilize waste wood from the state's forest lands for renewable energy production.

The forest products industry is critical to all areas of Washington State, representing 11% of all manufacturing jobs and playing a particularly important role in rural, timber-dependent communities.

The sector provided over 45,000 jobs in 2005, generated approximately $16 billion in gross business revenue, and paid out over $2 billion in wages and over $100 million in tax receipts. [Footnote: http://www.ruraltech.org/projects/wrl/sfr/pdf/RetentionReport.pdf]

As the state has invested in the renewable energy field, we have looked to the forest products sector to take a leadership role. In particular we have focused on renewable biomass power as an arena where we have a competitive advantage and an ability to increase distributed domestic power generation and utilization of previously wasted forestry resources.

A 2005 state biomass inventory found that as a state we are "blessed with a vast and diverse, annually renewable biomass, which although in places is presently utilized for energy, fertilizer and feed, in other places is still quite underutilized and capable of being a significant factor in

bioenergy, biofuel, or bioproduct production." The inventory found that Washington State has an annual production of over 16.9 million dry tons of underutilized biomass which could be capable of creating 15.5 billion kWh of electrical energy, or almost 50% of the state's annual residential energy consumption. [Footnote: http://www.ecy.wa.gov/pubs/0507047.pdf]

This focus on biomass power has resulted in significant levels of public and private investment. In 2006 the state energy freedom fund provided $6 million to the Grays Harbor PUD to invest in a new biomass boiler used by the Grays Harbor Paper Company to generate process steam for the 100% recycled green paper plant and electrical power for the PUD. [Footnote: http://www.commerce.wa.gov/DesktopModules/CTEDPublications/CTEDPublicationsView.aspx?tabID=0&ItemID=6698&MId=863&wversion=Staging]

In 2009 the Port Townsend Paper Company received a $2 million dollar stimulus grant to upgrade its biomass boiler. This grant is being matched by $2 million in private funds generated by other energy saving projects in the mill. This boiler is now a part of a proposed $55 million cogeneration project that will provide the equivalent of 35 construction jobs for one year and will create 30 new jobs. In addition, it helps sustain the 290 permanent mill jobs.

Also in 2009, the Nippon Paper Company in Port Angeles received a combination of loans and grants of $2 million to support a planned $71 million investment to replace an existing steam boiler with a biomass boiler retaining 234 permanent jobs and adding 10 temporary jobs. [Footnote: http://www.commerce.wa.gov/site/1345/default.aspx]

A 2009 state study on pulp and paper boilers showed great opportunities for reduced fossil fuel usage and increased renewable energy production – but old boilers will need to be upgraded. [Footnote: http://www.chpcenternw.org/NwChpDocs/Pulp_and_Paper_EE_Boilers_and_CHP_092009.pdf]

With the capital costs involved and the current state of the market, it would be unfortunate if limited capital resources went into short term investments to meet unattainable standards rather than a longer term strategy of investing in aging infrastructure that can continue to create jobs and meet core business objectives while increasing renewable energy generation and environmental performance.

In addition to financial investments, the state has pursued policy opportunities to promote long term stability and investment in the biomass industry. The state passed a law in 2010 allowing for long term contracts for biomass purchase from state timber lands. In addition to providing stability to the industry, our state DNR anticipates additional revenues from forest residuals to be a benefit to the common school trust fund. In recent years the state has provided tax incentives for hog fuel and biomass energy, authorized county governments to acquire biomass generation facilities, and ensured that our greenhouse gas policies reflect our priorities in this area.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Mass Comment Campaign sponsoring organization unknown (53)

Commenter Affiliation: sponsoring organization unknown
Document Control Number: EPA-HQ-OAR-2003-0119-2449
Comment Excerpt Number: 2

Comment: Biomass is not "carbon neutral." Our nation's forests are natural "carbon sinks" and our best defense against the climate crisis. When forests are cut for biomass incinerators, they will not re-sequester the amount of carbon released for decades or centuries, if at all. Reports by the Manomet Center for Conservation Science and Environmental Working Group issued in June 2010 conclusively show that biomass incineration using forests as fuel will undermine efforts to curb carbon emissions. Burning garbage and wood for electricity is terribly inefficient; biomass incinerators are about 25% efficient -- that is, for every 100 trees burned, only 25 are converted into energy. Worse yet, biomass burning smokestacks emit more carbon dioxide per unit of energy than coal, oil and natural gas, and in some cases up to 50% more carbon dioxide than coal, per unit of energy.

The May 17, 2010 letter to Speaker of the House Nancy Pelosi signed by 90 scientists also supports the EPA action. I quote: "Replacement of fossil fuels with bioenergy does not directly stop carbon dioxide emissions from tailpipes or smokestacks. Although fossil fuel emissions are reduced or eliminated, the combustion of biomass replaces fossil emissions with its own emissions (which may even be higher per unit of energy because of the lower energy to carbon ratio of biomass)... clearing or cutting forests for energy, either to burn trees directly in power plants or to replace forests with bioenergy crops, has the net effect of releasing otherwise sequestered carbon into the atmosphere, just like the extraction and burning of fossil fuels. That creates a carbon debt, may reduce ongoing carbon uptake by the forest, and as a result may increase net greenhouse gas emissions for an extended time period and thereby undercut greenhouse gas reductions needed over the next several decades."

It would be disastrous for CO_2 emissions attributable to biomass combustion at any facility to be ignored. All CO_2 emissions must be considered for the purpose of determining whether any facility's CO_2 emissions are large enough that an NSR permit is required. Burning biomass would otherwise be a convenient and dangerous way to comply with CO_2 limitations under that permit. The net effect would be to undermine any meaningful effort to limit CO_2 emissions and greenhouse gasses in the atmosphere, while forests would be cleared, destroying soils, increasing sedimentation, and removing key habitat for native flora and fauna.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 2

Comment: These rules encourage greater use of landfilling for reusable and recyclable nonhazardous secondary materials which is counter to long-standing EPA policy that promotes such activities. Even more unfortunately, EPA recognizes that its proposals will have this effect.

The preamble of the CISWI rule (75 Fed. Reg. 31966) states that EPA's expected outcome of this rulemaking is a reduction of existing facilities such as cement kilns using these materials as fuels or ingredients, the elimination of new facilities using these materials, and therefore, an increase in material being sent to landfills.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Melissa Mullarkey
Commenter Affiliation: Recycled Energy Development, LLC (RED)
Document Control Number: EPA-HQ-OAR-2003-0119-2213.1
Comment Excerpt Number: 2

Comment: The proposed restrictive rule would actually discourage the use of renewable biomass, which runs counter to several other agency objectives. Since the most efficient and economical means of disposing certain wood waste is combustion in the regulated, tightly-controlled environment of a biomass power plant, the rule would lead to increase greenhouse-gas emissions as wood wastes are allowed to degrade and release methane in landfills and forests.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Steven A. Brink
Commenter Affiliation: California Forestry Association
Document Control Number: EPA-HQ-OAR-2003-0119-2222.1
Comment Excerpt Number: 2

Comment: The standards in the proposed rule could cause existing biomass boilers to add Hg and HCL control technologies, such as activated carbon injection, carbon beds, or wet scrubbers and CO control technology (afterburners or catalytic oxidizers). The likely outcome would be very small emission reductions and likely be prohibitively expensive for anyone to make the investments. The result would be millions of tons of biomass open burned or land-filled and additional fossil fuels to replace the renewable energy that is currently produced by biomass boilers.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Danny Bell
Commenter Affiliation: Steelman Industries, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1520
Comment Excerpt Number: 3

Comment: Companies will use alternative cleaning measures which are the very reason cleaning ovens were introduced to the market place decades ago.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: James C. Jackson
Commenter Affiliation: Boise Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-2150.1
Comment Excerpt Number: 3

Comment: Boise has demonstrated a commitment to sustainability through the use of renewable biomass energy and production of bio-based products which includes:

Chain of Custody Certification from the Forest Stewardship Council,

which certifies and tracks attributes from fiber source to customer;

Chain of custody and wood fiber procurement systems certified by the Sustainable Forestry Initiative® (SFI), which track wood procurement and fiber source attributes;

Environmental management systems at our four white paper mills that are certified by an independent third party to meet the ISO 14001 standard;

Producing about 65% of our energy from renewable, carbon neutral wood-based biomass

Is a major manufacturer of a full line of recycled paper products_

From 2000 to 2004, Boise operations reduced absolute greenhouse gas (GHG) emissions by about five percent companywide. In 2005, Boise joined the EPA voluntary Climate Leaders program. Under Climate Leaders, Boise set a goal to further reduce absolute GHG emissions an additional 10% from a 2004 baseline by 2014. At the end of 2008, we had achieved GHG emission reductions of 6% relative to that goal. Boise is also a member of the Chicago Climate Exchange, which operates a cap and trade system for greenhouse gas emissions, and a member of ENERGY STAR®, the EPA voluntary program designed to help companies protect the environment through assessing and improving energy performance.

Unfortunately, these important sustainability contributions are challenged by an unprecedented wave of new regulatory proposals that could severely harm our company if not carefully designed. This challenge comes during the worst economic crisis since the Great Depression. To address this challenge, we are prepared to work with EPA, the Administration, Congress and other stakeholders to achieve a regulatory path for a sustainable future. As we explain below, many elements of EPA's proposed CISWI rule would directly impede or even prohibit certain aspects of our sustainability efforts. Yet with appropriate changes, EPA can issue a final rule that will encourage these efforts instead.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Curtis Lesslie

Commenter Affiliation: Ash Grove Cement Company
Document Control Number: EPA-HQ-OAR-2003-0119-2145.1
Comment Excerpt Number: 4

Comment: Use of secondary materials in the US cement industry has increased over the years in an attempt to reduce the need for virgin raw material ingredients which results in reduced impacts on the environment due to less material being extracted, transported and processed while at the same time reducing productions costs to remain competitive with strong international competitors that have far fewer (if any) environmental regulations.

EPA must consider the overall environmental impacts of implementing these two proposals. It is clear that the environmental benefits of reusing/recycling secondary materials in lieu of disposal were underestimated and misrepresented in EPA's analysis, while the benefits of the proposals were overestimated.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 5

Comment: EPA's focus on individual HAPs has resulted in a failure to recognize the critical interplay between emissions controls and emissions of other pollutants. For example, we are concerned that the controls necessary to meet the stringent emissions limitations for CO will result in increased energy usage, with the concomitant increase in emissions of NOx and other pollutants. Further, EPA failed to account for this interrelationship in its economic analysis.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 6

Comment: The primary goals of the Resource Conservation and Recovery Act (RCRA) are to promote resource conservation and recovery and protect human health and the environment. The proposed CISWI rule (in conjunction with the proposed NHSM rule) does not achieve either goal. The proposed CISWI standards will drive existing cement kilns away from the beneficial reuse of non-hazardous secondary materials. These materials will end up in landfills, or worse, in rogue piles as has been common place for materials such as used tires before cement kilns and others started reusing these materials as fuels.

Lafarge strongly encourages EPA to consider the consequences of this rulemaking and its impact not only on the cement industry, but on the RCRA objectives of promoting resource conservation and recovery while protecting human health and the environment.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 6

Comment: The rule will increase solid waste landfilled due to shutdowns and no new units.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 7

Comment: Despite EPA's acknowledgement that many cement kilns will stop burning scrap tires instead of complying with the CISWI rule, the Agency's regulatory impact analysis completely ignores the risk of losing these benefits and fails to quantify or even substantively consider the significant extent to which these losses will offset or negate the rule's purported benefits.

In the proposed CISWI rule, EPA has predicted that many combustion unit operators will stop using secondary materials to avoid being regulated under Sec. 129 [Footnote: "Our experience with regulations for municipal waste combustors, HMIWI and, in fact, CISWI has shown that negative growth in the source category historically occurs upon implementation of CAA Section 129 standards." (FR 75 31966)] In the RIA for the CISWI rule, however, EPA has ignored the associated loss of the environmental benefits from using tires as fuel in cement kilns.

EPA has neglected to quantify or even address the existing benefits that will be lost when cement kilns switch from burning scrap tires to burning coal.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 7

Comment: EPA's proposed CISWI subcategories would also have negative environmental policy consequences. Take for example biomass-to-energy units which have historically combusted demolition wood wastes from urban sources which even after processing to remove painted wood and other inerts/contaminants contain small amounts (less than 100 parts per million) of lead. These units face the dim prospect of having to meet the stringent and possibly unachievable lead standard set using units which did not combust lead-containing wastes. With an uncertain compliance future, even with an expensive air pollution control retrofit, the unit operator would either switch out the demolition wood waste for a clean biomass material (if that material was available and economical), or, more likely, cease operating. In either case, demolition wood waste which would have been beneficially reused to produce renewable energy will instead be landfilled. These biomass combustion units which serve a useful waste management purpose, produce renewable energy, and have demonstrated negligible health impacts would be sacrificed in favor of a waste management method ranked lower on EPA's solid waste management hierarchy.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453
Comment Excerpt Number: 8

Comment: If boilers, kilns, and incinerators burning solid waste cannot achieve the limits and cannot afford to install the multiple, costly controls required by this rule, they will stop burning these valuable secondary materials and many of these materials will be disposed in landfills, thus increasing greenhouse gas emissions and increasing our reliance on fossil fuels. This is not the intent of the Clean Air Act or the Resource Conservation and Recovery Act, nor is it consistent with the goals of the President and Congress in steering our country toward greater use of alternative fuels.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 12

Comment: A complete and accurate analysis would show the emissions (and human health and environmental) impacts on a unit-specific or subcategory-specific basis. It also would analyze the incremental impacts by comparing the environmental performance of units that already are regulated under a Sec. 112 MACT standard vs. what that performance would be under a Sec. 129

standard. Instead, EPA's analysis looks only at the effects of being regulated under Sec. 129 vs. not being regulated at all. By failing to analyze the impact of the CISWI rule on a unit-specific and incremental basis, EPA makes it seem as though the rule will produce across-the-board emission reductions and environmental benefits. But the reality is that none of the emission reductions and none of the benefits of the rule will come from regulation of cement kilns under the CISWI standards. And by attempting to force cement kilns into the CISWI rule, which will destroy existing markets for the safe reuse of secondary materials, EPA will actually harm the environment.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 24

Comment: The ARIPPA facilities also provide unique environmental benefits by utilizing state-of-the-art circulating fluidized bed technology to convert coal refuse into alternative energy. Indeed, by EPA's own analysis, these sources generate air emissions at substantially lower rates than other coal-fired EGUs. Further, because ARIPPA facilities process coal refuse from both current and historic mining activities, they are able to achieve reclamation of thousands of acres of idle and abandoned strip mines and substantial abatement of mine drainage, which is one of the principal sources of contamination to surface and ground water in coal-mining regions in the United States. These environmental benefits are currently realized at no cost to taxpayers; however, absent the zero cost option for removing coal refuse piles from the environment provided by the ARIPPA facilities, the total financial responsibility for such removal and clean-up would fall upon taxpayers and local and state government.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Jeff A. McNelly
Commenter Affiliation: ARIPPA
Document Control Number: EPA-HQ-OAR-2003-0119-2104.1
Comment Excerpt Number: 26

Comment: 10% OF PENNSYLVANIA'S TOTAL ENERGY CAPACITY WILL BE LOST

The amount of electricity produced at CFB coal refuse alternative energy plants in PA totals 1449 MW's or an average of 97MGW per plant...add these figures to the amount produced in WV and the totals increase to 1721 MW's or an average per plant of 91 MGW

THE TAX FREE ENVIRONMENTAL LAND RECLAMATION BENEFITS PROVIDED WOULD VANISH

The CFB coal refuse alternative energy industry reached a significant milestone in 2009 in its ongoing tax free efforts to reclaim damaged abandoned mine reclamation lands and streams. Industry data (data recording began in1988) indicates that over 4,700 acres of mine-scarred lands have been reclaimed which in turn restored life to hundreds of miles of formerly "dead" streams.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 32

Comment: It has been known in the utility sector that oxidized mercury captured in a wet scrubber can be reemitted as elemental mercury [Footnote: Ghorishi, B.; Downs, B.; Renninger, S. Role of Sulfides in the Sequestration of Mercury by Wet Scrubbers. In Proceedings of the EPRI-DOE-EPA-AWMA Combined Power Plant Air Pollutant Control Mega Symposium; BR-1787, Baltimore, MD, Aug, 2006.] Thus, efforts to further reduce HCl may actually increase emissions of mercury.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 35

Comment: EPA's assumption that waste-burning cement kilns can be excluded from the environmental or economic impact analysis of this rulemaking is wrong.

Water and Solid Waste Impacts

In the preamble to this rulemaking (75 Fed. Reg. 31967), EPA estimates that 68 million gallons per year of additional wastewater would be generated, 1,760 tons per year

of solid waste from PM capture, 10,860 tons per year of solid waste from activated carbon injection and 214,000 tons per year of solid waste from sources who discontinue the use of non-hazardous secondary materials designated as "solid wastes". These totals represent the water and solid waste from incinerators, burn-off ovens and small remote incinerators. EPA does not estimate the water and solid waste impacts from the waste-burning cement kiln subcategory, as it assumes that all of these impacts will be accounted for by compliance with the NESHAP.

It is important to point out that water estimates made by EPA only address additional wastewater generated. EPA does not discuss additional water usage by these sources. This volume is several times greater, as wet scrubbers recirculate much of the

water and a majority of this water is released with the exhaust gases. EPA needs to address the impact on this valuable resource.

Lafarge estimates that approximately 30 million tons per year of non-hazardous secondary materials are used in the manufacture of cement in the U.S. All cement plants will eventually abandon the use of these materials if the currently proposed CISWI emission limits are finalized. This figure does not include the additional solid waste that will be generated and landfilled due to the use of fossil fuels (with higher sulfur contents than most alternative fuels).

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 37

Comment: In the preamble to this rulemaking (75 Fed. Reg. 31967), EPA estimates that from the 214,000 tons of additional solid waste landfilled each year, approximately 38 tons of

PM, 16 tons of HCl, 32 tons of SO2, 1,742 tons of CO, 90 tons of NOx and 3 lbs of mercury will be generated. These numbers represent the emissions from flaring about 187,000 tons of methane generated by the landfill.

If the non-hazardous secondary materials currently used by the cement industry (30 million tons annually) are added to EPA's estimate, the EPA's numbers become: 5,326 tons of PM, 2,243 tons of HCl, 4,486 tons of SO2, 244,206 tons of CO, 12,617 tons of NOx, and 420 pounds of mercury.

EPA also failed to estimate the GHG impacts associated with landfilling these added tons of solid waste. Using EPA's estimates of methane generation (at a CO2e of

25x), the potential GHG contribution is 4,675,000 tons of CO2e. Using Lafarge's estimates of methane generation from the materials unusable by the cement industry, the GHG contribution is 624 million tons of CO2e

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 38

Comment: In the preamble to this rulemaking (75 Fed. Reg. 31967), EPA estimates that if energy recovery units and waste-burning kilns stopped burning non-hazardous secondary materials designated as "solid wastes", that the replacement with traditional fuels would

approximate 56 Tera-Btu per year. Lafarge believes that this figure is significantly understated, and provides the following calculation for just the waste-burning kilns subcategory:

* Estimated US cement production (avg. 2006-2009) – 95 million tons

* Specific heat consumption – 4.7 mmBtu/ton cement

* Percent of energy input from NHSM – 50%

* Total replacement with traditional fuels – 223 Tera-Btu/year

Lafarge estimates that the waste-burning kilns subcategory would have to replace in excess of 200 TBtu/year, which is four times higher than EPA's estimate. Lafarge does not have the data to estimate the energy recovery units contribution, but it is likely equal or greater than the waste-burning kiln subcategory.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 39

Comment: Other Direct and Indirect Environmental Impacts for Loss of TDF Are Substantial

The replacement of TDF with coal causes additional environmental impacts besides the direct changes in emissions from cement kilns noted above. Increased coal consumption would cause collateral increases in other pollutants or from other sources such as PM emissions from the processing and handling of coal. EPA completely ignores this very probable adverse impact. Additionally, even though in the preamble to the SWI rule,

EPA identified the very real and significant positive effects on both GHG and PM emissions that occur when cement kilns replace coal with scrap tires, in the CISWI rule EPA neglected to even consider these impacts [Footnote For example, the GHG rate associated with the combustion of scrap tires is approximately 0.081 MTCO2E per MMBtu of scrap tires combusted, while the GHG emissions rate for coal is approximately 0.094 MTCO2E per MMBtu. Combined with the avoided extraction and processing emissions 0.006 MTCO2E/MMBtu for coal, the total avoided GHG is 0.019 MTCO2E per MMBtu. Substituting tire-derived fuel for coal would also avoid an estimated 0.246 Lbs/MMBtu of PM associated with extraction and processing of the coal. Please see the Materials Characterization Papers in the docket for further details on these estimates, and other estimates of avoided emissions associated with burning tires and other secondary materials as fuel." See 75 FR 31849, footnote 9.]

A direct impact from the loss of TDF in cement kilns would be the increase in GHG emissions from cement kilns. As noted above, the net increase in GHG emissions would be 0.013 MTCO2E per MMBtu. Based upon the aforementioned 20,328,000 MMBtu value for lost TDF, the resulting increase in GHG emissions from cement kilns would be 264,424 MTCO2E if cement kiln operators elected to avoid Sec. 129 and the CISWI rule by ending their use of TDF.

In addition to the direct change in GHG emissions from the cement kilns, additional secondary GHGs will be emitted by the extraction and processing of the coal that would have to replace the TDF. Using the same heat input value and EPA's figure of 0.006 MTCO2E per MMBtu, the increase in secondary GHG emissions from the supply of coal would be 121,968 MTCO2E.

Finally, the change to coal from TDF would result in additional PM emissions. Based upon the total annual replaced heat value and EPA's estimate of 0.246 lbs/MMBtu of PM from extraction and processing of coal, the increase in PM emissions would amount to 2,500 tons per year. This is a significant amount of additional PM, as it represents 13% of the total reductions EPA claims would be achieved from all sources complying with the CISWI rule (noting once again that EPA estimates that none of those PM reductions would come from regulating cement kilns under CISWI).

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 41

Comment: Costs of Adverse Health or Environmental Impacts for Loss of TDF Are Significant

There are many adverse emissions impacts that would result from TDF being replaced with coal. These impacts can readily be quantified in terms of adverse health impacts. EPA has based the entire environmental benefit analysis for the CISWI rule on PM2.5 and PM2.5 precursors. The adverse impacts can also be calculated based upon costs presented in EPA's RIA and other sources [Footnote: Draft Regulatory Impact Analysis Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA-420-D-09-003, September 2009, p. 7- 46.] [See submittal for Table 4 – Adverse Impacts from Loss of TDF/Replacement by Coal] Table 4 includes a summary of the calculation of the impacts to human health and the environment for the increase in emissions due to the use of coal in lieu of TDF as fuel for cement kilns.

For NOx and SO2 impacts, the adverse cost estimates assume that no additional controls would be installed at cement kilns to abate the additional emissions. This may or may not occur because whether emission of NOx and SO2 would need to be abated is a function of individual facility permits and whether or how far the actual emissions might be below a cement facility's permitted levels.

Table 4 also includes the estimated cost range for the additional GHGs that may be emitted due to the loss of TDF. As noted above, the change in the marginal dollar value (i.e., cost) of climate-related damages resulting from carbon emissions is the "social cost of carbon" (SCC) [Footnote: Draft Regulatory Impact Analysis Proposed Rulemaking to Establish Light- Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA-420-D-09-003, September 2009.]

As can be seen, the adverse health and environmental impacts from switching all of the TDF burned at cement kilns to coal is very significant. In the worst case, the adverse cost impacts have the potential to totally wipe out the monetized benefits claimed by EPA for the entire rule, and that is considering only the loss of TDF. The impact would be even more severe if the wider range of alternative fuels used by the industry also were abandoned.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 42

Comment: Costs of Adverse Health or Environmental Impacts for Loss of Other AFRs Defined as Solid Waste Are Similar to TDF

While the above discussion has focused on the loss of TDF and the resulting replacement with coal, similar emissions and adverse cost impacts may result from the loss of any other AFR categorized as solid waste. These impacts may be quite similar to TDF if another alternative solid waste fuel were abandoned due to a cement manufacturer's decision not to become a CISWI regulated unit. Certainly any currently used AFR that would be replaced by coal would create adverse impacts (increased overall emissions of PM and GHGs) due to the increased coal usage. Because information is unavailable in EPA's RIA, data to prepare similar analyses and make such calculations are not possible [Footnote: EPA's background documents provided data on scrap tires but no data for other materials used by the cement industry.]

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 62

Comment: EPA's Discussion of Costs and Impacts

We are concerned that the proposed CISWI regulation, along with the proposed rule defining non-hazardous secondary materials that are solid waste, will reduce the nation's fuel diversity. The rules are likely to encourage facility owners and operators to divert material that would have otherwise been used as fuel to landfills due to the cost and difficulty of many types of units to comply with the proposed rule, resulting in increased reliance on fossil fuels. Fuel diversity is fundamental to the stability and reliability of U.S. energy supply. It is particularly crucial to electricity production, as no individual fuel is capable of providing the energy to meet all of the Nation's electricity needs. A diverse fuel mix protects energy users from fuel unavailability,

price fluctuations, and changes in regulatory practices. We believe EPA should be encouraging, not discouraging, the use of valuable fuel-like secondary materials in order to ensure fuel diversity.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 67

Comment: ACC is concerned that the stringency of the proposed regulations will cause some units to shut down and this will result in an increase in landfilled solid waste. In the preamble to the proposed rule EPA states that it estimated an additional 214,000 tons/year of material would be diverted to landfills. 75 FR 31967. This added burden to landfills reduces their active lifetime and likely increase greenhouse gas emissions (e.g., methane).

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 74

Comment: It appears that EPA's cost analysis is limited to control costs and fails to consider or compare the costs associated with CISWI units no longer burning materials and instead sending them to landfills. EPA also has failed to consider the environmental impact of transporting and landfilling all of the materials that are presently incinerated.

It also appears that EPA has not considered the impacts of increased fuel costs for these units that no longer burn solid waste due to the increased use of traditional fossil fuels. EPA notes, "As discussed earlier, there could be instances where owners and operators of energy recovery units and waste burning kilns decide to cease burning waste materials. In these cases, the energy provided by the burning of waste would need to be replaced with a traditional fuel, such as natural gas. Assuming an estimate that 50 percent of the energy input to energy recovery units and kilns are from waste materials, an estimate of the energy that would be replaced with a traditional fuel if all existing units stopped burning waste materials is approximately 56 TBtu/yr. Since we do not anticipate any new CISWI units to be constructed, there would be no energy impacts associated with control of new units." [Footnote: 75 FR 31967.] However, EPA does not recognize that other fossil fuels could be used to offset the waste

material heating value, such as coal. EPA also does not appear to include in their estimated impacts the amount of replacement fossil fuel for units that stop burning waste materials. Incremental increased cost for replacement fossil fuel is not mentioned when

discussing annual cost impacts of the proposed rule in the Federal register notice or support documents. EPA needs to explicitly explain the actual projected impacts of the

imposed limits on affected units and accurately account for the increased fuel costs.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

Commenter Name: Eric Trauner
Commenter Affiliation: none
Document Control Number: EPA-HQ-OAR-2003-0119-2457
Comment Excerpt Number: 2

Comment: It is not sound policy to put such demands on modestly-size boilers burning fuel other than natural gas. Placing such demands on modestly-sized solid/ liquid fuel boilers will create a rush for conversion to natural gas, to the point where natural gas supplies could be strained. US-EPA itself acknowledges this reality.

Furthermore, in an era of debate about anthropogenic global warming, it's unwise to put excessive demands on use of biomass and energy-intensive solid waste. US-EPA acknowledges that biomass is a carbon-neutral fuel source. Furthermore, there will be increased landfilling of biomass as well as energy-intensive solid waste under this proposal. Not only will this strain landfill space, but anaerobic decay of biomass and solid waste produces methane gas, a decidedly more potent greenhouse gas than carbon dioxide. Indeed, a strong case can be made that US-EPA should be encouraging use of biomass and solid waste as fuel rather than landfilling, in order to reduce net greenhouse gas impact.

Response: See the "Secondary Impacts of Control Options for Commercial and Industrial Solid Waste Incineration (CISWI) Standards" memorandum in the docket.

14.7 Health Benefits

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 37

Comment: These boilers and incinerators produce particulate matter -– tiny bits of solids and aerosols formed by the sulfur dioxide and nitrogen oxide emissions. Particulate matter is the most dangerous of the widespread air pollutants. Particulate matter triggers asthma attacks, heart attacks, and strokes, among other damage, but most critically, particulate matter kills. Breathing

find particles increases the risk that children with asthma and older adults with chronic obstructive pulmonary disease or cardiovascular disease will end up in the emergency room or the hospital.

These units also spread mercury and lead, hazardous metals that can harm children's brains, hurting their IQ and limiting their ability to learn and to remember what they have learned. Many of the other toxic pollutants spewing from these sources cause cancer, including formaldehyde, dioxin, cadmium, furans, and hydrochloric acid. Because these devices are so numerous and so widespread, their toxic pollution infiltrates communities across the nation. Their harm to health settles heaviest on those who live near them, communities that are often poorer, less well educated, and minorities.

Study after study finds that pollution harms these folks far more than it does others. Cleaning up these boilers and incinerators will save lives. EPA estimates that between 2,000 and 5,000 lives will be saved every year because of the changes put in place by these requirements beginning in 2013.

But that's only part of the benefits. Having less pollution to breathe should benefit –- should prevent over 3,000 non-fatal heart attacks, avoid over 35,000 cases of worsened asthma, and eliminate nearly 3,400 hospital and emergency room visits each year –- each year.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 71

Comment: The new rules will substantially reduce emissions of hazardous air pollutants and the risk of serious health effects, including cancer, reproductive disorders, and birth defects in the communities across our state and the country.

Boilers that burn coal and waste material are an antiquated, highly destructive way to produce energy. EPA action to crack down on toxic pollutants, including mercury, that come from small coal boilers –- especially those that many college campuses continue to use -– is well overdue. The new rules will require significant, welcome upgrades at many of the campus coal plants across the nation, including both the University of Virginia and Virginia Tech.

The new rules will protect students and residents who live near and downwind from those coal –- excuse me -– coal-burning boilers. Emissions of toxic air pollution such as mercury, arsenic, cadmium, and acid gases, would be significantly reduced. These pollutants are extremely dangerous, and EPA's actions will help remove thousands of pounds of toxics from the air, including 15,000 pounds of mercury and tens of thousands of tons of acidic gases that cause breathing problems, particularly in vulnerable individuals like children and the elderly. About 36,000 asthma attacks could be prevented each year and result in approximately $18 to $44 billion in health savings annually, according to the EPA's analysis.

Mercury is an extremely dangerous neurotoxin that can impact a child's ability to walk, talk, read, write, and learn. The mercury problem in the United States is so pervasive that one in six women today have mercury levels in their blood high enough to put her baby at risk, according to the EPA. High mercury levels have also been linked to an increased risk of heart disease in men.

We need drastic reductions in toxic pollution and greenhouse gas pollution, and these boilers are a major source of this pollution, even if not individually, then cumulatively. There are nearly 14,000 major source boilers alone around the country. Even the smaller types of boilers burning coal and waste present a grave threat to human health and the environment. Toxins like mercury and selenium are harmful even in small doses, and many of these facilities are located in very highly populated areas.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 84

Comment: There are several –- I think it's 4,800 unnecessary deaths are going to be avoided by instituting or finalizing the MACT rule. And that's certainly been something that we're encouraged to see in the environmental and also the public health community.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Richard Luczyski
Commenter Affiliation: Sierra Club
Document Control Number: EPA-HQ-OAR-2003-0119-0715
Comment Excerpt Number: 2

Comment: I would like more medical information on what these processes are needed and used for in our economy that are impacting our health.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters

Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 73

Comment: The boiler and incinerator cleanup will save lives, up to 5,000 every year because of the changes put in place by these requirements beginning in 2013, as estimated by the EPA. Less polluted air should also prevent over 3,000 nonfatal heart attacks, avoid over 35,000 cases of worsened asthma, and eliminate nearly 3,400 hospital and emergency room visits each year . As the EPA estimates that cleaner air from cutting emissions from major areas with source boilers will amount to up to over $43 billion each year beginning in 2013 in savings. There are overwhelming benefits that far outweigh costs to cleaning up our air.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: David Mickey
Commenter Affiliation: Blue Ridge Environmental Defense League
Document Control Number: EPA-HQ-OAR-2003-0119-1966.1
Comment Excerpt Number: 4

Comment: The proposed rule sets limits for nine air pollutants-mercury, lead, cadmium, hydrogen chloride, dioxins/furans, particulate matter, carbon monoxide, nitrogen oxides, and sulfur dioxide. The "common" air pollutants particulate matter, carbon monoxide, nitrogen oxides, and sulfur dioxide contribute to widespread respiratory illness like asthma, emphysema, and cardiovascular disease.

In an April 19, 2010, letter to North Carolina Department of Environment and Natural Resources Secretary Dee Freeman, the NC Academy of Family Physicians emphasized the need to reduce emissions specifically from poultry waste and biomass:

"Biomass burning of poultry litter and wood wastes creates emissions of particulate matter that research has shown increase the risk of premature death, asthma, chronic bronchitis, and heart disease. (1, 2) This burning process also creates numerous byproducts, including nitrogen oxides and volatile organic compounds that increase smog and ozone, which are known to increase lung disease and mortality (3); sulfur dioxides which also contribute to respiratory disease (4); arsenic which can increase the risk of cancer (5); mercury which can increase the risk of brain and kidney disease and affect the developing fetus (6); and dioxins which may increase the risk of cancer, heart disease, diabetes mellitus, developmental delays in children, neurotoxicity, and thyroid disease (7). These health effects would increase disability and death in all age groups, but particularly in the most vulnerable—developing fetuses, newborns, children, those with chronic illness, and the elderly. As a result of this increased disability and disease, medical costs in the state will increase."[Footnote: Academy of Family Physicians letter to NC DENR Secretary Freeman April 19, 2010].

The impact of incinerators on human health is obvious.

Response: EPA agrees that exposure to fine particulates and toxic air pollutants is associated with severe health effects and reducing exposure to these pollutants is associated with substantial public health benefits.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 4

Comment: Benefits are all based on PM reductions from the controls. The benefit of the HAP regulation insofar as it reduces HAPs, cannot be known according to EPA:

These benefits estimates represent the total monetized human health benefits for populations exposed to less PM 2.5 in 2015 from controls installed to reduce air pollutants in order to meet these standards...

The benefits from reducing carbon monoxide and HAP have not been monetized in this analysis, including reducing 29,000 tons of CO, 590 tons of hydrochloric acid, 5.4 tons of Cd, 6.0 tons of lead and 280 pounds of Hg each year. Although we do not have sufficient information or modeling available to provide monetized estimates for this rulemaking, we include a qualitative assessment of the effects associated with these air pollutants in the RIA for this proposed rule, which is available in the docket. 75 FR 31968

Response: In many instances, it is not possible to quantify and monetize all of the benefits associated with a regulatory action due to data, resource, and methodological limitations. For this rule, we were only able to monetize the benefits associated with reducing exposure to PM2.5 as a result of reducing direct PM2.5 emission and PM2.5 precursor emissions such as SO2. If we were able to fully monetize all of the benefit categories, the benefits would exceed the costs by an even greater amount than we currently estimate.

EPA estimates all of the anticipated costs and benefits associated with a regulatory action, to the extent feasible, for the purpose of determining the likely impacts, not to justify an action. Co-benefits that occur as a result of a regulatory action are appropriate to include in the RIA, and it is appropriate to compare the total monetized benefits with the costs.

Commenter Name: Ted Michaels
Commenter Affiliation: Energy Recovery Council (ERC)
Document Control Number: EPA-HQ-OAR-2003-0119-2088.1
Comment Excerpt Number: 8

Comment: EPA's proposed standards will require dramatic emission reductions at biomass-toenergy facilities which already meet stringent health-based toxic air emission standards. Take, for example, Covanta Energy Corporation's Oroville, California facility which combusts urban demolition wood and agricultural wood and residues, producing 20 MW of renewable electricity.

The plant employs 24 people from the surrounding small communities and contributes $13 million dollars annually to the local economy. EPA's proposed standards will require the facility to reduce emissions up to 99% depending on the pollutant. Since 1987, the facility has been subject to California's AB 2588 Air Toxics "Hot Spots" Program which requires assessments of the health risks of emissions of hazardous or toxic air pollutants. The AB 2588 program provides for the calculation of the cancer, chronic non-cancer, and acute non-cancer risks due to emissions from any specific facility, based on measurements of the toxic emissions from that facility, using an approved methodology, with the comparison of the results to established thresholds of acceptable risk. This program, a "Health Risk Assessment (HRA)," has been successfully and effectively employed in California for over two decades. Recently, the Butte County Air Quality Management District (BCAQMD) reported the results of its AB 2588 assessment for the Oroville facility, indicating a potential cancer risk of 0.42 in a million and chronic and acute hazard indices of 0.005 and 0.003 respectively.

[Footnote: Letter from David J. Lusk, Senior Air Quality Engineer, BCAQMD to Francisco Barriga dated March 12,2010.] Cancer risks of less than one in a million and hazard indices of less than one are deemed acceptable by the BCAQMD. Risks are also significantly below EPA's acceptable carcinogenic risk threshold range of 1 to 100 in a million. EPA's proposed standards would impose costly emission reduction requirements on biomass-to-energy facilities that currently meet applicable health-based standards and is indicative of the over-reach of EPA's floor setting methodology.

Response: See Preamble Section V. for discussion of MACT floor calculations.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 10

Comment: A complete and accurate analysis would show the emissions (and human health and environmental) impacts on a unit-specific or subcategory-specific basis. It also would analyze the incremental impacts by comparing the environmental performance of units that already are regulated under a Sec. 112 MACT standard vs. what that performance would be under a Sec. 129 standard. Instead, EPA's analysis looks only at the effects of being regulated under Sec. 129 vs. not being regulated at all. By failing to analyze the impact of the CISWI rule on a unit-specific and incremental basis, EPA makes it seem as though the rule will produce across-the-board emission reductions and environmental benefits. But the reality is that none of the emission reductions and none of the benefits of the rule will come from regulation of cement kilns under the CISWI standards. And by attempting to force cement kilns into the CISWI rule, which will destroy existing markets for the safe reuse of secondary materials, EPA will actually harm the environment.

Response: In the regulatory impact analysis (RIA), we provide pie charts to illustrate the fraction of benefits by subcategory, including the fraction associated with cement kilns.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 13

Comment: All of the health benefit that EPA claims in the CISWI rule is from reductions in emissions of PM and PM precursors. EPA has noted that burning scrap tires in cement kilns results in lower PM emissions from the mining, processing, and transportation of coal. But EPA does not disclose or analyze the fact that, by significantly reducing the number of cement kilns that burn scrap tires, the proposed rule will increase coal consumption and cause a measurable increase in related PM emissions. This is yet another reason why EPA's impact analysis should consider units or subcategories separately. Because the RIA lumps together all units, it inappropriately camouflages the fact that the rule would cause direct emissions from certain types of units and indirect emissions to increase.

Response: In the regulatory impact analysis, we account for the emission disbenefits to the extent feasible.

See the emission reduction memorandum in the docket for discussions on calculation of baseline emissions and emissions reductions.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 28

Comment: The proposed CISWI rule includes Table 13: Emissions Reductions for MACT Compliance and Alternative Disposal Options For Existing CISWI Using the 'Primary Approach" Emission Limits Concurrently Proposed Under RCRA which details the emissions reductions that would be achieved under the proposed rule using the concurrently proposed definition of solid waste under RCRA [Footnote: 75 FR 31963.] Background document data reveals that EPA's calculations for emission reductions from waste-burning cement kilns are non-existent for the following pollutants:

* mercury

* PM

* dioxins/furans

* NOx

* SO2

For these pollutants, the total emission reductions are zero tons per year. This is extremely important because in this rule EPA has regarded PM, NOx, and SO2 emissions as the pollutants responsible for the highest cost to human health and the environment. EPA highlights their

importance by assigning costs only to the reduction of these three pollutants. But none of the reduction of emissions of the pollutants that EPA has deemed most important will come from cement kilns that would be subject to this rule.

Of the nine pollutants regulated by the CISWI Rule, EPA has predicted that emission reductions from cement kilns will occur for only four of the pollutants. Of those pollutants, over 99% of the reductions would be from a single specie – carbon monoxide (CO). Of the 53 cement kilns EPA anticipates being subject to this rule, the estimated reduction in CO will occur at only 6 facilities, with 3 of those facilities accounting for 88% of total CO reductions. [Footnote: Baseline Emissions and Emissions Reductions Estimates for Existing CISWI Units, Table 5. Emission Reductions, memo from Jason Huckaby, Amber Allen, Kristen James, ERG to Charlene Spells, Toni Jones, Ketan Patel, EPA, April 28, 2010.]

CO, however, is not a hazardous air pollutant and the potential impacts of CO emissions on human health and the environment are relatively small and EPA has not even bothered to quantify benefits for CO reductions in this rule. In general, the benefits per ton for CO control/reduction are far lower than for the other air pollutants because: 1) CO is not linked to excess mortality at typical ambient concentrations; and 2) CO does not contribute significantly to atmospheric formation of other pollutants that are linked to excess mortality (e.g., PM & ozone).

In summary, EPA's estimated emission reductions from cement kilns complying with the CISWI rule are almost entirely related to carbon monoxide emissions from a small number of facilities. Cumulatively, the emissions reductions EPA has predicted for cement kilns would, at most, have minimal positive impact on human health and the environment.

Response: Carbon monoxide (CO) is associated with cardiovascular morbidity, particularly in individuals with coronary heart disease. Other subpopulations potentially at risk include individuals with diseases such as chronic obstructive pulmonary disease (COPD), anemia, or diabetes, and individuals in very early or late life stages, such as older adults or the developing young.For more information on the health effects associated with exposure to CO, please consult the Integrated Science Assessment for Carbon Monoxide (U.S. EPA, 2010).

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 34

Comment: EPA's assumption of the benefits derived from this rule is based primarily upon reductions in PM2.5 and PM2.5 precursor emissions as calculated in EPA's regulatory impact analysis (RIA) [Footnote: Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units, Draft Report, April 2010.] The PM2.5 reductions are the result of emission limits on PM, on PM2.5 precursors such as NOx and SO2, as well as emission limits on other pollutants. EPA's analysis uses the same benefit-per-ton method as applied in the Subpart LLL RIA.

The value of the benefits was applied by EPA only to PM2.5 emissions and to PM2.5 precursors, NOx and SO2. No benefits were calculated from the reductions of any other pollutants.

As has been noted previously, the emission reductions for cement kilns complying with the floor standards of the CISWI rule are minimal. For the pollutants that EPA deemed most important to human health and the environment, the Agency has estimated the CISWI rule will produce no reductions for PM, NOx, or SO2 for the cement kiln subcategory. All emission reductions and benefits estimated by EPA are derived from other, non-cement kiln CISWI subcategories. [See submittal for Figure 1 – Breakdown of Monetized Benefits for the Proposed CISWI NSPS and Emissions Guidelines by Subcategory provided by commenter,] as reproduced from Figure 6-4 of EPA's RIA, demonstrates that EPA knows that regulating cement kilns under the CISWI rule will provide no benefits.

Response: Data, resource, and methodological limitations prevented EPA from estimating the monetized benefits from reducing mercury and other HAP emissions. Even if we were able to monetize the public health benefits of reducing exposure to mercury and other HAPs, it is likely that the PM benefits would continue to dominate the total monetized benefits due to the size of the exposed population and the severity of the associated health effects. Despite our inability to provide monetized benefits of HAP emission reductions, the total monetized benefits exceed the estimated costs of the rule by a substantial margin, even when taking uncertainty into account.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 40

Comment: Costs of Adverse Health or Environmental Impacts for Loss of TDF Are Significant

There are many adverse emissions impacts that would result from

TDF being replaced with coal. These impacts can readily be quantified in terms of adverse health impacts. EPA has based the entire environmental benefit analysis for the CISWI rule on PM2.5 and PM2.5 precursors. The adverse impacts can also be calculated

based upon costs presented in EPA's RIA and other sources [Footnote: Draft Regulatory Impact Analysis Proposed Rulemaking to Establish Light- Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA-420-D-09-003, September 2009, p. 7- 46.] [See submittal for Table 4 – Adverse Impacts from Loss of TDF/Replacement by Coal] Table 4 includes a summary of the calculation of the impacts to human health and the environment for the increase in emissions due to the use of coal in lieu of TDF as fuel for cement kilns.

For NOx and SO2 impacts, the adverse cost estimates assume that no additional controls would be installed at cement kilns to abate the additional emissions. This may or may not occur because whether emission of NOx and SO2 would need to be abated is a function of individual facility permits and whether or how far the actual emissions might be below a cement facility's permitted levels.

Table 4 also includes the estimated cost range for the additional GHGs that may be emitted due to the loss of TDF. As noted above, the change in the marginal dollar value (i.e., cost) of climate-related damages resulting from carbon emissions is the "social cost of carbon" (SCC) [Footnote:

Draft Regulatory Impact Analysis Proposed Rulemaking to Establish Light- Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, EPA-420-D-09-003, September 2009.]

As can be seen, the adverse health and environmental impacts from switching all of the TDF burned at cement kilns to coal is very significant. In the worst case, the adverse cost impacts have the potential to totally wipe out the monetized benefits claimed by EPA for the entire rule, and that is considering only the loss of TDF. The impact would be even more severe if the wider range of alternative fuels used by the industry also were abandoned.

Response: In the regulatory impact analysis, we account for the emission disbenefits to the extent feasible.

See the emission reduction memorandum in the docket for discussions on calculation of baseline emissions and emissions reductions.

14.8 Projection of New Units

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 7

Comment: In fact, our Green Energy Cogeneration project is now at risk. As EPA has pointed out in the draft CISWI rules, it's expected no new CISWI units to come on line. This is not MACT.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: James P. Brooks
Commenter Affiliation: Bureau of Air Quality, Maine Department of Environmental Protection (DEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1845.1
Comment Excerpt Number: 4

Comment: EPA states that they expect no new units to be subject to the proposed CISWI standards. The Maine DEP is aware of several multi-fuel boilers that were planned for reconstruction or modification to improve production and combustion efficiency that may be subject to the standards for new CISWI units. We believe EPA's assumption is misguided, and we recommend that EPA review its proposed applicability provisions and solid waste definition to ensure that they match EPA's intended impact.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 52

Comment: Domestic cement capacity is expected reach roughly 107 million metric tons in 2015 and beyond. These estimates reflect planned expansions. PCA assumes no new capacity is added beyond these announced plans. Capacity estimates also include assumptions regarding the continued retirement of older wet kilns as well as estimates regarding plant closures not covered by the Proposed CISWI Rule resulting from rigorous standards contained in the Pre-publication Portland Cement NESHAP.

The portland cement industry in the United States is currently comprised of more than 30 producers operating more than 167 kilns with an estimated domestic clinker capacity of nearly 92 million metric tons. Gypsum is mixed with clinker to form portland cement. Gypsum/limestone currently accounts for 7.5% of the mix. Including gypsum and limestone additions, domestic cement capacity is currently estimated at 105 million metric tons.

Nearly three million metric tons of new clinker capacity is expected to come on-line during 2010. Further expansions are planned in the out years, bringing the total clinker 2006- 2015 capacity expansion to 21 million metric tons by the end of 2015. By itself, this investment increases capacity over 21% compared to 2007 levels. The expansion affects 26 plants with a mix of greenfield sites (8) as well as expansions at existing facilities. Beyond 2013, no new additions are expected. This assumption may have merit. During 1980-1996, for example, United States cement capacity was largely unchanged.

Large multinational companies dominate ownership of the United States cement industry. Within a multinational company each geographic region, such as the United States, competes for scarce corporate investment dollars (keep in mind, expanding cement capacity is extremely expensive – a two million metric ton plant now costs upwards of $600 million). The rate of return on new capacity investment in the United States are compared against returns in other countries. Current financial distress caused by low utilization rates and an uncertain regulatory environment could reduce expected returns on investments in the United States and contribute to corporate decisions to wait-and-see before making further investments in the United States.

In addition to clinker capacity expansions, changes in U.S. specifications allowing for increased use of limestone in portland cement could increase the potential domestic supply. Further changes in U.S. specifications occurred this year allowing for increased use of inorganic cementitious materials such as fly ash and slag. How much these specification changes increase cement capacity depends on how plants elect to exercise these options. Gypsum/limestone allowances currently add 7.5%. PCA expects that total additions will grow to 9.5% by 2025. By 2025 these additions could add 2.2 million metric tons to domestic cement supply [see submittal for Figure 3 capacity expansion of cement industry submitted by commenter.]

Expansions in cement supply are expected to be largely offset by displacements of capacity. Economic stress and declining cement consumption have resulted in commissioning delays and slower planned ramp-ups for new plants. Two planned "greenfield" plants have been postponed

indefinitely. Permanent or temporary shutdowns at 16 plants have been announced or are planned. Clinker plant shutdowns since 2008 have reduced domestic capacity by 10.3 million metric tons.

Some, but not all, of these capacity displacements may be permanent. Of the closure announcements, seven plants are considered permanent, reflecting nearly 4 million metric tons. Of the remaining temporary closures, PCA assumes these plants will remain closed until stronger market conditions may dictate reopening.

In addition to cyclical displacement of capacity, the cement industry has been gradually phasing out its wet kiln clinker capacity – reducing its clinker capacity by approximately one million metric tons annually during the past ten years. The wet kiln process is an older process and is typically less energy efficient [Footnote: Note: the last wet kiln was installed 35 years ago.]

During the past two years, the phase-out of wet kilns has accelerated – reducing wet kiln clinker capacity by nearly 5.6 million metric tons. In the context of current economic distress, the potential for higher energy prices in the future, and impending climate change legislation, this accelerated pace of wet kiln retirement is expected to continue. PCA assumes total wet kiln clinker capacity will decline to 2.7 million metric tons in 2020 and beyond compared to 12 million metric tons in 2007. This assumption suggests a 9.3 million ton reduction in existing wet-kiln clinker capacity by 2020-2025.

Combining estimates of capacity expansion, changes in specification standards, the structural shutdown of wet kilns and the impact of NESHAP on cement plants translates into domestic clinker capacity estimates at roughly 97 million metric tons in 2015 and 95 million metric tons in 2025. With gypsum and limestone additives this translates into 107 million metric tons.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 63

Comment: National Cement Company of Alabama (NCCA) is a portland cement plant located in Ragland, Alabama that has been in operation for 102 years at the same location. In 2005, NCCA began the process of designing and permitting a new state-of-the-art new kiln system, raw material storage, alternative fuel storage, blending silos, and cooler systems to replace the existing systems. A PSD permit to construct was issued in December 2009 after an extensive BACT review and Class I modeling analysis. Since the beginning, this project has been greatly complicated by the fact that NESHAP and NSPS regulations were in the process of being revised and the limits being proposed by those rules were possibly unattainable. Uncertainty about the NESHAP and NSPS rules combined with the recent Proposed RCRA Rule and Proposed CISWI Rule has jeopardized the new kiln project because NCCA is uncertain that it can successfully comply with the new kiln limits using the best available control technologies based on the 100 year future plan for local raw materials. These proposed rules when combined create an environment that discourages capital investments, kiln upgrades, new technology, and the use of alternative materials and fuels. Multinational conglomerates own more than 80% of the US

cement industry, making it difficult to justify expansion here when regulatory certainty is much greater in other areas of the world.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Andrew T. O'Hare
Commenter Affiliation: Portland Cement Association (PCA)
Document Control Number: EPA-HQ-OAR-2003-0119-1972.1
Comment Excerpt Number: 66

Comment: The new kiln system was also designed and engineered to use 40% alternative fuels replacing traditional fossil fuels, and promoting beneficial re-use and recycling of raw material ingredients. The Proposed CISWI Rule discourages beneficial re-use, and NCCA is greatly concerned that alternative fuels and materials will not be allowed unless a facility is subject to unattainable new source CISWI limits. Eliminating viable proven alternative resources results in a greater reliance on coal, and further contributes to ambiguity in kiln upgrades.

No company or industry sector can invest major resources in technology and operations when future compliance with the limits, and the ability to even monitor these limits is in doubt and unproven. Regulations and their application should be based on what has been achieved in the sector. Each of the foregoing EPA proposed regulations jeopardize the feasibility of the new kiln project. The net result of the proposed regulations discourage investment in capital projects and thus upgrades, efficiency improvements, alternative material and fuel use, effectively locking industry into existing operations. Over time, this will result in economic losses and risks associated with a transition of the U.S. to reliance on increased imports. In addition, imports predominantly come from unregulated countries and thus not only will there be no net environmental improvement, there will likely be a environmental detriment.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: John C. deRuyter
Commenter Affiliation: DuPont
Document Control Number: EPA-HQ-OAR-2003-0119-2089.1
Comment Excerpt Number: 5

Comment: The standards for new sources are extremely stringent, to the point EPA states "we already estimate no new CISWI sources will be constructed due to the costs associated with the MACT floor limits in the proposed NSPS" (75 Fed. Reg. 31959). Such a conclusion should be a red flag warning that a standard is unreasonable and not in keeping with Congressional intent as provided in the CAA. We urge EPA to revisit its evaluation and decision making process and develop standards that while protective of human health and the environment, do not prevent installation of new equipment that can help continue industrial production in the U.S.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Brad C. Thomas
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2003-0119-2124.1
Comment Excerpt Number: 15

Comment: EPA is incorrect in asserting that no new CISWI units will be constructed.

The preamble to the proposed rule expresses doubt that any new CISWI units will be constructed. We do not believe this is necessarily the case for facilities constructed at a remote location off of any road system – as frequently is the case in Alaska. As detailed above, remote Alaska facilities do not enjoy the ease of alternative waste disposal options that operators in the Lower 48 may. At remote facilities, particularly on the North Slope, footprint size matters greatly so any need for storage will necessarily result in more wetland fill. Moreover, any waste storage will invite potentially dangerous human-wild animal interactions. These statements are further developed in the final section of this letter. The need for incinerators in Alaska is, we expect, an ongoing one so EPA should consider this possibility in order to ensure that only reasonable standards are set.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Martha Rudolph
Commenter Affiliation: Colorado Department of Public Health and Environment (CDPHE)
Document Control Number: EPA-HQ-OAR-2003-0119-1906.1
Comment Excerpt Number: 3

Comment: Given the sustainability movement's efforts to rethink materials' use, including those materials previously considered as "waste" (i.e. landfill gas, wood waste, agricultural crop waste, etc.), EPA's assumption that there will be no new CISWI units may be incorrect.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Mark Denzler
Commenter Affiliation: Illinois Manufacturer's Association (IMA)
Document Control Number: EPA-HQ-OAR-2003-0119-2381.1
Comment Excerpt Number: 3

Comment: MACT Floor Setting Method Is Flawed, Unrepresentative, and Is Too Stringent

EPA's MACT floor setting methodology is based on the selection of the best performing units on a pollutant by pollutant basis with upper limit calculations only for the pollutant specific test runs

for that unit. This results in unrealistically low emission limits for many types of units that will preclude installation of any new units that can combust alternative materials. This outcome is inconsistent with the stated goals of improving energy efficiency and lessening dependence on fossil fuels.

This approach obviously does not recognize the inherent differences in materials properties that in turn are dependent on the source, which obviously cannot represent the best performing similar sources. Furthermore, the EPA estimates no new CISWI sources will be constructed due to the costs associated with the MACT floor limits in the proposed NSPS. This clearly demonstrates the excessively stringent emission limits resulting from EPA's approach. This analysis needs to be redone in such a way that new facilities can be built.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Michael I. Holzman
Commenter Affiliation: M.I. Holzman & Associates, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2102.1
Comment Excerpt Number: 4

Comment: EPA's assumption, as stated in the preamble, that no new CISWI units will be constructed, is unacceptable. For example, there are several biomass power plants under development in the Northeast alone proposing to use biomass obtained from C&D sources, as well as existing facilities in Maine currently permitted to use C&D wood fuel mixtures and an existing dedicated whole-tire fired power plant in Connecticut.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Ron Barmore
Commenter Affiliation: Energy Launch Developments, LLC
Document Control Number: EPA-HQ-OAR-2003-0119-2146.1
Comment Excerpt Number: 1

Comment: Comment – The inclusion of energy recovery units as a commercial and industrial solid waste incineration (CISWI) unit does not follow the stated intent of the Resource Conservation and Recovery Act (RCRA) or the rationale presented by the Environmental Protection Agency (EPA).

RCRA Intent

As stated in the introduction to the related rule defining solid waste, Section V. Part A., Docket ID No. EPAHQ-RCRA-2008-0329-0534, Federal Register Vol. 75, No. 107:

Within the context of RCRA, this proposal aims to facilitate materials management to the extent allowed by the statute, through the establishment of a regulatory framework that guides the beneficial

Use of various secondary materials, while ensuring that such use is protective of human health and the environment. EPA, in conjunction with the states, seeks to further facilitate this objective through research, analysis, incentives, and communication. (p. 31849)

The proposed CISWI rule states, "Based on the results of our analysis for existing units and our experiences with other CAA Section 129 regulations, we do not anticipate that any new CISWI units will be constructed." (p 31966) This belief demonstrates that the rule reduces the universe of materials that could be used as a beneficial material or alternative fuel based on the limits in combination with the proposed definition of solid waste and potentially eliminates the opportunity to beneficially use secondary materials in an environmentally positive and productive manner.

Suggested Revision – The proposed rule should provide for the incorporation of new technology that protects human health and the environment. Rather than expanding the universe of solid wastes, the protection of human health and the environment should rely on acceptable control of emissions comparable to current emission standards which have been proven to be protective and meet acceptable levels of risk. Realizing that the court has found that EPA must set standards, the standards should be based on similar units that produce energy such as boilers.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Arthur N. Marin
Commenter Affiliation: Northeast States for Coordinated Air Use Managment (NESCAUM)
Document Control Number: EPA-HQ-OAR-2003-0119-2149.1
Comment Excerpt Number: 19

Comment: New CISWI Facilities

EPA has suggested that it does not anticipate that any new CISWI units will be constructed. NESCAUM is concerned that this conclusion may be premature, especially given the complex landscape for fuels today. New programs to encourage use of waste materials, such as a low carbon fuel standard, may provide incentives to use fuels that would place facilities in the CISWI category. Currently, operators of existing boilers are expressing a willingness to switch to discarded materials. Given the current possibilities for alternative fuels and the potential impacts of the proposed solid waste definition, it is yet to be seen whether or not new CISWI units will be put in place after promulgation of this rule.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Robert D. Bessette

Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 40

Comment: EPA estimates no new CISWI sources will be constructed due to the costs associated with the MACT floor limits in the proposed NSPS. This obviously demonstrates the excessively stringent emission limits resulting from EPA's approach. The standards should not, as a policy matter, be so stringent that they work against use of alternate fuels. This needs to be redone in such a way that new facilities can be built. 75 FR 31959, 31966.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 47

Comment: The proposed unachievable limits would curtail the opening of any new units.

Response: See preamble Sections V and VI. for a discussion on the projection of new units.

14.9 Other - Impact Analysis

Commenter Name: Craig S. Campbell
Commenter Affiliation: Lafarge North America
Document Control Number: EPA-HQ-OAR-2003-0119-2021.1
Comment Excerpt Number: 3

Comment: Perhaps EPA believes (although it never attempts to justify its proposals on these grounds), that eliminating thermal processing of any material with useful energy or mineral composition value is necessary to protect human health and the environment. Lafarge believes, however, that RCRA's goals of protecting human health and the environment and encouraging recycle and reuse of non-hazardous materials can be achieved and are currently being achieved without the extreme positions EPA has taken in its proposed rulemakings.

Response: This comment is apparently directed at the NHSM definition rulemaking. To the extent the commenter has provided this comment there, it will be addressed in that rulemaking.

15.0 EXECUTIVE ORDERS

15.1 Executive Order 12866, Regulatory Planning and Review

Commenter Name: Jason A. Schwartz
Commenter Affiliation: Institute for Policy Integrity
Document Control Number: EPA-HQ-OAR-2003-0119-2016.1
Comment Excerpt Number: 4

Comment: EPA Should Set Emissions Standards that Maximize Net Social Benefits

Given the mandate from Executive Order 12,866, EPA's default practice should be to design regulations that maximize net social welfare, unless directly forbidden by statute. Since Section 112(d)(2) cannot be read to prohibit such a goal, the agency should pursue any beyond-the-floor regulations where benefits justify the costs. This interpretation is not forbidden by the D.C. Circuit opinion in Sierra Club v. EPA (2004), and EPA's regulatory impact analysis indicates that, particularly for the Major Source Proposal, more stringent emission standards than those currently proposed would increase social welfare.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

15.2 Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 50

Comment: These units also spread mercury and lead, hazardous metals that can harm children's brain, hurting their IQ, limiting their memory and their ability to learn.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

15.3 Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act (RFA) of 1996 SBREFA), 5 U.S.C. 601 et Seq.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1

Comment Excerpt Number: 18

Comment: In reference to paragraph C on pages 31970 - 31971, a portion of this paragraph states that this rule will not have a significant impact on a substantial number of small entities. We disagree with this statement. Many of our customers are small companies who will have difficulty spending the estimated $25,000.00 to $50,000.00 per year for an annual stack test. We believe that EPA has greatly underestimated the number of units in operation in performing impact analysis. We currently have over 7,000 installations worldwide, with about 4,500 units in operation in the United States. We estimate that between ourselves and our competitors, there are approximately 15,000 to 20,000 installations domestically. If each of these customers were to be required to perform an annual stack test at an average cost of $30,000.00, the overall cost to small businesses would be $450-$600 million annually.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Nancy and Jim Oliver
Commenter Affiliation: Safety Waste Incineration (SWI)
Document Control Number: EPA-HQ-OAR-2003-0119-1969.1
Comment Excerpt Number: 1

Comment: EPA has not considered the affects of this rule on small entities, even though it is compelled to do so by the Regulatory Flexibility Act.

The Regulatory Flexibility Act requires EPA to review its regulations to ensure they do not unduly inhibit the ability of small entities to compete. During this rulemaking, EPA published the document titled "Regulatory Impact Analysis:" In it, EPA concludes that there are an insubstantial number of small entities affected by its proposed rule. However, its analysis failed to further conclude that the human health benefits to be gained by subjecting an insubstantial number of small entities to the full emission reduction requirements are also insubstantial.

In the document, EPA lists the affected sectors by its proposed rule in Table 5-1. The table shows the annual receipts of a typical waste management and remediation services business to be $7 to $14 million. The table shows the other affected sectors as having at least 500 employees. EPA's document goes on and concludes that all affected entities have the economic resources to cover the cost of compliance with the proposed rule and the economic impact on them is insignificant. In its analysis, EPA failed to consider the economic impact on waste management and remediation service businesses that have much lower annual receipts than $7 to $14 million and less than 500 employees. Certainly, EPA failed to consider the economic impact of its proposed rule on our waste service business that has expected annual receipts for 2010 of less than $100,000 and is solely run by 2 owner/operators.

Clearly, this proposed rule will unduly inhibit the ability of small entities to compete and likely force their closures. EPA should not simply ignore the affects of this rule on small entities. This rule needs to be rewritten so that small entities are not disproportionately affected as they are now.

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Paul W. Rankin
Commenter Affiliation: Reusable Industrial Packaging Association (RIPA)
Document Control Number: EPA-HQ-OAR-2003-0119-2214.1
Comment Excerpt Number: 9

Comment: In the ERG document "Economic Analysis Inputs for Existing CISWI Units" available in the docket, Table 1 provides employee data for the facilities identified as burn-off ovens. As shown in the summary [see submittal for table provided by commenter], only 2 of the 17 business identified are small entities, and most have over 1000 company and/or facility employees. This is in sharp contrast to the drum reconditioning industry: most facilities operate with an average of 50 employees and many are designated as small businesses (up to $7 million revenue).

Response: See the Regulatory Impact Analysis for Commercial/Industrial Solid Waste Incinerators in the docket.

15.4 Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 60

Comment: I am the Vice Chair of the Maryland State Commission on Environmental Justice and Sustainable Communities, and as of today a newly re-appointed member of the EPA's National Environmental Justice Advisory Council.

And my comments will focus on sort of across the rules but in particular on the industrial solid waste incineration units and the definition of non-hazardous solid waste and the environmental justice implications of those.

So, how is EPA evaluating the environmental justice impacts of these rules? In the documents that were provided for the webinar that the Agency conducted last Wednesday -- the rather excellent webinar I might add -– in those documents it described the demographic evaluation of population distribution around the sources impacted by the Boiler MACT CISWI rule and the definition of non-solid hazardous waste.

EPA's demographic analysis of the industrial boilers rule clearly shows that 33 percent of the population around these existing facilities are people of color, and 29 percent of the population around the CISWI incinerators are people of color. Both analyses demonstrate that areas in

closest proximity to these two categories of facilities exceed the percentage of people of color in the nation's population at large, which is 25 percent.

I want to note that while the demographic analysis represents a significant step forward by EPA in determining the potential impacts of its rulemaking, it is nonetheless an insufficient analysis of adverse impact of the operations of these facilities on the nearby communities.

The demographic analysis also shows that surrounding communities also have higher levels of people living at or below the national poverty levels. EPA's determination of benefits of these rules to environmental justice communities outweighing impacts is spotty and needs to be expanded to include public health impacts that extend beyond the simple and mere demographic analysis.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 62

Comment: This is a longstanding set of issues and concerns for environmental justice communities across the nation in all four categories of facilities that these rules are speaking to and the definition of solid waste which we have been tracking for quite awhile now.

And we are very concerned that the Agency is trying to move forward, and we sincerely applaud the efforts of the Agency to bring these rules to closure to enact these rules and to then have them be the law of the land; but we don't want half measures. We want measures that really incorporate and address all of these adverse impacts that are now known to the Agency. The Agency is developing all kinds of tools to measure, but the measure has to be more than a demographic analysis. A demographic analysis is just one aspect of an environmental justice analysis. It is not the sum total. And most of the rulemakings -— at least the slides that were provided for the webinar last week -– talk about a demographic analysis.

Data is given; a demographic table was provided on who would be impacted, who lives in closest proximity to these facilities; but that was the sum total of the environmental justice analysis. There was no analysis about the potential emissions levels or the emissions that would be cut by the enactment of these rules.

There was no quantifying of what the potential public health impact was of the rules. And so we say that you're –- you're 50 percent of the way there, but you still have 50 percent of the way to go to get a really complete picture of how the rules will or will not improve public health and improve the health conditions and the air quality conditions for those who live in closest proximity to these facilities.

I want to offer again, as I have offered numerous times, particularly around the conversation around the definition of solid waste, that there are folks around the country –- and particularly through the National Environmental Justice Advisory Council -– experts of every level -– scientists, attorneys, physicians, public health specialists, people who live in these communities

and run community-based non-profit organizations, academic. There's a wide range of people who through the National Environmental Justice Advisory Council and all the entities that participate in the NEJAC or have worked with the NEJAC to help the Agency come to a better and more comprehensive understanding of what these environmental justice issues are, how to measure them, how to gauge them, and how to factor them into the rulemaking process.

Again, the Agency is 50 percent of the way there, but let me say this on the record: Fifty percent of the way there is a sight better than where we were some years before in doing these rulemakings and enacting these rules. And we excluded a lot of populations and a lot of populations have borne a fairly heavy public health burden from not being included in the rulemaking.

So I want to lift the Agency up for opening the door and saying that we have to look at what the impacts are on all populations; but you're not there yet. And we don't just want to castigate you for having an incomplete analysis; we want to offer that there are so many people who are willing to work with you to help pull this analysis together, including folks in the private sector who have been looking at this issue for a very, very long time.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 63

Comment: It is a fairly strong misnomer to believe that or to assume that because a facility is –- operating in a particular demographic or geographic location that the people who live in closest proximity to that facility necessarily work in that facility or nave any economic benefits. That's a widely held misunderstanding. And just because a facility is in a location doesn't mean that the people who live closest to it work in that location and have some economic benefits.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 74

Comment: I am President of the Connecticut Coalition for Environmental Justice, and I'm an environmental -– and a public health physician.

I wanted to talk a little bit about Connecticut. In Connecticut we have the highest percentage of our trash burned of any state in the country. Over 81 percent of our trash is incinerated in trash energy incinerators.

These incinerators are disproportionately located in low-income communities and in communities of color. The largest trash incinerator in Connecticut, which is the fifth largest in the country is located in Hartford, Connecticut, which has a population that's 78 percent black and Latino.

The second largest in Connecticut, which is the 11th largest in the country, is in Bridgeport, Connecticut, which is, again, a majority of black and Latino.

We are very concerned about asthma in our communities, with cancer, diabetes, and endometriosis. In Hartford our asthma rate is 20 percent, and then there's another 10 percent of people who have symptoms which may or may not be asthma.

I want to comment on all of the -– on all of the rules. And we're very concerned about the trash –- we're very happy that EPA is tightening the rules on trash incinerators and on sewage sludge incinerators.

I forgot to mention that we also have the largest sewage sludge incinerator in the state in Hartford. And, in fact, we have 8 regional waste facilities –- our trash facility takes waste from 70 different surrounding suburban towns –- wealthy suburban towns -– to bring it to Hartford which is one of the poorest cities in the United States.

And so we're very concerned about the toxins from that, and we believe that it contributes to our high rates of asthma, cancer, diabetes, endometriosis, and other health effects.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 81

Comment: I live here in D.C. I work for the organization Earth Justice as our Environmental Health Advocate, and I live in D.C., as I mentioned. And as a resident of D.C., it's always fairly disappointing to see on every rank card that D.C. scores an F in every air toxic category there is out there, which is why I'm really specifically concerned about rules that impact the air community.

I think when we're thinking about air toxic rules it really is about protecting public health, especially in communities that have been over burdened across this country. And we're talking about a number of different issues here in terms of refineries, chemical manufacturers, and other industries across the country.

I just spent the last week in Texas -– in Houston, Texas; Port Arthur; Texas, Bay City, Lake Jackson, and other areas. And these communities are disproportionately impacted, certainly, by a number of air pollution issues, including the malfunction piece.

And in this particular rule it's been really nice to see that that loophole has been closed. And, hopefully, this is going to be finalized; this will protect communities across the country from basically being poisoned by polluters.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 48

Comment: [PANALIST]: You mentioned a cumulative impact analysis. Do you have information available as to how that's being carried out? [COMMENTER]: I think that if you look at the California EPA process that's going on they have a Cumulative Impacts Precautionary Approaches Work Group that we fly up to Sacramento to be a part of. And what they've just finished wrapping up, along with some assistance from the University of Berkeley and Dr. Amy Kyle, is really looking at the data gaps that are out there. And I don't necessarily mean that we need to spend 40 years collecting more data. We obviously need to move forward on the data we have. But they have a very good process and she's a very commendable toxicologist who can actually give us an honest opinion. That's what we're looking for. We don't need to fudge it one way or the another. But let's really look at where we are and see where these data gaps are so that we can make better informed decisions. So I would say that you might want to plug into that or Dr. Joe Lew (phonetic) from the California Environmental Rights Alliance who couldn't be with us here today. He has been working as a representative of E.J. communities on that panel and I'm sure that he could give you information in a way that would be easier for you to process than I can probably do at this time.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437
Comment Excerpt Number: 51

Comment: Because these devices are so numerous and widespread, their toxic pollution infiltrates communities across the nation. They're harm settles heaviest on those who live near them, communities that are often poorer, less well-educated and minorities. Study after study finds that pollution harms these folks far more than it does others.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Los Angeles Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0437

Comment Excerpt Number: 60

Comment: We have some substantial concerns over aspects of these proposed regulations. These industrial sources of pollution are ubiquitous throughout the Los Angeles region and, in many cases, are located in low income areas and communities of color. For instance, of the roughly one dozen refineries in our area, most of which are associated with very high health risks, all but one are located in communities of color. Many of these facilities are poorly using boilers that are decades old and contribute to a lot of pollution, both locally and regionally.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 9

Comment: There has been a lot of talk over the past couple of years from EPA about protecting environmental justice communities ensuring that environmental justice is a part of the decision-making process of everything that EPA takes on . I think that this is a clear example where better protecting and better serving environmental justice communities would be better served by a stricter interpretation of what is a solid waste; as well, using carbon monoxide as a surrogate for other sorts of VOCs, especially those which we struggle so mildly with in the Houston area. I don't think that, again, is going to serve environmental justice communities well.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 13

Comment: [COMMENTER]: How are you defining "environmental justice communities"? You have to -- I know it's a very complicated issue . [COMMENTER]: Yeah, the EPA doesn't even really have a good definition of environmental justice communities, and I think that's one of the things that NEJAC is -- is struggling with, as well, finding exactly what it means to take environmental justice and give it its full measure in the decision-making process, exactly where that comes into the decision-making process, exactly who are environmental justice communities . That's one of the things that I think that is most challenging about Houston, is that it's not just the usual suspects. I think most of the ten-point communities of major industry in the Houston area are obviously environmental justice communities following the regular interpretations of low socioeconomic levels, the racial profile of the community, its proximity to major sources, is

a good start . But especially in Houston, one of the things that my organization has been struggling with a lot over the past year is that we are finding small, yet major sources of pollution buried within our entire community from unusual suspects, such as automotive mechanics, things such as metal fabrication or foundries . So I think these sorts of rules that deal very specifically and are very well defined in things such as a boiler versus an incinerator or solid waste, especially in the Houston region, which I think even by a narrow definition of environmental justice community would probably have more EJ communities than anywhere else in the United States; that is further multiplied when you look at Houston itself being the largest city without any form of zoning in the United States . If you actually pull back the cover of Houston, you start to find many communities sprinkled throughout the entire region that face very specific, but very serious threats from air emissions. We're dealing with one about a half mile from downtown right now. A historic black community that has a boundary in the center of the community, and that boundary from its permit, which was only taken out a few years ago, its historic operational practices, the emissions and locations of the different units within the facility that, that community has been very poorly served by a poor regulatory definition of how a boundary of that size should operate . And this rule or these rules are exactly the sort that need to be very specific and very well defined in order to better protect exactly those sorts of communities that don't have the profile of Manchester or Galena Park or Baytown.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 72

Comment: Their harm settles heaviest on those who live near them, communities often that are poor, less educated and populated by minorities. Study after study confirms that it can harm these individuals far more than it does others.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 84

Comment: There is another study going on in Corpus Christi concerning benzine releases from current existing refineries in the area . This is conducted by a local group called the Citizens for Environmental Justice, conducted after ten years of refusal to bond the Texas commissioner on environmental quality to conduct such a study. That year-end study determined there were absorbantly high benzine levels in people living in the Hillcrest community immediately adjacent

to several refineries in the northern part of Corpus Christi . In Addition to that, as we determine now, as a consequence of that study, that hundreds of millions of dollars worth of hydrocarbons are in the ground and the groundwater beneath the Hillcrest neighborhood currently right now seeping into people's homes and into their bloodstreams. We would urge that the EPA -- TCEQ, as well, and specifically the EPA move toward a more cumulative study of emissions -- to look at the emissions not just at any one plant, but of all those in the immediate vicinity, whether it be looking at SO2 or mercury or lead or particulate matter or what have you.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Margaret E. Sheehan
Commenter Affiliation: Save America's Forests, Energy Justice Network, The Biomass Accountability Project, Inc.
Document Control Number: EPA-HQ-OAR-2003-0119-1176.1
Comment Excerpt Number: 6

Comment: EPA should conduct further study on the effects of siting commercial biomass combustion power plants in environmental justice communities.

The EPA should continue to consider the disproportionate impact that incinerators have on poor and minority communities. According to the EPA's webinar on national emission

standards for boilers, process heaters and incinerators, for populations living near disposal and processing facilities that may receive wastes diverted from incinerators, the results suggest that percentages of low-income and minority populations are slightly higher than national average. [See submittal footnote 19 for reference.]

These results should not be used to justify avoidance of heightened standards for incinerators

because low -income communities are already disproportionately affected by air pollution. [See submittal footnote 20 for reference.]

The pollution from industrial air pollution sources, such as incinerators, accumulates in places where minority populations are disproportionately affected. Id.

The EPA should do more studies to test the background levels of already existing pollution of communities affected by incinerator emissions. Background levels of air pollution in these communities are often higher than in other areas because, in general, low-income neighborhoods experience more of all forms of pollution (including air and water pollution, as well as toxic waste pollution) than do neighborhoods that maintain higher levels of income. [See submittal footnote 21 for reference.]

For example, a biomass incinerator was planned to be built in Springfield, Massachusetts, a city described as already having "an 'F' in air quality." [See submittal footnote 22 for reference.] In fact, Springfield ranks number fourteen on the Asthma and Allergy Foundation of America's ranking of U.S. Metropolitan areas according to prevalence of asthma. [See submittal footnote 23 for reference.]

The EPA should use the results of studies of background emissions to strengthen regulation of emissions; for example, if an inner-city community already has high dioxin emissions, emission standards should be higher.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Alice Wright-Bailey
Commenter Affiliation: Pennsylvania Department of Environmental Protection (PDEP)
Document Control Number: EPA-HQ-OAR-2003-0119-1973
Comment Excerpt Number: 1

Comment: EPA is really not EJ friendly when it comes to these type of initiatives, you ask communities to make public comments and the website is too complex. The conference call was absolute overwhelming. There was too much material covered all at one time. It was too technical, hard to understand and keep up with the discussion. These 4 rules covered boilers, heaters, solid waste incinerators, industrial/residential incinerators, hazardous/non-hazardous, etc. It's a shame, the impacted community where a vast majority of these facilities are located are being asked the impossible. What is the problem with simplifying some of the information. EPA staff deal with the terminology and the science daily; community just live among these sites. EPA presents to people like they should understand the science and reiterate that the reason you are having these sessions is for community involvement.

112 and 129 - there are a lot of concerns and unanswered questions about the "unknown" pollutions that are processed through these facilities that EPA/DEP does not monitor. How can you explain different rules, monitoring, and upgrades for old and new facilities. Communities can go on and on if given the opportunity. What is this big rush to cram all this material into a few presentation and get it over with?

The website, the presentation of materials are not user friendly and this process discourages community involvement and comment and that is very discouraging.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Vinson Hellwig and Robert Colby
Commenter Affiliation: National Association of Clean Air Agencies (NACAA)
Document Control Number: EPA-HQ-OAR-2003-0119-2047.1
Comment Excerpt Number: 15

Comment: In its discussion of environmental justice issues, EPA asserts that the rule meets environmental justice concerns because it does not increase HAP emissions in minority and low income areas. We suggest that this is too low a test for disparate impact. If this rule reduced HAP emissions broadly across the country, except in minority and low-income areas, a disparate impact might result. Here, it has been established that industrial boilers are often located in

minority/low-income communities and that the reductions in HAPs from the proposed rule will in fact disproportionally impact those communities – but in a beneficial way. EPA's preamble should reflect this fact.

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

Commenter Name: Michel R. Benoit
Commenter Affiliation: Cement Kiln Recycling Coalition
Document Control Number: EPA-HQ-OAR-2003-0119-1970.1
Comment Excerpt Number: 20

Comment: Cement kilns differ significantly from other facilities affected by these rules in ways that are highly relevant to EPA's environmental justice analysis. Due to these differences, the proposed CISWI and SWI rules will not provide environmental justice benefits when applied to the cement industry. To the contrary, they will significantly increase the environmental burden on minority communities. This is a compelling reason to remove cement kilns, which are already fully and stringently regulated under Clean Air Act §112, from the scope of these rules at least until the

Agency can more thoroughly consider these facts and ensure that its rulemaking will not cause disproportionate harm to minority and low-income populations.

Cement kilns differ in at least two important ways from the vast majority of facilities covered by the CISWI rules, most of which are relatively small integral components of commercial or industrial facilities. First, cement kilns differ in terms of the principal factors that determine their location. The main ingredient in cement production is limestone. Because it is extremely expensive to transport this essential raw material, the great majority of cement kilns are located immediately adjacent to large limestone deposits. In other words, the siting of cement kilns has historically followed the limestone. This has occurred for basic economic reasons that are wholly unrelated to the racial composition or income levels of local populations [Footnote: Nothing we are saying about cement plant siting should be construed as indicating or implying anything about the siting criteria relevant to other units affected by the CISWI rule.]

Most limestone deposits, and hence most cement kilns, are located in rural and under-populated areas where, as circumstances would have it, there are few minorities. In fact, as will be explained further below, the great majority of kilns are located in areas where the minority population is far below the national average. This means that, as applied to most cement kilns, these rules will not achieve the environmental justice benefits that EPA has identified in its Review of Costs, Benefits, Economic Impacts, Environmental Justice, and Other Impacts ("Review of EJ Impacts") [Footnote: Review of Costs, Benefits, Economic Impacts, Environmental Justice, and Other Impacts, Docket ID: EPA-HQRCRA-2008-0329-0528, p.37 (April 29, 2010) (minority and low income populations "stand to see increased environmental and health benefits from the emissions reductions resulting from the two rules") [hereinafter "Review of EJ Impacts"]. Furthermore, and as EPA's regulatory impact analysis shows, layering these additional requirements on cement kilns, which already are subject to stringent Clean Air Act §112 emission standards, will have zero impact on cement kiln emissions and therefore

could not improve the health of minority communities even if they existed in proximity to cement plants.

Instead, as applied to cement kilns, these rules will seriously damage the environmental health of minority communities if promulgated as proposed. The reason for this has to do with the second large difference between cement kilns and other CISWI facilities. Compared to the other combustion units covered by the CISWI rule, cement kilns use much greater quantities of scrap tires. This means that the "diversion" issue, which EPA's own analysis shows will harm the environmental health of minority communities, is far more significant for cement kilns than for most other covered sectors. Scrap tires provide a dramatic example of this [Footnote: Id., section 4.5, p. 28] As we will further describe below, cement kilns burn hundreds of thousands of tons of scrap tires each year—much more than most other CISWI sectors—and beneficially use them to produce the energy needed to drive the cement manufacturing process [Footnote: For example, in 2007 the U.S. cement industry consumed about 847,000 tons of scrap tires, most of which were whole tires.] Scrap tire combustion technology was developed in cooperation with EPA as part of a deliberate Agency policy to divert tires away from landfills, where they generate high risk of mosquito-borne diseases, fires and other health and safety problems, and to redirect scrap tires toward highly-regulated industrial combustion facilities such as cement kilns. For decades, EPA, the tire industry, the cement industry, and others have worked together to develop the markets that have allowed this effort to succeed. If EPA defines solid waste in a way that causes cement kilns to be regulated as CISWI units, cement kiln operators will abandon the use of scrap tires and much of this hard work will be undone. Consequently, many thousands of tons of tires will be diverted to landfills and/or waste processing facilities, which tend disproportionately to be located in minority communities. The result will be a damaging and dangerous environmental impact on minority groups as hundreds of thousands of tires and other previously recycled or reused secondary materials flow into their communities. EPA can avoid this negative environmental justice outcome simply by appropriately defining scrap tires as NOT a solid waste for purposes of CAA §129 and thereby removing the use of scrap tires in cement kilns from the applicability of the CISWI rules, or, preferably, by defining solid waste in a way that completely removes cement kilns from applicability of the CISWI rule.

The remainder of this section of our comments further explains why EPA would better serve environmental justice by removing cement kilns from the CISWI and SWI rules than by including them. It will demonstrate that, if EPA persists in applying these rules to the cement industry, its action would both violate Executive Order 12898 and constitute arbitrary and capricious rulemaking. It will show that EPA's decision to use the national population as a comparison group in its demographic analysis is fundamentally flawed and contrary to established civil rights law. EPA should, instead, compare only similarly situated populations. Finally, it will demonstrate that EPA must follow its own guidance and make decisions only on the basis of statistically significant differences, a key requirement that the Agency has failed to meet in these proposed rules.

A. Due to the special characteristics of the cement industry these rules will not yield environmental justice benefits at cement kilns.

In its Review of EJ Impacts EPA concludes that the populations living within a three-mile radius of the facilities covered by the CISWI rule are disproportionately minority and low-income [Footnote: Review of EJ Impacts, Docket ID: EPA-HQ-RCRA-2008-0329-0528, p.37.] EPA accordingly concludes that the rules, which purportedly will tighten emission limits on these

facilities, will generate improved environmental and health benefits for minority communities [Footnote: Id.]

EPA has made these sweeping conclusions despite the fact that this reasoning is completely wrong as applied to cement kilns. As we explained above, to a very large extent cement kilns are located near limestone deposits to minimize the high cost associated with transporting this essential raw material. At the great majority of cement kiln locations, the percentage of the population that lives within a 3-mile radius and that qualifies as minority is less than the national average of 25 percent. As demonstrated by the data in [See submittal for Table 1 showing the percentage of population that lives within a 3-mile radius of each facility provided by commenter,] for every 10 cement plants, more than 8 are located in places where minorities make up 25 percent or less of the overall population. At two-thirds of cement kiln sites minorities make up less than 20 percent of the surrounding population. At fully four out of ten sites minorities make up less than 10 percent of the surrounding population [Footnote: It is true that, at a small number of cement kiln sites, the minority population exceeds the national average in percentage terms. But, as we will explain below, a proper delineation of the comparison population for these facilities shows that they do not present an environmental justice threat.] This should be viewed in contrast to EPA's broad claim that the percent minority population within a 3-mile radius of CISWI units "significantly" exceeds the national average. This clearly is not true for cement kilns and there is no evidence that EPA ever specifically examined the population data for these facilities.

These facts have important implications for EPA's analysis. They demonstrate that, at a significant majority of cement kiln sites, if the CISWI Rule's emission limitations were applicable, they would not provide the environmental and health benefits to minority groups claimed by EPA. Due to the natural consequence of cement industry business realities that require companies to site their kilns near limestone deposits (where minority populations are for the most part not located), these rules will not further the goals of environmental justice at cement kilns. (They cannot solve a problem that does not exist.) On the contrary, and as the next section will show, these rules will harm minority communities and undermine environmental justice goals.

B. Due to the special characteristics of the cement industry, the diversion from cement kilns to landfills will be greater and more damaging to minority communities than the diversion from other sectors

In its Review of EJ Impacts EPA recognizes that, as a result of the CISWI and SWI rules' adverse impact on combustion facilities, those who generate scrap tires and other secondary materials will increasingly divert them to land disposal and waste processing facilities because facilities (such as cement kilns) that would combust them for energy recovery will experience what EPA euphemistically calls "negative growth.". EPA's own data further show that land disposal units and waste recovery facilities generally are sited in locations with higher than average percentages of minorities and low-income individuals than the locations of the combustion units EPA has targeted for regulation by the CISWI rule. (This is particularly true for cement kilns.) It follows therefore that the rules will have the effect of diverting more secondary materials to minority communities and, in so doing, will damage the environmental and health conditions of these populations [Footnote: EPA itself recognizes this in its Review of EJ Impacts. For example, referring to its "Diversion Analysis," EPA observes that "the results of the three-mile analysis suggest that populations living near facilities that may receive secondary

materials diverted from affected combustion units are located in areas where minority and low-income populations are higher than the national average. The Exhibit also shows that minorities' share of the population

within a three-mile buffer is greater than the national average (25 percent) for all seven facility types, ranging from 26 percent for landfills to 38 percent for material recovery facilities. The percent of the population below the poverty line is greater than, or the same as the national population average (13 percent), for all seven facility types, ranging from 13 percent for composting to 17 percent for waste-to-energy plants." (Docket ID: EPA-HQ-RCRA-2008-0329-0528, pp. 40-41) EPA further states that "according to EPA's assessment of affected units using the least cost method, disposal is the most likely prospect for diverted secondary materials, but some specific secondary materials are more likely to be processed into a legitimate non-waste fuel or ingredient, or recycled for nonfuel applications.

The diversion of secondary materials away from combustion units will show benefits (i.e., improved air quality), but will not necessarily alleviate all the potential environmental justice concerns. As secondary materials are diverted to disposal and processing facilities, activity at these facilities will increase (e.g., increased transportation to these sites), which may create environmental exposure and nuisance concerns (e.g., odors, noise, and aesthetics)." (Id., p. 39, emphasis added)]

This finding alone puts these rules into direct conflict with Executive Order 12898 and would render arbitrary and capricious any EPA decision to promulgate the rules in their present form.

This problem with the rules becomes even more acute when one considers cement kilns. In overall tonnage, cement kilns use more secondary materials than most, if not all, of the other covered sectors. Therefore diversion from cement kilns to land disposal and waste processing facilities will be greater and have larger impact. As EPA has noted and as we have reinforced in [See submittal for Attachment 7 – Comments on Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Proposed Rule provided by commenter] to these comments, cement plants are among the largest consumers of scrap tires in the US and definitely are the largest consumers of whole scrap tires, which cement kilns are uniquely capable of using as fuel. In 2007 alone, the industry consumed 847,000 tons of scrap tires. When cement kilns abandon the use of scrap tires rather than become subject to regulation as incinerators under the CISWI standards, huge numbers of tires will be diverted to land disposal in minority communities. EPA has acknowledged this fact and also has admitted accurately that there is no capacity to absorb these tires in the civil engineering and TDF scrap tire markets. (See Section VIII above.) Instead, most tires will be diverted to landfills located in areas with high minority and low-income populations [Footnote: 36 As EPA has stated, "If whole tires are diverted from their current combustion applications as a result of the rule, EPA assumes that they would be diverted to land disposal. While whole tires could potentially be redirected to TDF or civil engineering applications, the size and structure of the scrap tire market suggests that this is unlikely. Given that demand for scrap tires in civil engineering applications has declined in recent years, the capacity of the civil engineering market to absorb additional tires is uncertain. In addition, because tire processors generally send whole tires to cement kilns when there is no demand for them as shredded TDF, it is unlikely that the TDF market would absorb a significant quantity of tires from the whole tire market." (Id., p. 30, emphasis added).]

As EPA has previously noted, tires tend to float to the top of landfills, generating increased risk of mosquito-borne diseases, and long-lasting uncontrolled fires. The Agency has therefore concluded that scrap tires constitute a "special risk factor" in landfills and EPA has previously prioritized limiting the number of tires that are disposed of in this way [Footnote: 37 Host Community Compensation and Municipal Solid Waste Landfills, Robin R. Jenkins, Kelly M. Maguire, and Cynthia Morgan, National Center for Environmental Economics, EPA, at p. 24]. It is for these very reasons that many land disposal facilities do not accept scrap tires. Those that do are located in communities that are disproportionately minority and low-income. As EPA itself has concluded:

"minorities make up 40 percent of the population living within three miles of these randomly selected [scrap tire] facilities, and...18 percent of the population living within three miles of these facilities is below the poverty line. Both of these percentages exceed the corresponding national averages." [Footnote: Review of EJ Impacts, Docket ID: EPA-HQ-RCRA-2008-0329-0528, p.40. (emphasis added)]

Thus these rules, as applied to cement kilns, will result in a massive transfer of "special risk" materials (scrap tires) to landfills in minority communities, which goes directly against the goals of environmental justice and violates Executive Order 12898.

To factually illustrate the scale of the problem, one needs to look only at one state. North Carolina allows tire monofills and, by a very wide margin, the state land-disposes far more tires than 48 other states [Footnote: Only West Virginia is higher.] . In Race, Wealth, and Solid Waste Facilities in North Carolina, the authors make it clear that the state's solid waste landfills hurt minorities [Footnote: Race, Wealth, and Solid Waste Facilities in North Carolina, Jennifer M Norton, Steve Wing, Hester J Lipscomb, Jay S Kaufman, et al Environmental Health Perspectives; Sep 2007; 115, 9.] The document's conclusions state: "We found that, accounting for population density and region, the prevalence odds of a solid waste facility in 2003 was greater in North Carolina block groups with larger populations of people of color compared with white block groups." It does not require much imagination to predict what will happen to the rate of tire disposal in North Carolina landfills if these rules

cause cement kiln operators to walk away from their TDF programs and abandon over 800,000 tons per year of tires that will have to find a new home at "alternative disposal" sites. Has EPA bothered to ask the communities surrounding North Carolina's tire disposal landfills what they think about the prospect of a huge increase in tire-dumping in their backyards? EPA contends that its rules will produce EJ benefits. In fact, as applied to cement kilns, EPA is in actuality proposing to:

1. Destroy existing markets for the use of secondary materials (particularly scrap tires) in cement kilns. (EPA has predicted the SWI and CISWI rules will cause "negative growth" among combustion facilities that recover energy from secondary materials.)

2. Divert secondary materials that currently are reused in cement kilns in low-minority areas, and cause them to be directed instead towards land disposal in high-minority areas. (EPA is on record saying that the SWI and CISWI rules will cause "diversion" of secondary materials away from facilities where they currently are reused and toward "alternative disposal" sites, principally landfills.)

These facts have important legal significance. Executive Order 12898 instructs EPA and all other federal agencies to seek through their policies to achieve environmental justice "[t]o the greatest extent practicable and permitted by law." [Footnote: 59 FR 7629, February 16, 1994.] EPA's own Office of Inspector General has called on the Agency to implement the intent of the Executive Order, [Footnote: US EPA, Office of Inspector General, EPA Needs to Consistently Implement the Intent of the Executive Order on Environmental Justice (2004), available at < http://www.epa.gov/oig/reports/2004/20040301-2004-P-00007.pdf>.] and its own Environmental Appeals Board has held that the Agency should seek to fulfill the spirit of the order where underlying statutes give it the discretion to do so [Footnote: See American Bar Association, The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risks 133 (2nd ed. 2008) (Michael Gerrard & Sheila Foster, eds.) (discussing the EAB decisions that require this).] Thus, EPA must follow this Order or explain in rational terms why it cannot. As applied to the current Rules, this obligation means that EPA must, at minimum, modify t

Response: See the Environmental Justice memorandum for Commercial/Industrial Solid Waste Incinerators in the docket.

16.0 DATA COLLECTION

16.1 Data Skewed

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 16

Comment: We are working hard to –- now that you've released the best performing units to try to get additional information from them; but we also ask that the Agency go out and collect information from other sources, not just stack tests but maybe emission factor information to try to better represent the information that's out there.

So part of that we will take some responsibility, but I think the Agency also needs to do more work in gathering information that's out there and has not been gathered, particularly the CO data.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Arlington Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-0512
Comment Excerpt Number: 17

Comment: ACC is working very hard to provide the Agency with appropriate data that will further inform the statistics that are needed to set realistic standards.

Response: EPA thanks the commenter for their input.

Commenter Name: Houston Public Hearing Transcript
Commenter Affiliation: See transcript for detailed list of commenters
Document Control Number: EPA-HQ-OAR-2003-0119-1111
Comment Excerpt Number: 52

Comment: [Note: Commenter states that same concerns about data quality in Boiler MACT are also relevant to the CISWI rule.]EPA should base the Boiler MACT limits on more realistic data. The data used in setting emission limits is heavily biased, given the way it was collected and sorted. EPA required the best performing units to test and took the best of that small data to represent the best performers; the top 1 percent, not the top 12 percent that the law instructs.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 9

Comment: Such statements seem to support a lack of achievability of the proposed Iimits [see submittal for footnote.] As the limits are being set using a very small amount of data from a very small number of sources, we are not surprised that EPA has come to these conclusions. For the incinerator subcategory, the reason a small number of units are being used to set the limits is that the existing standard caused many units to shutdown. The remaining units likely installed or improved controls in order to comply with the original CISWI standards, effectively resulting in the new limits being set based on the top performers among the already top performers.

Response: See preamble Section V. for the response on MACT-on-MACT. Also, see preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Michael J. Hagenbarth
Commenter Affiliation: RockTenn Company
Document Control Number: EPA-HQ-OAR-2003-0119-1517.1
Comment Excerpt Number: 12

Comment: EPA has "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. The result is a set of standards that reflect the performance of

a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. A source approach would result in emission limits that a real-world incinerator, kiln, burn-off oven, or energy recovery unit could actually achieve.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing. Also see preamble Section V. for the response on the Pollutant-by-pollutant approach and Alternative Approaches.

Commenter Name: Gary Lyon
Commenter Affiliation: Pollution Control Products Co.
Document Control Number: EPA-HQ-OAR-2003-0119-1767.1
Comment Excerpt Number: 5

Comment: Based on the Test Data Provided in Exhibit H [DCN: EPA-HQ-2003-0119-1767.9], EPA Appears To Have Selected the Best Results For Specific Pollutants From Each Individual Test.

EPA appears to have "cherry picked" data to artificially lower MACT levels on a pollutant by pollutant basis. For example, if one furnace had low NOx but high CO, then the NOx test from this unit was used in the NOx tabulation, but the CO for a different furnace was used in the CO tabulation. Such data selection is not a valid way to express the stack test data. In order to express the data in an accurate way, you must use all of the test data from the same source in the compilation. From the unit I.D. numbers shown on the test information that we found, we cannot determine who manufactured most of these units because they have unit I.D. numbers that were assigned by the customer, or by the contractor doing the test. The amount of emissions of one constituent may affect the emission of another.

Response: See preamble Section V. for the response on the Pollutant-by-Pollutant Approach and Alternative Approaches.

Commenter Name: Robert E. McKenna
Commenter Affiliation: Motor & Equipment Manufacturers Association (MEMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1964.1
Comment Excerpt Number: 3

Comment: In light of extensive data sourcing and quality problems, EPA's standards are arbitrary and capricious. We believe the data that EPA gathered to support these rules reflects bias, is incomplete, and is fundamentally flawed. EPA's data collection efforts to support these rules were biased toward so-called "top performing facilities." EPA directed its information requests to units that it had reason to believe were the better performing units in each subcategory. This tainted sample has resulted in proposed standards that are inordinately

stringent, not representative of the overall subcategories to which they apply, and not in accord with the legal standards.

In addition, despite the decade and a half long process that lead to the proposed rules, the Agency based the standards on a relatively minute pool of relevant data. This is best demonstrated by the fact that EPA is faced with the question of what to do about subcategories of over 30 sources where data is so limited that the top 12 percent is represented by only one or two sources. 75 Fed. Reg. 32022. Given that the Clean Air Act requires EPA consider at least five sources in such a situation, the ultimate solution to this concern would have been to have collected more data in the first place.

Finally, EPA's analysis failed to properly address the variability of the data, as well as emissions associated with startup, shutdown and malfunction. Thus, EPA's proposed limits do not appropriately address the variability in emissions of various HAPs. In addition, EPA's proposed limits are unduly impacted by issues associated with the limits of detection. Fundamentally, numerical limits should be based on quantifiable and reproducible test results consistent with reliable source test methods that have well-established performance. Limits should not be based on tests and methods that raise issues of significant measurement and other uncertainties.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Biased Data Collection from Phase II ICR Testing.

Commenter Name: David A. Buff
Commenter Affiliation: The Florida Sugar Industry (FSI)
Document Control Number: EPA-HQ-OAR-2003-0119-1967.1
Comment Excerpt Number: 4

Comment: The limits are being set using a very small amount of data from a very small number of sources. For the incinerator subcategory, the presumed reason a small number of units are being used to set the limits is that the existing standard caused many units to shutdown. The remaining units likely installed or improved controls in order to comply with the original CISWI standards, effectively resulting in the new limits being set based on the top performers among the already top performers.

Response: See preamble Section V. for the response on MACT-on-MACT.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 5

Comment: Such statements seem to support a lack of achievability of the proposed limits. As the limits are being set using a very small amount of data from a very small number of sources, we are not surprised that EPA has come to these conclusions. For the incinerator subcategory, the reason a small number of units are being used to set the limits is that the existing standard caused many units to shutdown. The remaining units likely installed or improved controls in order to comply with the original CISWI standards, effectively resulting in the new limits being set based on the top performers among the already top performers.

Response: See preamble Section V. for the response on MACT-on-MACT. Also, see preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 7

Comment: The Stack Tests provided for the information gathering activity were generally Compliance Stack Test Results. Compliance Stack Tests are generally performed at high firing rates to demonstrate compliance with permitted emissions limitations. These stack tests are not representative of operating conditions at all firing rates and all expected conditions (or all pollutants for all firing conditions).

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 8

Comment: EPA has Illegally Proposed a Standard Based on the Performance of Hypothetical Sources Rather than Actual Sources

EPA has “cherry picked” the best data in setting each standard, without regard for the sources from which the data come. The result is a set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. A source approach would result in emission limits that a real-world incinerator, kiln, burn-off oven, or energy recovery unit could actually achieve.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 36.

Commenter Name: Wayne Smith
Commenter Affiliation: Westlake Chemical Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-1950.1
Comment Excerpt Number: 8

Comment: The Stack Tests provided for the information gathering activity were generally Compliance Stack Test Results. As such, these tests results were designed to demonstrate whether the combustion device was capable of meeting the permitted emissions limitation. For many of the combustion sources, while operating at maximum firing capacity, the Oxygen levels are at a minimum, and the Carbon Monoxide emissions are at a minimum. The goal of the Compliance Tests was to assess compliance with the Permitted Emission Limitation, not to assess the actual low-level Carbon Monoxide emissions. Thus, many of the Stack Test results were not tuned, crafted, or calibrated properly to determine precise low level Carbon Monoxide emissions, just to assess compliance with the Permitted Emissions Limitations (which were often one or two orders of magnitude higher than the reported results).

Response: See preamble Section V. for the responses on the MACT Floor Analysis.

Commenter Name: Paul Noe
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 33

Comment: EPA Improperly Based the Proposed Limits on Synthetic

Sources that do not Actually Exist

AF&PA is very concerned that the proposed limits are not achievable by many sources. EPA's own statement that many units are expected to shut down and no new units are expected to be built seems to support a lack of achievability of the proposed limits. As the limits are being set using a very small amount of data from a very small number of sources, we are not surprised that EPA has come to these conclusions. For the incinerator subcategory, the reason a small number of units are being used to set the limits is that the existing standard caused many units to shutdown. Id. The remaining units likely installed or improved controls in order to comply with the original CISWI standards, effectively resulting in the new limits being set based on the top performers among the already top performers.

Response: See preamble Section V. for the responses on MACT-on-MACT, Biased Data Collection from Phase II ICR Testing, and Technology-Based Beyond-the-Floor Comments-New Units.

Commenter Name: Paul Noe

Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2003-0119-1951.1
Comment Excerpt Number: 36

Comment: EPA has "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. The result is a set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. A source approach would result in emission limits that a real-world incinerator, kiln, burn-off oven, or energy recovery unit could actually achieve. A pollutant-by-pollutant approach results in limits based on a hypothetical unit.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing. Also see preamble Section V. for the response on the Pollutant-by-pollutant approach and Alternative Approaches.

Commenter Name: Jay C. Moon
Commenter Affiliation: Mississippi Manufacturers Association (MMA)
Document Control Number: EPA-HQ-OAR-2003-0119-1975
Comment Excerpt Number: 6

Comment: In light of extensive data sourcing and quality problems, EPA's standards are arbitrary and capricious. We believe the data that EPA gathered to support these rules reflects bias, is incomplete, and is fundamentally flawed. EPA's data collection efforts to support these rules were biased toward so-called "top performing facilities." EPA directed its information requests to units that it had reason to believe were the better performing units in each subcategory. This tainted sample has resulted in proposed standards that are inordinately stringent, not representative of the overall subcategories to which they apply, and not in accord with the legal standards.

In addition, despite the decade and a half long process that lead to the proposed rules, the Agency based the standards on a relatively minute pool of relevant data. This is best demonstrated by the fact that EPA is faced with the question of what to do about subcategories of over 30 sources where data is so limited that the top 12% is represented by only one or two sources. 75 Fed. Reg. 32022. Given that the Clean Air Act requires EPA consider at least five sources in such a situation, the ultimate solution to this concern would have been to have collected more data in the first place.

Response: See preamble Section V. for the responses on the MACT Floor Analysis and Biased Data Collection from Phase II ICR Testing.

Commenter Name: Susan J. Miller

Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 4

Comment: EPA must base the MACT floor on the best performing 12 percent of the source category when that 12 percent can be reasonably determined.

EPA cannot arbitrarily reduce the number of sources that they use to calculate the top 12 percent. If EPA has emissions information (which is not limited solely to stack test data) for all sources, the emission limits must be based on the best 12 percent of the total number of sources. EPA must consider the total number of sources for which they have any data- and also follow Court's ruling to make reasonable estimates, where possible. In addition, if EPA knows that their database is skewed toward the better controlled sources, it must account for this in determining what percent of their data set represents the best 12 percent of sources in the listed source category.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1975, excerpt 6.

Commenter Name: Susan J. Miller
Commenter Affiliation: Brick Industry Association (BIA)
Document Control Number: EPA-HQ-OAR-2003-0119-1930.1
Comment Excerpt Number: 6

Comment: When EPA knowingly skews a data set (such as targeting known controlled units for emissions testing), EPA cannot base the MACT floor on 12 percent of that skewed set without ignoring the CAA. EPA must first identify what amount of the dataset would represent 12 percent of the entire source category.

* For example, take a situation where EPA knows that the complete universe of sources for a category or subcategory is 150 sources.

* EPA targets the top 20 sources for stack testing. (for example, based on preliminary tests or older data, EPA includes the "best" add-on control equipment in a testing protocol and no other emission reduction techniques exist).

* EPA then determines that only the 20 recent tests were conducted in the same format as their final rule and, thus, represent what they consider to be the only data to evaluate.

* If EPA were to take 12 percent of the 20 sources, it would be establishing the floor based on 3 sources, which represents only the "best performing" 2 percent of sources (i.e., 3 out of 150). As EPA knows that the universe is 150 sources, it would be knowingly violating the requirements of the CAA.

* Instead, if EPA can reasonably determine that the 20 sources are the best controlled of the 150 sources, EPA must take the top 18 of the 20 sources to determine the MACT floor (i.e. 12 percent of 150). To do anything else is disingenuous at best. The above example illustrates a problem that prevails in this proposed rule. EPA has a known amount of sources in a subcategory (or size, type, class), but then focuses in on those for which they have data and takes 12 percent

of that number. Before EPA can do this, they must be able to say that the dataset represents the cross section of the entire

population of data points. If this conclusion cannot be made (e.g., EPA knows only a portion of the group are controlled and only has data for that controlled group), EPA must account for this skewing of the data. Using the above example, if EPA can reasonably say that the other 130 sources are uncontrolled, with no other techniques to control emissions, then EPA could reasonably interpret that these emission sources are likely to have emission levels above the 20 tested. EPA could assign emission levels for these other sources (e.g., using uncontrolled emission rates of the 20 tested units) or simply state that the levels are "above" the tested 20. EPA would then base the MACT floor for existing sources on the

best 18 of the 20 sources. To evaluate more stringent limits, such as 12 percent of the 20 sources, EPA would need to follow the requirements of going "above" or "beyond" the floor and establish MACT. EPA's current approach appears to be arbitrarily and capriciously setting a MACT floor lower than legally defensible in a blatant attempt to avoid the required consideration (i.e., beyond the floor) of costs and other non-air quality impacts. In no case would it make sense to base a floor on fewer than 5 sources, if data on 5 or more sources are available and are reasonably believed to be the top performers for a larger category.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1975, excerpt 6.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 1

Comment: ACC is very concerned that the proposed limits are not reasonable and may not be achieved by the best performers. EPA's own statement that many units are expected to shut down and no new units are expected to be built demonstrates that it too believes the proposed limits may not be achievable. As the limits are being set using a very small amount of data from a very small number of sources, ACC is not surprised that EPA has come to these conclusions.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1951.1, excerpt 33.

Commenter Name: Alicia Oman
Commenter Affiliation: National Association of Manufacturers (NAM)
Document Control Number: EPA-HQ-OAR-2003-0119-2147.1
Comment Excerpt Number: 3

Comment: In light of extensive data sourcing and quality problems, EPA's standards are arbitrary and capricious. We believe the data that EPA gathered to support these rules reflects bias, is incomplete, and is fundamentally flawed. EPA's data collection efforts to support these rules were biased toward so-called "top performing facilities." EPA directed its information requests to units that it had reason to believe were the better performing units in each

subcategory. This tainted sample has resulted in proposed standards that are inordinately stringent, not representative of the overall subcategories to which they apply, and not in accord with the legal standards.

In addition, despite the decade and a half long process that lead to the proposed rules, the Agency based the standards on a relatively minute pool of relevant data. This is best demonstrated by the fact that EPA is faced with the question of what to do about subcategories of over 30 sources where data is so limited that the top 12% is represented by only one or two sources. 75 Fed. Reg. 32022. Given that the Clean Air Act requires EPA consider at least five sources in such a situation, the ultimate solution to this concern would have been to have collected more data in the first place.

Finally, EPA's analysis failed to properly address the variability of the data, as well as emissions associated with startup, shutdown and malfunction. Thus, EPA's proposed limits do not appropriately address the variability in emissions of various HAPs. In addition, EPA's proposed limits are unduly impacted by issues associated with the limits of detection. Fundamentally, numerical limits should be based on quantifiable and reproducible test results consistent with reliable source test methods that have well-established performance. Limits should not be based on tests and methods that raise issues of significant measurement and other uncertainties.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1964.1, excerpt 3.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 4

Comment: EPA has "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. The result is a set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. A unit approach would result in emission limits that a real-world incinerator, kiln, burn-off oven, or energy recovery unit could actually achieve. A pollutant-by-pollutant approach results in limits based on a hypothetical unit.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing. Also see preamble Section V. for the response on the Pollutant-by-pollutant approach and Alternative Approaches.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 6

Comment: In light of extensive data sourcing and quality problems, EPA's standards are arbitrary and capricious. We believe the data that EPA gathered to support these rules reflects bias, is incomplete, and is fundamentally flawed. EPA's data collection efforts to support these rules were biased toward so-called "top performing facilities." EPA directed its information requests to units that it had reason to believe were the better performing units in each subcategory. This tainted sample has resulted in proposed standards that are inordinately stringent, not representative of the overall subcategories to which they apply, and not in accord with the legal standards.

In addition, despite the decade and a half long process that lead to the proposed rules, the Agency based the standards on a relatively minute pool of relevant data. This is best demonstrated by the fact that EPA is faced with the question of what to do about subcategories of over 30 sources where data is so limited that the top 12% is represented by only one or two sources. 75 Fed. Reg. 32022. Given that the Clean Air Act requires EPA consider at least five sources in such a situation, the ultimate solution to this concern would have been to have collected more data in the first place.

Response: See the response to comment EPA-HQ-OAR-2003-0119-1964.1, excerpt 3.

Commenter Name: Jim Griffin
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2003-0119-2092.1
Comment Excerpt Number: 7

Comment: In other words, EPA "cherry picked" the best data in setting each standard, without regard for the units from which the data come. This approach violates the language of § 129, which is focused on the performance of "units," and produces arbitrary and capricious standards.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Commenter Name: Richard Caserta
Commenter Affiliation: Red Hill Grinding Wheel Corporation
Document Control Number: EPA-HQ-OAR-2003-0119-2101
Comment Excerpt Number: 9

Comment: EPA's proposed limits are unduly impacted by issues associated with the limits of detection.

Response: See preamble Section V. for the response on treatment of detection levels.

Commenter Name: Duane Mummert
Commenter Affiliation: South Carolina Chamber of Commerce
Document Control Number: EPA-HQ-OAR-2003-0119-2453

Comment Excerpt Number: 9

Comment: The law requires EPA to base CISWI emission limits on control levels that the best performing sources have actually :achieved in practice. However, EPA's proposal violates that condition in multiple ways. EPA has "cherry picked" the best data in setting each standard, without regard for the sources from which the data come. The result is a set of standards that reflect the performance of a hypothetical set of best performing sources that simultaneously achieve the greatest emission reductions for each and every pollutant rather than the actual performance of one or more real sources. A source approach would result in emission limits that a real-world incinerator, kiln, burn-off oven, or energy recovery unit could actually achieve.

Response: See preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing. Also see preamble Section V. for the response on the Pollutant-by-pollutant approach and Alternative Approaches.

Commenter Name: Robert D. Bessette
Commenter Affiliation: Council of Industrial Boiler Owners
Document Control Number: EPA-HQ-OAR-2003-0119-1834.1
Comment Excerpt Number: 50

Comment: Detection Limit. After the first CISWI rule was promulgated in 2000 the incinerators that were able to meet those strict new standards installed controls, and others unable to meet the limits were forced to shut down. There are currently fewer data points available for EPA to evaluate, because of the difficulty that incinerators already have had in complying with the existing limits. This small number of compliant incinerators is being used to set new, ratcheted down limits which will squeeze sources already struggling to comply. Under §129(a)(5) of the CAA, EPA does not have authority to set floor limits for new rules based on what has been achieved by sources that are achieving those levels in order to comply with existing standards. This "MACT on MACT" situation underscores the need for representative data, collected from a wide range of sources, and calculated with adequate consideration of achievability. The sources used for testing for the limits in the proposed revisions were cherry-picked by EPA because they were already running the equipment that the other sources may have to install. This was thus not representative of the entire industry, only the sources already utilizing more advanced equipment.

Response: See preamble Section V. for the response on MACT-on-MACT. Also, see preamble Section V. for the response on Biased Data Collection from Phase II ICR Testing.

Table 1. Form Letter EPA-HQ-OAR-2003-0119-2100.1

Commenter	Affiliate	DCN
Carlos Mosto	Capital Drum, Inc.	EPA-HQ-OAR-2003-0119-2122.1
William Dworsky	Consolidated Container Company, LLC	EPA-HQ-OAR-2003-0119-2126.1
Kyle Stavig	Myers Container	EPA-HQ-OAR-2003-0119-2129
Michael Verzaleno	Kearny Steel Container Corporation	EPA-HQ-OAR-2003-0119-2231
Edward Meyer	Meyer Steel Drum, Inc.	EPA-HQ-OAR-2003-0119-2239.1
David Swanbeck	Industrial Container Services (ICS)	EPA-HQ-OAR-2003-0119-2451

Table 2. Form Letter EPA-HQ-OAR-2003-0119-1842

Commenter	Affiliate	DCN
Tom Johnson	JEMS Equipment	EPA-HQ-OAR-2003-0119-1843

Table 3. Form Letter EPA-HQ-OAR-2003-0119-2461

Commenter	Affiliate	DCN
Grady W. Hux	Halifax County Business Horizons, Inc.	EPA-HQ-OAR-2003-0119-2462
Tony N. Brown	State of North Carolina, County of Halifax	EPA-HQ-OAR-2003-0119-2463

Table 4. Form Letter EPA-HQ-OAR-2003-0119-1975

Commenter	Affiliate	DCN
Robert L. Carfield	Food Industry Environmental Council	EPA-HQ-OAR-2003-0119-2015.1
Scott Manley	Wisconsin Manufactureers & Commerce	EPA-HQ-OAR-2003-0119-2110.1
A. Steve Young	Association of Independent Corrugated Converters (AICC)	EPA-HQ-OAR-2003-0119-2148.1
John Ledger	Associated Oregon Industries	EPA-HQ-OAR-2003-0119-2443

Table 5. Form Letter EPA-HQ-OAR-2003-0119-0074

Commenter	Affiliate	DCN
Christopher Lish	none	EPA-HQ-OAR-2003-0119-1901

Table 6. Form Letter EPA-HQ-OAR-2003-0119-1948.1

Commenter	Affiliate	DCN
Morris Mantey	Clean Burn, Inc.	EPA-HQ-OAR-2003-0119-2080.1

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Dale Olson	Montana Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-0693.1
Kevin M. Toor	Birclar Electric and Electronics	EPA-HQ-OAR-2003-0119-0694.1
Ryan M. Senter	Hibbs ElectroMechaical, Inc.	EPA-HQ-OAR-2003-0119-0695.1

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Steven S. Skenzick	HPS Electric Motors	EPA-HQ-OAR-2003-0119-0696.1
David Bailey	City Electric Motor Company	EPA-HQ-OAR-2003-0119-0697.1
Patrick H. Blevins	Service Pump & Supply Co., Inc.	EPA-HQ-OAR-2003-0119-0698.1
Malcolm L. Barcarse	A & B Electric Co., Inc.	EPA-HQ-OAR-2003-0119-0885.1
George Stratton	GE Jones Electric Co., Inc	EPA-HQ-OAR-2003-0119-0897
Donald J. Anderson	Keller Electrical Industries, Inc.	EPA-HQ-OAR-2003-0119-0963.1
Dan Custer	Riverside Inc.	EPA-HQ-OAR-2003-0119-0964.1
Robert Hayward	Troy Motor Service	EPA-HQ-OAR-2003-0119-0965.1
Jeff Bahnsen	Foremost Industrial Technologies (FIT)	EPA-HQ-OAR-2003-0119-0977.1
Cynthia S. Langhirt	Mid-Ohio Electric Company	EPA-HQ-OAR-2003-0119-0988.1
Bernard E. Stella, Jr.	Hights Electric Motor Service Inc.	EPA-HQ-OAR-2003-0119-0989.1
Barbara R. Smith	HPS Electrical Apparatus Sale & Service	EPA-HQ-OAR-2003-0119-0990.1
B. J. Schriner	HPS Electrical Apparatus Sale & Service	EPA-HQ-OAR-2003-0119-0991.1
J. David Fowler	Kiemle-Hankins (KH)	EPA-HQ-OAR-2003-0119-0992.1
Jimmy Dickinson	Cookeville Electric Motor Inc. (CEM)	EPA-HQ-OAR-2003-0119-0993.1
Thomas Sheppard	Tramco Services, Inc.	EPA-HQ-OAR-2003-0119-0994.1

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Scott Woods	Cookeville Electric Motor, Inc. (CEM), Electrical Apparatus Service Association, Inc. (EASA)	EPA-HQ-OAR-2003-0119-0995.1
Timothy A. Bieber	D-Electric, Inc.	EPA-HQ-OAR-2003-0119-1019.1
Theresa Vera	Dahl-Beck Electric	EPA-HQ-OAR-2003-0119-1020.1
Roger Beck	Dahl-Beck Electric	EPA-HQ-OAR-2003-0119-1021.1
Michael Budd	Dahl-Beck Electric Company	EPA-HQ-OAR-2003-0119-1022
Russ Bishop	Electrical Engineering & Equipment Company	EPA-HQ-OAR-2003-0119-1023.1
Robert Koy	Bonno Electric, Inc.	EPA-HQ-OAR-2003-0119-1024.1
Morris Droppers	Bridgeway Power Gaylord	EPA-HQ-OAR-2003-0119-1025.1
Robert H. Dorr	Central Armature Works, Inc.	EPA-HQ-OAR-2003-0119-1026.1
Raymond K. Paden	Cole Electric Technology, Inc.	EPA-HQ-OAR-2003-0119-1027.1
Rod Wiggins	Northwest Motor Service	EPA-HQ-OAR-2003-0119-1033.1
Dirk Van Proyen	Chick's Electric Motor Service	EPA-HQ-OAR-2003-0119-1034
Gary N. Demaria	Demaria Electric Motor Services, Inc.	EPA-HQ-OAR-2003-0119-1035.1
David Scott	Electric Motor Shop, Inc.	EPA-HQ-OAR-2003-0119-1036.1
Ted Keller	Scott Armature Companies, LLC	EPA-HQ-OAR-2003-0119-1037.1
Jerry Gray	Sloan Electromechanical Service & Sales	EPA-HQ-OAR-2003-0119-1038
Michael Maiuri	Smith Services, Inc.	EPA-HQ-OAR-2003-0119-1039

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Michael Maiuri	Smith Services, Inc.	EPA-HQ-OAR-2003-0119-1039.1
Michael Maiuri	Smith Services, Inc.	EPA-HQ-OAR-2003-0119-1039.2
George E. Flolo	The Flolo Corporation	EPA-HQ-OAR-2003-0119-1040
Wayne J. Henrichsen	Sparks Electric Motor Repair, LLC	EPA-HQ-OAR-2003-0119-1041.1
Troy D. Gray, Jr.	T. Gray Electric Company, Inc.	EPA-HQ-OAR-2003-0119-1043.1
James F. Steenbruggen	First Electric Motor Service Inc.	EPA-HQ-OAR-2003-0119-1044.1
Brian F. Moore	The Repair Shop, Georgia Power Company	EPA-HQ-OAR-2003-0119-1045
Brian F. Moore	The Repair Shop, Georgia Power Company	EPA-HQ-OAR-2003-0119-1045.1
Gregg Gower	Lange and Leaman Electric Michigan Motorworks	EPA-HQ-OAR-2003-0119-1046
Jim Kinney	Kinney Electric and Power Transmition Inc.	EPA-HQ-OAR-2003-0119-1047
Dave Phillips	Electrotek	EPA-HQ-OAR-2003-0119-1048.1
R. Scott Lynn	Lynn Electric Motor Co. Inc	EPA-HQ-OAR-2003-0119-1049
David L. Cothran	Electric Motors and Drives, Inc. (EMD)	EPA-HQ-OAR-2003-0119-1067.1
Randall Valachovic	Tri-State Electric Motors Incorporated	EPA-HQ-OAR-2003-0119-1068.1
Richard L. Frank	Hannon Electric Company	EPA-HQ-OAR-2003-0119-1069.1
Peter Sutherland, PE	Integrated Power Services, LLC (IPS)	EPA-HQ-OAR-2003-0119-1070
Mike Schaldecker	Janda Motor Services	EPA-HQ-OAR-2003-0119-1071
Rod Dobb	Jones Electric Motor Repair	EPA-HQ-OAR-2003-0119-1072

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
P. Michael Himmler	Allegany Motor & Pump Service, Inc. (AMP)	EPA-HQ-OAR-2003-0119-1073.1
Larry Barger	Atlas Electric Motor Service and Sales, Inc	EPA-HQ-OAR-2003-0119-1074
Neil Barwick	Barwick's Electric Service, Inc.	EPA-HQ-OAR-2003-0119-1075
Kenneth R. Robinson	Burford Electric Service, Inc.	EPA-HQ-OAR-2003-0119-1077
Josh Butcher	Energy Management Corporation (EMC)	EPA-HQ-OAR-2003-0119-1078.1
Jim White	C. W. Silver Industrial Services Inc.	EPA-HQ-OAR-2003-0119-1079.1
Gary Lucero	C.W. Silver Industrial Services, Inc.	EPA-HQ-OAR-2003-0119-1080.1
William Hinnendael	EMS Industrial, Inc.	EPA-HQ-OAR-2003-0119-1081.1
Paul Sellers	C.W. Silver Industrial Services, Inc.	EPA-HQ-OAR-2003-0119-1082.1
Joe L. Robertson, Jr.	Marrs Electric Motor Repairs, Inc.	EPA-HQ-OAR-2003-0119-1083
M. S. Darby	none	EPA-HQ-OAR-2003-0119-1085
Michael T. Moline	none	EPA-HQ-OAR-2003-0119-1086
Robert N. Cobb	Perry's Electric Motors & Controls	EPA-HQ-OAR-2003-0119-1087
Sean Sullivan	Poppleton Electric and Machinery Company, Inc.	EPA-HQ-OAR-2003-0119-1088
David Mollet	Queens Industrial Electric Corp.	EPA-HQ-OAR-2003-0119-1089
Kirk Kirkland	Electrical Repair Service Company, Inc.	EPA-HQ-OAR-2003-0119-1090
Ronald Keppel	Illinois Electric Works	EPA-HQ-OAR-2003-0119-1091.1
Gary Braun	Brehob Corporation	EPA-HQ-OAR-2003-0119-1093.1

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Michael W. Fitch	E & L Electric, Inc.	EPA-HQ-OAR-2003-0119-1094.1
Steve Duncan	Hibbs ElectroMechanical Inc	EPA-HQ-OAR-2003-0119-1095
Paul Turbiville	Turbiville Industrial Electric Works	EPA-HQ-OAR-2003-0119-1096.1
William E. Boyington	Advanced Technology Services UK Limited (ATS)	EPA-HQ-OAR-2003-0119-1097.1
Alberto DiMascio	Blanchard Electric, Inc.	EPA-HQ-OAR-2003-0119-1098.1
Kenneth W. Johnson	Industrial Electric Service Co.	EPA-HQ-OAR-2003-0119-1099
Alan Horner	Horner Industrial Services, Inc.	EPA-HQ-OAR-2003-0119-1100.1
Charles Koffler	Koffler Electrical	EPA-HQ-OAR-2003-0119-1101.1
Edmond McClure	MMI Electric Motors & Pumps	EPA-HQ-OAR-2003-0119-1102.1
Gary Pirtle	City Electric Motor Service	EPA-HQ-OAR-2003-0119-1103
Brian McNeil	Electric Motor Specialists, Inc.	EPA-HQ-OAR-2003-0119-1104.1
Scott Mohler	Mohler Technology, Inc.	EPA-HQ-OAR-2003-0119-1105.1
Leslie J. Steitz	Motor Rewinder	EPA-HQ-OAR-2003-0119-1106.1
Kerry R. Dodd	Precision Electric, Inc.	EPA-HQ-OAR-2003-0119-1108.1
Joseph R. Chamberlin, Jr.	Precision Electric, Inc.	EPA-HQ-OAR-2003-0119-1109.1
Bradley Warren	Rainbow Electric Co.	EPA-HQ-OAR-2003-0119-1110.1
Public Hearing		EPA-HQ-OAR-2003-0119-1111
Cynthia S. Langhirt	Mid-Ohio Electric Company	EPA-HQ-OAR-2003-0119-1112.1

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Ron Rapa	Rapa Electric, Inc.	EPA-HQ-OAR-2003-0119-1113.1
Glenn E. Bange	Swam Electric Co., Inc.	EPA-HQ-OAR-2003-0119-1114.1
Peter W. Schultes	A. C. Schultes Motor & Pump Repair, Inc.	EPA-HQ-OAR-2003-0119-1115.1
Steve Jacobs	Attalla Electric Motor Inc.	EPA-HQ-OAR-2003-0119-1116
Gordon Cantrell	Attalla Electric Motor Inc.	EPA-HQ-OAR-2003-0119-1117.1
Russell Bergstrom and Jacob Beck	Electrom Power Products	EPA-HQ-OAR-2003-0119-1118.1
Mike Dertien	Electric Motor Service Center Inc	EPA-HQ-OAR-2003-0119-1119
Herman Gatewood, Jr.	Gatewood Enterprises, Inc.	EPA-HQ-OAR-2003-0119-1120
Chuck Rutledge	Hupp Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1121.1
Gary Hamilton	Hamilton Electric Works, Inc.	EPA-HQ-OAR-2003-0119-1124.1
Karen E. Smith	Troy Belting & Supply Company	EPA-HQ-OAR-2003-0119-1125.1
Ray A. Garcia	Walton Motors & Controls Inc.	EPA-HQ-OAR-2003-0119-1126.1
Thomas E. Walma	Harrison Electric, Inc.	EPA-HQ-OAR-2003-0119-1127.1
Kenneth R. Randall, Jr.	Randall Supply, Inc.	EPA-HQ-OAR-2003-0119-1129.1
Mike Bongner	Illinois Electric Works	EPA-HQ-OAR-2003-0119-1130
Keith Schoettle	Dart Enterprises, Inc	EPA-HQ-OAR-2003-0119-1131
Roger L. Saunders	Hayden Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1132.1
Roger Taylor	Electric Motor Rebuilders, Inc.	EPA-HQ-OAR-2003-0119-1134

Table 7. Form Letter EPA-HQ-OAR-2003-0119-0563.1

Commenter	Affiliate	DCN
Pete Smith	Western Industrial Electric Motor Repair and Machine Shop	EPA-HQ-OAR-2003-0119-1135.1
Dale F. Johnson	Wright Repairs, Inc.	EPA-HQ-OAR-2003-0119-1136
Debbie Wilson	Crimson Electric, Inc.	EPA-HQ-OAR-2003-0119-1137
Charles L. Wilson	Crimson Electric, Inc.	EPA-HQ-OAR-2003-0119-1137.1
Robert C. Brost	Kurz Electric Solutions, Inc.	EPA-HQ-OAR-2003-0119-1138.1
Larry Mader	M & R Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-1139.1
Denver J. Weigel	Apparatus Repair & Engineering, Inc. (AR&E)	EPA-HQ-OAR-2003-0119-1140.1
Richard Davis	Industrial Apparatus Repair, Inc.	EPA-HQ-OAR-2003-0119-1141.1
Robert Toth, President	JCI Industries, Inc.	EPA-HQ-OAR-2003-0119-1142.1
David B. Launder	Independent Electric Machinery Company	EPA-HQ-OAR-2003-0119-1143.1
J. Richard Nalley, Jr.	Krauth Electric Company	EPA-HQ-OAR-2003-0119-1144.1
Curtis Hensley	Kay Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1145.1
Kevin Hupp	Hupp Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1146.1
Brian N. Dobbs	Overturf Electric Motor Service	EPA-HQ-OAR-2003-0119-1148.1
Greg Smith	S&G Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-1149.1
Robert Heise	Krug Northwest Electric Motors	EPA-HQ-OAR-2003-0119-1151
Larry Caudill	Integrated Power Services	EPA-HQ-OAR-2003-0119-1152.1

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Commenter	Affiliate	DCN
Robert C. Wilson	Kentucky Armature & Motor Works, Inc.	EPA-HQ-OAR-2003-0119-1154.1
Doude Wysbeek	HC Stroud Electric Motor Service	EPA-HQ-OAR-2003-0119-1155
Gary Hamilton and Bart Hamilton	Loyd Armature Works, Inc.	EPA-HQ-OAR-2003-0119-1157.1
Robert A. Bozich	Malton Electric Company	EPA-HQ-OAR-2003-0119-1158
Robert A. Bozich	Malton Electric Company	EPA-HQ-OAR-2003-0119-1158.1
Dale Hamil	Illinois Electric Works	EPA-HQ-OAR-2003-0119-1159.1
Mark E. Kalen	Kalen Electric & Machinery Incorporated	EPA-HQ-OAR-2003-0119-1160.1
Kirk Graham	Volland Electric Equipment Corporation	EPA-HQ-OAR-2003-0119-1162
Kirk Graham	Volland Electric Equipment Corporation	EPA-HQ-OAR-2003-0119-1162.1
Debbie Tripp	none	EPA-HQ-OAR-2003-0119-1163
E. W. Steadman	Industrial Apparatus Service, Inc. (IAS)	EPA-HQ-OAR-2003-0119-1163.1
Dorothy Elsbrock	Wheatley Electric Service Co., Inc.	EPA-HQ-OAR-2003-0119-1170
Marcia Bailey	Sierra Club	EPA-HQ-OAR-2003-0119-1183
Lendale Widner	TESSCO-Kermit	EPA-HQ-OAR-2003-0119-1223
Earl L. Priest	Priest Electric	EPA-HQ-OAR-2003-0119-1224
Timothy L. Martindale	Kiemle-Hankins Company	EPA-HQ-OAR-2003-0119-1341.1
G. Allen White	Sturgis Electric Motor	EPA-HQ-OAR-2003-0119-1342
Randy Breaux	Baldor Electric Company	EPA-HQ-OAR-2003-0119-1348.1

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Commenter	Affiliate	DCN
George Orenchak	Kencoil Inc	EPA-HQ-OAR-2003-0119-1358.1
Doug Moore	Kentucky Service Company, Inc.	EPA-HQ-OAR-2003-0119-1375
Herbert L. Morrow	Hennings Quality Service, Inc.	EPA-HQ-OAR-2003-0119-1378
Jeffery Mark Mcever	North Georgia Electric	EPA-HQ-OAR-2003-0119-1379.1
Jodi M. Satches	Bollinger Shipyards, Inc.	EPA-HQ-OAR-2003-0119-1380.1
Peter V. Ross	Biscayne Electric Motor & Pump, Inc.	EPA-HQ-OAR-2003-0119-1387
Marcia Clark on behalf of Daniel S. Parsons	AC Electric Corporation	EPA-HQ-OAR-2003-0119-1390.1
Trent R. Hamil	Illinois Electric Works	EPA-HQ-OAR-2003-0119-1392.1
Kim Naab	Electric Motor Service	EPA-HQ-OAR-2003-0119-1396.1
Nick Klosowsky	Advanced Rotors	EPA-HQ-OAR-2003-0119-1397
Roseann Cuomo on behalf of Robert C. Davis	Schultz Electric Company	EPA-HQ-OAR-2003-0119-1398.1
Robert L. Haungs	SE-MAR Electric Company, Inc.	EPA-HQ-OAR-2003-0119-1399.1
Gene F. Moir Jr.	Motors & Drives, Inc.	EPA-HQ-OAR-2003-0119-1402.1
Dennis W. Conner	Energy Efficient Motors & Controls Inc.	EPA-HQ-OAR-2003-0119-1404.1
Charles A. Young	Young Brothers Machine and Electric Shop, Inc.	EPA-HQ-OAR-2003-0119-1408.1
William Mielenz	Herold and Mielenz, Inc.	EPA-HQ-OAR-2003-0119-1453.1
Keith A. Wojan	W.W. Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1454.1

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Commenter	Affiliate	DCN
Harold Muse	Tencarva Machinery Company	EPA-HQ-OAR-2003-0119-1459.1
Robert Hayward	Troy Motor Services	EPA-HQ-OAR-2003-0119-1460.1
Alex Rokhsaz	Northstar Industries	EPA-HQ-OAR-2003-0119-1461
Barbara A. Fox	Fox Bros. Electric Motor Service, LLC	EPA-HQ-OAR-2003-0119-1462.1
Patrick Rawlings	Hudson LAP, Inc.	EPA-HQ-OAR-2003-0119-1463.1
Landon Tate	Lane Electric, Inc.	EPA-HQ-OAR-2003-0119-1465.1
Michael Przybycien	Dunkirk Electric Motor Repair	EPA-HQ-OAR-2003-0119-1466
James L. Still	Jim's Electric Motor Co. Inc.	EPA-HQ-OAR-2003-0119-1468.1
Sean Hickey	Lafert MetricMotors, Lafert North America	EPA-HQ-OAR-2003-0119-1470.1
John Hansen	Laron Incorporated	EPA-HQ-OAR-2003-0119-1471
John Hansen	Laron Incorporated	EPA-HQ-OAR-2003-0119-1471.1
Clifford E. Sloop III	Alabama Electric Company Inc. of Dothan	EPA-HQ-OAR-2003-0119-1481.1
Krystle Johnson	Allied Electric Motor Services, Inc.	EPA-HQ-OAR-2003-0119-1482
Krystle Johnson	Allied Electric Motor Services, Inc.	EPA-HQ-OAR-2003-0119-1482.1
Bill Nielsen	Flanders Electric of Illinois	EPA-HQ-OAR-2003-0119-1494.1
Krystle Johnson	Allied Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-1518.1
Mike Williamson	Sytek Electric	EPA-HQ-OAR-2003-0119-1521
William A. Oliver and David R. Patterson	Flanders Electric Motor Service Inc.	EPA-HQ-OAR-2003-0119-1522.1

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Commenter	Affiliate	DCN
Chris Robertson	Savannah Apparatus Repair Co., Inc.	EPA-HQ-OAR-2003-0119-1537.1
Larry Kragh, President	Arrow Electric Motor Service Inc.	EPA-HQ-OAR-2003-0119-1667.1
M.C. Anderson	Integrated Power Services (IPS)	EPA-HQ-OAR-2003-0119-1672.1
Robert F. Heran	ACE Equipment Co.	EPA-HQ-OAR-2003-0119-1673.1
Carl J. Barner	Jarvis Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-1765
Eileen A. Sottile	LKQ Corporation	EPA-HQ-OAR-2003-0119-1832.1
Janet Schmidlkofer	K&N Electric	EPA-HQ-OAR-2003-0119-1838.1
Yvonne G. Boysen	Alexandria Armature Works	EPA-HQ-OAR-2003-0119-2048.1
David Cook	Lake City Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-2096.1
Brian Scott	Leppert-Nutmeg Inc.	EPA-HQ-OAR-2003-0119-2097.1
Rodney R. Fisher	Fisher's RPM Electric Motor Service and Sales Inc.	EPA-HQ-OAR-2003-0119-2217
Gene Brandstetter	Brownwood Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2219
Greg Sennett	Jim's Electric Service	EPA-HQ-OAR-2003-0119-2240
Danny Cravens	Kamay Electric Service, Inc.	EPA-HQ-OAR-2003-0119-2241
Hershel Kay	Kay Electric	EPA-HQ-OAR-2003-0119-2242
Leland Stabnow	L & J Motor Repair	EPA-HQ-OAR-2003-0119-2243
Wally Lawson	L & L Machinery Co., Inc.	EPA-HQ-OAR-2003-0119-2244
Diann M. Lewis	Lewis Electric Motor, Inc.	EPA-HQ-OAR-2003-0119-2260
Steve Moffett	Lubbock Electric Co.	EPA-HQ-OAR-2003-0119-2261

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Commenter	Affiliate	DCN
Edwin Pankow	Mac & Mac Electric Inc.	EPA-HQ-OAR-2003-0119-2262
Gordon McDaniel	McDaniel Electric Motors	EPA-HQ-OAR-2003-0119-2263
Timothy G. and Linda L. Holcomb	McGilvra Electric	EPA-HQ-OAR-2003-0119-2264
Don and Nancy Garbers	Garbers Electric Motor Repair Inc.	EPA-HQ-OAR-2003-0119-2265
Andre Spetz	Coastal Service and Supply, Incorporated	EPA-HQ-OAR-2003-0119-2266
James W. Goding	Goding Electric Company	EPA-HQ-OAR-2003-0119-2267
G. Powell	GP Electric Motor Services	EPA-HQ-OAR-2003-0119-2268
Yvonne Smith	Gulf South Armature, Inc.	EPA-HQ-OAR-2003-0119-2269
William J. Pittaway	C-D Electric Motor Sales and Service	EPA-HQ-OAR-2003-0119-2270
Craig Contofalsky	Commercial Electric Products	EPA-HQ-OAR-2003-0119-2271
Randy Berenson	City Pump and Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2272
Mark S. Hatfield	HECO, Inc. Industrial Service Groups	EPA-HQ-OAR-2003-0119-2273
William L. Madan	Henderson Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-2274
Robert L. Cross	Electric Service Company	EPA-HQ-OAR-2003-0119-2275
Jacqueline Kelley	M & M Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-2276
Bruce M. Pitman	Mayland Armature Company, Inc.	EPA-HQ-OAR-2003-0119-2277
Charles Koeplin	Idaho Electric Motor Service	EPA-HQ-OAR-2003-0119-2278
Bryan Williams	Industrial Electric & Mechanical, Inc (IEM)	EPA-HQ-OAR-2003-0119-2279
Kathy L. Van Helden	Moberg Electric, Inc.	EPA-HQ-OAR-2003-0119-2280
Rodney Drake	Electric Motors Company Inc.	EPA-HQ-OAR-2003-0119-2281

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Commenter	Affiliate	DCN
Tony McDaniel	Industrial Electric Motor Works, Inc.	EPA-HQ-OAR-2003-0119-2282
Shawn Venable	Electric Motor Service of Clinton, Inc.	EPA-HQ-OAR-2003-0119-2283
Janet R. Garvey	Carolinas Electric Motor Service	EPA-HQ-OAR-2003-0119-2284
Tim Ford	Morgan Electic Motor Sales & Service	EPA-HQ-OAR-2003-0119-2285
Douglas M. Bauer	The Moir Co., Inc	EPA-HQ-OAR-2003-0119-2286
Steven A. Schuetz	A-1 Electric Motor Service, Inc	EPA-HQ-OAR-2003-0119-2287
Howard P. Dosmann	Northern Electric	EPA-HQ-OAR-2003-0119-2288
Danny Freelen	A-1 Electric Motor Service	EPA-HQ-OAR-2003-0119-2289
Ralph Cuppoletti	OTS Wire & Insulation, Inc.	EPA-HQ-OAR-2003-0119-2290
Alan D. Fletcher	Oilfield Electric & Motor	EPA-HQ-OAR-2003-0119-2291
Ronald Gene Hickson	Phase Electric Motors, Inc.	EPA-HQ-OAR-2003-0119-2292
William F. Hall, President	Electric Motor Repair and Service, Inc (ABC)	EPA-HQ-OAR-2003-0119-2293
Ralph P. Presley	Presley Group, LTD.	EPA-HQ-OAR-2003-0119-2294
J. P. Boucher	AIMS	EPA-HQ-OAR-2003-0119-2295
Larry Richmond	All American Pump & Machine, Inc	EPA-HQ-OAR-2003-0119-2296
	Allstate Electric Motor Co. Inc.	EPA-HQ-OAR-2003-0119-2297
Jack L. Heinz	Power Flow Technologies	EPA-HQ-OAR-2003-0119-2298
Sherry Phillips	Phillips Electric Motors	EPA-HQ-OAR-2003-0119-2299
Steve Jacobson	Precision Drive and Control, Inc.	EPA-HQ-OAR-2003-0119-2300
Ron Harksen	Rock Island Electric Motor Repair, Inc. (RIEMR)	EPA-HQ-OAR-2003-0119-2301
Curtis L. Cummins	Reed Electric Company	EPA-HQ-OAR-2003-0119-2302
J. David Row, Jr.	Row Electrical Equipment, Inc.	EPA-HQ-OAR-2003-0119-2303

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Commenter	Affiliate	DCN
Tim Robertson	R/S Electric Motor Sales and Services	EPA-HQ-OAR-2003-0119-2304
Scott Meador	Shermco Industries	EPA-HQ-OAR-2003-0119-2305
Michael T. Moline	Specialty Marine and Industrial Supplies, Inc.	EPA-HQ-OAR-2003-0119-2306
William H. Overton	Electrical and Mechanical Resources, Incorporated	EPA-HQ-OAR-2003-0119-2307
John Edwards and Patricia Van Osdel	Richmond Electric Company	EPA-HQ-OAR-2003-0119-2308
Sven Syvertsen	Electric Incorporated	EPA-HQ-OAR-2003-0119-2309
Dana Sandoval	Amarillo Electric Specialist Inc.	EPA-HQ-OAR-2003-0119-2310
James L. Stout and Alice M. Stout	American Electric Motor Service	EPA-HQ-OAR-2003-0119-2311
Michael Huber	American MTS	EPA-HQ-OAR-2003-0119-2312
Eugene H. Shadwick	Electric Motor Service	EPA-HQ-OAR-2003-0119-2313
Jay F. Kramer	Austin Armature Works	EPA-HQ-OAR-2003-0119-2314
Isabell Siegel	Electric Motor Corporation	EPA-HQ-OAR-2003-0119-2315
Robert Clawson	Electric Motor Center	EPA-HQ-OAR-2003-0119-2316
Angie Meza	Bellwood Electric Motors Inc.	EPA-HQ-OAR-2003-0119-2318
Martha Meza	Bellwood Electric Motors Inc.	EPA-HQ-OAR-2003-0119-2319
Erik Lara	Bellwood Electric Motors Inc.	EPA-HQ-OAR-2003-0119-2320
Mario Meza	Bellwood Electric Motors Inc.	EPA-HQ-OAR-2003-0119-2321
J. McCord-Burgess		EPA-HQ-OAR-2003-0119-2322
Grant T. Stewart	Stewart Brothers Electric	EPA-HQ-OAR-2003-0119-2323
Robert Perry	T.E.C. Industrial, Inc.	EPA-HQ-OAR-2003-0119-2324
Edward J. Hoerner	Texas Electric Equipment Co., Ltd.	EPA-HQ-OAR-2003-0119-2325
David Turnupseed	Turnupseed Electric Service, Inc.	EPA-HQ-OAR-2003-0119-2326

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Commenter	Affiliate	DCN
Jay F. Kramer	Taylor Armature Works, LLC	EPA-HQ-OAR-2003-0119-2327
Jeff D. Willoughby and Karen J. Willoughby	Union Hill Electric, LLC	EPA-HQ-OAR-2003-0119-2328
Andres Veliz	Universal Electric Motor Service	EPA-HQ-OAR-2003-0119-2329
Michael Bowers	Vallejo Electric Motor Shop, Inc.	EPA-HQ-OAR-2003-0119-2331
Roger Hicks	Whitfield Electric Motor Sales and Service, Inc.	EPA-HQ-OAR-2003-0119-2332
John Warden	Warden Electric Company	EPA-HQ-OAR-2003-0119-2333
Melanie Wofford	Wofford Mcallen Armature Works, Inc.	EPA-HQ-OAR-2003-0119-2334
Chuck Yost	Yost Electric, Inc.	EPA-HQ-OAR-2003-0119-2355
Mark Kohlberg	Zeller Technologies, Inc.	EPA-HQ-OAR-2003-0119-2356
Eric Musshorn	Electric Motor and Machinge Company	EPA-HQ-OAR-2003-0119-2357
Kenneth Ullrich	Electric Motor Service	EPA-HQ-OAR-2003-0119-2358
Harmon D. Noblett and Mark A. Noblett	Electrico, Incorporated	EPA-HQ-OAR-2003-0119-2359
Judy Lilley	E-Tex Electric Motor Service	EPA-HQ-OAR-2003-0119-2360
David Stover	Florida Armature Works, Inc.	EPA-HQ-OAR-2003-0119-2361
Jeff Chambers	Electric Motor Shop	EPA-HQ-OAR-2003-0119-2406
Joy Wiecks	Fond du Lac Environmental Program	EPA-HQ-OAR-2003-0119-2407
David L. Shollenberger	G.I. Electric Co, Inc.	EPA-HQ-OAR-2003-0119-2408
Mark F. Selby	Lansing Electric Motors, Inc. (LEM)	EPA-HQ-OAR-2003-0119-2409
Michael Higgins	Mid-America Steel Drum Company, Inc.	EPA-HQ-OAR-2003-0119-2410
James L. Kavanaugh	State of Missouri Department of Natural Resources	EPA-HQ-OAR-2003-0119-2411

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Commenter	Affiliate	DCN
Terry L. O'Clair, P.E.	North Dakota Department of Health	EPA-HQ-OAR-2003-0119-2412
Daril Peterson	Alstra Industries, LLC	EPA-HQ-OAR-2003-0119-2413
Willis L. Byrd	Byrd's Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2414
Danny Freelen	A-1 Electric Motor Service	EPA-HQ-OAR-2003-0119-2415
Linda Byrd	Byrd's Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2416
Joseph DiPietro	Eastside Electric Motors	EPA-HQ-OAR-2003-0119-2417
William Carter	Foster Electric Motor Service	EPA-HQ-OAR-2003-0119-2418
Peggy Peterson	Alstra Industries, LLC	EPA-HQ-OAR-2003-0119-2419
Brenda Hicks	Alstra Industries, LLC	EPA-HQ-OAR-2003-0119-2420
Steven M. Deppe	Columbus Industrial Electric, Inc.	EPA-HQ-OAR-2003-0119-2421
Jack Williams	Byrd's Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2422
Timothy J. Welch	Charles Rewinding	EPA-HQ-OAR-2003-0119-2423
Arthur L. Gale	Lackore Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-2424
Sean M. O'Keefe	Alexander & Baldwin, Inc. (A&B)	EPA-HQ-OAR-2003-0119-2425
Timothy Tornabene	Charles Rewinding	EPA-HQ-OAR-2003-0119-2426
Vicki Stump	Electro Motor Services, Inc.	EPA-HQ-OAR-2003-0119-2427
Julius Hardie	Industrial Electric Equipment Inc. (IEEI)	EPA-HQ-OAR-2003-0119-2428
Ed Dombrowski	Industrial Metal Cleaning Corporation (IMCC)	EPA-HQ-OAR-2003-0119-2429
Paul J. Gale	Lackore Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-2430

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Commenter	Affiliate	DCN
Joseph C. Gale	Lackore Electric Motor Repair, Inc.	EPA-HQ-OAR-2003-0119-2431
Donald D. Winkels	Lewis Electric Motor Repair, Inc. (LMR)	EPA-HQ-OAR-2003-0119-2432
Charles J. Salemi	Ebling Electric Company	EPA-HQ-OAR-2003-0119-2433
John Carlson	Lewis Electric Motor Repair, Inc. (LMR)	EPA-HQ-OAR-2003-0119-2434
Arthur E. Anderson	Electrical Mechanical Services (EMS)	EPA-HQ-OAR-2003-0119-2435
Mike Stump	Electro Motor Services, Inc.	EPA-HQ-OAR-2003-0119-2436
Paul Sellers	Energy Management Corporation	EPA-HQ-OAR-2003-0119-2437
Gary Lucero	Energy Management Corporation	EPA-HQ-OAR-2003-0119-2438
	James Electric Company	EPA-HQ-OAR-2003-0119-2439
Jeff Kelsey	Kelsey Electric Motor Service, Inc.	EPA-HQ-OAR-2003-0119-2440
Landon Tate	Lane Electric Motor Service	EPA-HQ-OAR-2003-0119-2441
Steve Moore	Steelman Industries, Inc.	EPA-HQ-OAR-2003-0119-2442
Terry A. Koonce	Industrial Rewind, Inc.	EPA-HQ-OAR-2003-0119-2444
Michael Coughenour	Hunnell Electric Co., Inc.	EPA-HQ-OAR-2003-0119-2445
Buster Peek	Indeco Industrial Electric, Co.	EPA-HQ-OAR-2003-0119-2446
Angie Williams	Byrd's Electric Motor Services, Inc.	EPA-HQ-OAR-2003-0119-2447.1
	Arrow Motor & Pump, Inc.	EPA-HQ-OAR-2003-0119-2450
Jerry Drahota	Northwest Electric, Inc.	EPA-HQ-OAR-2003-0119-2452
James R. Cramsey	Richards Electric Motor Company	EPA-HQ-OAR-2003-0119-2456
Charlene Richard	Bayou Boeuf Electric, LLC	EPA-HQ-OAR-2003-0119-2458
Royce Electric	Royce Electric	EPA-HQ-OAR-2003-0119-2459

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Commenter	Affiliate	DCN
John Goodman	Core Electric	EPA-HQ-OAR-2003-0119-2460
David Jolley	E.M. Service Inc.	EPA-HQ-OAR-2003-0119-2465
Michelle Swander	American Armature Corporation	EPA-HQ-OAR-2003-0119-2466
Harvey Vincent	Vincent Electric Co Inc	EPA-HQ-OAR-2003-0119-2467
	M.C. Electric LLC	EPA-HQ-OAR-2003-0119-2468
Steve Lauber	SLS Electric Specialty Coils, Inc.	EPA-HQ-OAR-2003-0119-2469

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Commenter	Affiliate	DCN
Robert W. Glowinski	American Wood Council	EPA-HQ-OAR-2003-0119-1952.1
Guy R. Martin, P. Eng.	Domtar Inc.	EPA-HQ-OAR-2003-0119-1717.1
Thomas A. Julia	Composite Panel Association	EPA-HQ-OAR-2003-0119-1718.1
Jeffrey T. Miller	Treated Wood Council	EPA-HQ-OAR-2003-0119-1811.1
Carroll L. Missimer, Ph.D.	P.H. Glatfelter Company	EPA-HQ-OAR-2003-0119-1813.1
Traylor Champion	Georgia-Pacific LLC	EPA-HQ-OAR-2003-0119-1905.1
Mary Graham, CCR, IOM, CCE	Charleston Metro Chamber of Commerce	EPA-HQ-OAR-2003-0119-2020.1
Paul F. Perlwitz	Nippon Paper Industries, USA Ltd.	EPA-HQ-OAR-2003-0119-2040.1
A. Preston Howard, Jr., P.E.	Manufacturers and Chemical Industry Council of North Carolina	EPA-HQ-OAR-2003-0119-2043.1
Greg A Chandler	UPM-Blandin Paper	EPA-HQ-OAR-2003-0119-

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Commenter	Affiliate	DCN
		2044.1
Edward J. Wilusz	Wisconsin Paper Council	EPA-HQ-OAR-2003-0119-2117.2
Lewis F. Gossett	South Carolina Manufactureers Alliance	EPA-HQ-OAR-2003-0119-2255.1
Aubra Anthony, Jr.	Anthony Forest Products Company (AFP)	EPA-HQ-OAR-2003-0119-2372.1
Duane Mummert, P.E.	South Carolina Chamber of Commerce	EPA-HQ-OAR-2003-0119-2453
Jeffery S. Hannapel	National Association for Surface Finishing	EPA-HQ-OAR-2003-0119-2017.1
Jerry Call	American Foundry Society	EPA-HQ-OAR-2003-0119-2019.1
Brian Shrager	Kimberly-Clark Corporation	EPA-HQ-OAR-2003-0119-1954.1
Kevin M. Depsey	American Iron and Steel Institute	EPA-HQ-OAR-2003-0119-2111
James C. Jackson, PE	Boise Inc.	EPA-HQ-OAR-2003-0119-2150.1

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Commenter	Affiliate	DCN
Leann Slovenski	none	EPA-HQ-OAR-2003-0119-0948
Swaha Devi	none	EPA-HQ-OAR-2003-0119-0949
M. Foose	none	EPA-HQ-OAR-2003-0119-0950
R. Troupin	none	EPA-HQ-OAR-2003-0119-0951
E. Omalley	none	EPA-HQ-OAR-2003-0119-0952
W. Ebersberger	none	EPA-HQ-OAR-2003-0119-0953
L. McCracken	none	EPA-HQ-OAR-2003-0119-0954

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Commenter	Affiliate	DCN
G. R. Miller	none	EPA-HQ-OAR-2003-0119-0955
L. Ward	none	EPA-HQ-OAR-2003-0119-0956
J. Andes	none	EPA-HQ-OAR-2003-0119-0957
M. Abell	none	EPA-HQ-OAR-2003-0119-0958
B. Watson	none	EPA-HQ-OAR-2003-0119-0959
S. Fontana	none	EPA-HQ-OAR-2003-0119-0960
R. Lyon	none	EPA-HQ-OAR-2003-0119-0961
A. Myrick	none	EPA-HQ-OAR-2003-0119-0962
C. Jacobs	none	EPA-HQ-OAR-2003-0119-0966
M. P. Nochimson	none	EPA-HQ-OAR-2003-0119-0967
P. Evans	none	EPA-HQ-OAR-2003-0119-0968
B. Pilcher	none	EPA-HQ-OAR-2003-0119-0969
L. Wilson	none	EPA-HQ-OAR-2003-0119-0970
J. Capozzelli	none	EPA-HQ-OAR-2003-0119-0971
J. Lee	none	EPA-HQ-OAR-2003-0119-0972
V. Katz	none	EPA-HQ-OAR-2003-0119-0973
A. Ake	none	EPA-HQ-OAR-2003-0119-0974
C. Everett	none	EPA-HQ-OAR-2003-0119-0975
C. McGraw	none	EPA-HQ-OAR-2003-0119-0976
E. Mirabella	none	EPA-HQ-OAR-2003-0119-0986
E. Mirabella	none	EPA-HQ-OAR-2003-0119-0987
C. Melby	none	EPA-HQ-OAR-2003-0119-1028
P. Harlow	none	EPA-HQ-OAR-2003-0119-1029
M. Denevan	none	EPA-HQ-OAR-2003-0119-1031
M. DeLoye	none	EPA-HQ-OAR-2003-0119-1032

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Commenter	Affiliate	DCN
K. Jones	none	EPA-HQ-OAR-2003-0119-1050
J. Shepherd	none	EPA-HQ-OAR-2003-0119-1051
S. Burns	none	EPA-HQ-OAR-2003-0119-1052
M. Snowden	none	EPA-HQ-OAR-2003-0119-1053
T. Lincoln	none	EPA-HQ-OAR-2003-0119-1054
L. Elliott	none	EPA-HQ-OAR-2003-0119-1055
M. Ross	none	EPA-HQ-OAR-2003-0119-1056
S. Elkevizth	none	EPA-HQ-OAR-2003-0119-1057
T. Berghoff	none	EPA-HQ-OAR-2003-0119-1058
N. Neima	none	EPA-HQ-OAR-2003-0119-1059
N. Abood	none	EPA-HQ-OAR-2003-0119-1060
R. Dickinson	none	EPA-HQ-OAR-2003-0119-1061
Dr. D. K. Cinquemani	none	EPA-HQ-OAR-2003-0119-1062
M. Leach	none	EPA-HQ-OAR-2003-0119-1063
G. Locker	none	EPA-HQ-OAR-2003-0119-1064
S. Urban	none	EPA-HQ-OAR-2003-0119-1065
A. Fraser	none	EPA-HQ-OAR-2003-0119-1066
J. Taylor	none	EPA-HQ-OAR-2003-0119-1153
L. Bartell	none	EPA-HQ-OAR-2003-0119-1185
F. Carr	none	EPA-HQ-OAR-2003-0119-1186
J. Gau	none	EPA-HQ-OAR-2003-0119-1187
J. Bergeron	none	EPA-HQ-OAR-2003-0119-1188
M. Anton	none	EPA-HQ-OAR-2003-0119-1190
M. Vanderhill	none	EPA-HQ-OAR-2003-0119-1191
M. Watkins	none	EPA-HQ-OAR-2003-0119-1192

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Commenter	Affiliate	DCN
L. May	none	EPA-HQ-OAR-2003-0119-1193
M. Brunt	none	EPA-HQ-OAR-2003-0119-1194
M. Fogg	none	EPA-HQ-OAR-2003-0119-1195
B. O'Brien	none	EPA-HQ-OAR-2003-0119-1196
B. Gardner	none	EPA-HQ-OAR-2003-0119-1197
D. N. Orth	none	EPA-HQ-OAR-2003-0119-1198
G. M. Williams	none	EPA-HQ-OAR-2003-0119-1203
E. Wolf	none	EPA-HQ-OAR-2003-0119-1204
J. McCarthy	none	EPA-HQ-OAR-2003-0119-1205
C. Turtle	none	EPA-HQ-OAR-2003-0119-1206
J. Arnold	none	EPA-HQ-OAR-2003-0119-1207
R. Gordon	none	EPA-HQ-OAR-2003-0119-1208
S. Wilson	none	EPA-HQ-OAR-2003-0119-1209
S. Leone	none	EPA-HQ-OAR-2003-0119-1210
S. Chan	none	EPA-HQ-OAR-2003-0119-1211
S. Southwick	none	EPA-HQ-OAR-2003-0119-1212
J. Rampton	none	EPA-HQ-OAR-2003-0119-1213
Y. Autrey-Schell	none	EPA-HQ-OAR-2003-0119-1214
S. K. Snow	none	EPA-HQ-OAR-2003-0119-1215
B. Pratt	none	EPA-HQ-OAR-2003-0119-1216
S. Alexander	none	EPA-HQ-OAR-2003-0119-1218
M. Dormont	none	EPA-HQ-OAR-2003-0119-1219
R. Hodge	none	EPA-HQ-OAR-2003-0119-1220
B. Campbell	none	EPA-HQ-OAR-2003-0119-1221
C. Coari	none	EPA-HQ-OAR-2003-0119-1222

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Commenter	Affiliate	DCN
C. Baker-Willey	none	EPA-HQ-OAR-2003-0119-1225
C. Campbell	none	EPA-HQ-OAR-2003-0119-1226
A. Moore	none	EPA-HQ-OAR-2003-0119-1227
G. P. Mederos	none	EPA-HQ-OAR-2003-0119-1228
P. Daniels	none	EPA-HQ-OAR-2003-0119-1229
P. Richards	none	EPA-HQ-OAR-2003-0119-1230
P. Oaks	none	EPA-HQ-OAR-2003-0119-1231
R. Champlin	none	EPA-HQ-OAR-2003-0119-1232
R. Kiefer	none	EPA-HQ-OAR-2003-0119-1233
L. Brett	none	EPA-HQ-OAR-2003-0119-1234
S. P. O'Sullivan	none	EPA-HQ-OAR-2003-0119-1235
J. Davidson	none	EPA-HQ-OAR-2003-0119-1236
S. Small	none	EPA-HQ-OAR-2003-0119-1237
S. Elsey	none	EPA-HQ-OAR-2003-0119-1238
S. Carrico	none	EPA-HQ-OAR-2003-0119-1239
S. Yaffe	none	EPA-HQ-OAR-2003-0119-1240
T. Dukes	none	EPA-HQ-OAR-2003-0119-1241
T. Aldridge	none	EPA-HQ-OAR-2003-0119-1242
T. Magnani	none	EPA-HQ-OAR-2003-0119-1243
E. Wong-Drenning	none	EPA-HQ-OAR-2003-0119-1244
J. Cummins	none	EPA-HQ-OAR-2003-0119-1245
W. Foote	none	EPA-HQ-OAR-2003-0119-1246
L. Steele	none	EPA-HQ-OAR-2003-0119-1247
W. Wilgus	none	EPA-HQ-OAR-2003-0119-1248
W. Silver	none	EPA-HQ-OAR-2003-0119-1249

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Commenter	Affiliate	DCN
A. Faraldo	none	EPA-HQ-OAR-2003-0119-1251
P. Lowe	none	EPA-HQ-OAR-2003-0119-1252
P. Crouser	none	EPA-HQ-OAR-2003-0119-1253
M. Gargiulo	none	EPA-HQ-OAR-2003-0119-1254
R. Fusinato	none	EPA-HQ-OAR-2003-0119-1255
C. Rains	none	EPA-HQ-OAR-2003-0119-1256
A. J. Averett	none	EPA-HQ-OAR-2003-0119-1257
C. Ehrhardt	none	EPA-HQ-OAR-2003-0119-1258
K. Crose	none	EPA-HQ-OAR-2003-0119-1259
C. Nazor	none	EPA-HQ-OAR-2003-0119-1260
D. Berry	none	EPA-HQ-OAR-2003-0119-1261
E. Norris	none	EPA-HQ-OAR-2003-0119-1262
F. Devlin	none	EPA-HQ-OAR-2003-0119-1263
F. Friesen	none	EPA-HQ-OAR-2003-0119-1264
C. Harris	none	EPA-HQ-OAR-2003-0119-1266
B. Dennie	none	EPA-HQ-OAR-2003-0119-1267
B. Brewster	none	EPA-HQ-OAR-2003-0119-1269
P. Albers	none	EPA-HQ-OAR-2003-0119-1270
D. Millett	none	EPA-HQ-OAR-2003-0119-1271
C. Davies	none	EPA-HQ-OAR-2003-0119-1272
S. Lowen	none	EPA-HQ-OAR-2003-0119-1273
J. Hope	none	EPA-HQ-OAR-2003-0119-1274
E. and E. Hazard	none	EPA-HQ-OAR-2003-0119-1275
A. Warfield	none	EPA-HQ-OAR-2003-0119-1276
G. Ikeda	none	EPA-HQ-OAR-2003-0119-1277

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Commenter	Affiliate	DCN
B. Murphy	none	EPA-HQ-OAR-2003-0119-1278
M. Volkman	none	EPA-HQ-OAR-2003-0119-1279
C. Speas	none	EPA-HQ-OAR-2003-0119-1280
M. Shuter	none	EPA-HQ-OAR-2003-0119-1281
F. Willis	none	EPA-HQ-OAR-2003-0119-1282
D. Morphis	none	EPA-HQ-OAR-2003-0119-1283
H. Carr	none	EPA-HQ-OAR-2003-0119-1284
H. Putera	none	EPA-HQ-OAR-2003-0119-1285
Z. Benjamin	none	EPA-HQ-OAR-2003-0119-1286
M. Fitzgerald	none	EPA-HQ-OAR-2003-0119-1287
I. Casillas	none	EPA-HQ-OAR-2003-0119-1288
J. Cunningham	none	EPA-HQ-OAR-2003-0119-1289
B. Mihopulos	none	EPA-HQ-OAR-2003-0119-1290
R. Leibowitz	none	EPA-HQ-OAR-2003-0119-1291
J. Tuber	none	EPA-HQ-OAR-2003-0119-1292
J. Long	none	EPA-HQ-OAR-2003-0119-1293
J. Christy	none	EPA-HQ-OAR-2003-0119-1294
R. Cage	none	EPA-HQ-OAR-2003-0119-1295
C. MacGregor	none	EPA-HQ-OAR-2003-0119-1296
G. and L. Clark	none	EPA-HQ-OAR-2003-0119-1297
C. Mullins	none	EPA-HQ-OAR-2003-0119-1298
D. Artley	none	EPA-HQ-OAR-2003-0119-1299
B. Krasner	none	EPA-HQ-OAR-2003-0119-1300
G. Anderson	none	EPA-HQ-OAR-2003-0119-1301
J. Plant	none	EPA-HQ-OAR-2003-0119-1302

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Commenter	Affiliate	DCN
J. Harvey	none	EPA-HQ-OAR-2003-0119-1303
J. Knobloch	none	EPA-HQ-OAR-2003-0119-1304
J. Etter	none	EPA-HQ-OAR-2003-0119-1305
J. Pockrus	none	EPA-HQ-OAR-2003-0119-1306
K. Weller-Coffman	none	EPA-HQ-OAR-2003-0119-1307
K. De Vier	none	EPA-HQ-OAR-2003-0119-1308
M. A. Henderson	none	EPA-HQ-OAR-2003-0119-1309
J. Weills	none	EPA-HQ-OAR-2003-0119-1310
K. B. Russell	none	EPA-HQ-OAR-2003-0119-1311
F. Schilling	none	EPA-HQ-OAR-2003-0119-1312
K. Box	none	EPA-HQ-OAR-2003-0119-1313
K. Reiner	none	EPA-HQ-OAR-2003-0119-1314
K. Lozaw	none	EPA-HQ-OAR-2003-0119-1315
L. Duke	none	EPA-HQ-OAR-2003-0119-1316
K. Vasko	none	EPA-HQ-OAR-2003-0119-1319
L. S. Miller	none	EPA-HQ-OAR-2003-0119-1320
H. McKinney	none	EPA-HQ-OAR-2003-0119-1321
M. Lajoie-sandroff	none	EPA-HQ-OAR-2003-0119-1322
M. Star	none	EPA-HQ-OAR-2003-0119-1323
M. Carano	none	EPA-HQ-OAR-2003-0119-1324
B. and J. Epstein	none	EPA-HQ-OAR-2003-0119-1325
M. Hauck	none	EPA-HQ-OAR-2003-0119-1326
P. Kaiser	none	EPA-HQ-OAR-2003-0119-1327
M. A. Dobler	none	EPA-HQ-OAR-2003-0119-1329
B. Flowers	none	EPA-HQ-OAR-2003-0119-1330

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Commenter	Affiliate	DCN
J. Brown	none	EPA-HQ-OAR-2003-0119-1331
D. Payne	none	EPA-HQ-OAR-2003-0119-1332
D. Armor	none	EPA-HQ-OAR-2003-0119-1333
D. Robinson	none	EPA-HQ-OAR-2003-0119-1334
D. Rawlings	none	EPA-HQ-OAR-2003-0119-1335
S. Forbes	none	EPA-HQ-OAR-2003-0119-1336
D. Simmer	none	EPA-HQ-OAR-2003-0119-1337
R. McBane	none	EPA-HQ-OAR-2003-0119-1338
M. Walton	none	EPA-HQ-OAR-2003-0119-1339
M. Miller	none	EPA-HQ-OAR-2003-0119-1340
D. Graham	none	EPA-HQ-OAR-2003-0119-1343
M. Athene	none	EPA-HQ-OAR-2003-0119-1344
S. Brownrigg	none	EPA-HQ-OAR-2003-0119-1345
S. Rego-Ross	none	EPA-HQ-OAR-2003-0119-1346
S. Hawkins	none	EPA-HQ-OAR-2003-0119-1347
M. Haugen	none	EPA-HQ-OAR-2003-0119-1349
R. Mutchnik	none	EPA-HQ-OAR-2003-0119-1350
R. Parris	none	EPA-HQ-OAR-2003-0119-1351
M. Rice	none	EPA-HQ-OAR-2003-0119-1352
S. Miller	none	EPA-HQ-OAR-2003-0119-1353
S. Gaskins	none	EPA-HQ-OAR-2003-0119-1354
T. Fonda	none	EPA-HQ-OAR-2003-0119-1355
J. Voss	none	EPA-HQ-OAR-2003-0119-1356
V. Schulman	none	EPA-HQ-OAR-2003-0119-1357
K. Pendergrass	none	EPA-HQ-OAR-2003-0119-1359

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Commenter	Affiliate	DCN
S. and D. Ritchie	none	EPA-HQ-OAR-2003-0119-1360
J. Witte	none	EPA-HQ-OAR-2003-0119-1361
J. Snow	none	EPA-HQ-OAR-2003-0119-1362
J. Holkup	none	EPA-HQ-OAR-2003-0119-1363
A. Mink	none	EPA-HQ-OAR-2003-0119-1364
J. Archuleta	none	EPA-HQ-OAR-2003-0119-1365
J. B. Reid	none	EPA-HQ-OAR-2003-0119-1366
S. C. Spurgeon	none	EPA-HQ-OAR-2003-0119-1367
D. and A. Riley	none	EPA-HQ-OAR-2003-0119-1368
M. Anderson	none	EPA-HQ-OAR-2003-0119-1369
M. Britton	none	EPA-HQ-OAR-2003-0119-1370
A. Cullipher	none	EPA-HQ-OAR-2003-0119-1371
K. Querner	none	EPA-HQ-OAR-2003-0119-1372
C. Bowsher	none	EPA-HQ-OAR-2003-0119-1373
P. M. Williams	none	EPA-HQ-OAR-2003-0119-1374
Dr. John M. Stewart	Northland College	EPA-HQ-OAR-2003-0119-1381
R. Caputo	none	EPA-HQ-OAR-2003-0119-1383
R. Gale	none	EPA-HQ-OAR-2003-0119-1385
R. Jenkinson	none	EPA-HQ-OAR-2003-0119-1386
R. Kofler	none	EPA-HQ-OAR-2003-0119-1388
R. Yarnell	none	EPA-HQ-OAR-2003-0119-1389
D. Speck-Bartynski	none	EPA-HQ-OAR-2003-0119-1391
A. Hall-Mendoza	none	EPA-HQ-OAR-2003-0119-1393
S. Norton	none	EPA-HQ-OAR-2003-0119-1394
B. Smith	none	EPA-HQ-OAR-2003-0119-1395

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Commenter	Affiliate	DCN
S. Quirarte	none	EPA-HQ-OAR-2003-0119-1401
V. Nguyen	none	EPA-HQ-OAR-2003-0119-1403
J. Guinnessey	none	EPA-HQ-OAR-2003-0119-1405
A. Goodwin	none	EPA-HQ-OAR-2003-0119-1406
J. Miller	none	EPA-HQ-OAR-2003-0119-1409
H. Lazzarini	none	EPA-HQ-OAR-2003-0119-1410
H. Gwiazda	none	EPA-HQ-OAR-2003-0119-1411
M. T. Duffy	none	EPA-HQ-OAR-2003-0119-1412
R. Waller	none	EPA-HQ-OAR-2003-0119-1413
J. Pence	none	EPA-HQ-OAR-2003-0119-1414
J. Carlsen	none	EPA-HQ-OAR-2003-0119-1415
S. Gallucci	none	EPA-HQ-OAR-2003-0119-1416
L. Bryant	none	EPA-HQ-OAR-2003-0119-1417
A. Kurland	none	EPA-HQ-OAR-2003-0119-1418
P. M. Thomas	none	EPA-HQ-OAR-2003-0119-1419
C. Sayre	none	EPA-HQ-OAR-2003-0119-1420
K. Dodge	none	EPA-HQ-OAR-2003-0119-1421
M. M. Switlik	none	EPA-HQ-OAR-2003-0119-1422
R. Placone	none	EPA-HQ-OAR-2003-0119-1423
L. C. B. Stranaghan	none	EPA-HQ-OAR-2003-0119-1424
E. O'Dea	none	EPA-HQ-OAR-2003-0119-1425
L. Weiner	none	EPA-HQ-OAR-2003-0119-1426
L. Bagley	none	EPA-HQ-OAR-2003-0119-1427
M. Hein	none	EPA-HQ-OAR-2003-0119-1428
A. Collins	none	EPA-HQ-OAR-2003-0119-1429

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Commenter	Affiliate	DCN
M. Salvestrin	none	EPA-HQ-OAR-2003-0119-1430
M. Goodwin	none	EPA-HQ-OAR-2003-0119-1431
A. Nichols	none	EPA-HQ-OAR-2003-0119-1432
G. Gorden	none	EPA-HQ-OAR-2003-0119-1433
P. Blaha	none	EPA-HQ-OAR-2003-0119-1434
P. Wang	none	EPA-HQ-OAR-2003-0119-1435
P. Gordon	none	EPA-HQ-OAR-2003-0119-1436
P. Gampper	none	EPA-HQ-OAR-2003-0119-1437
R. Ross	none	EPA-HQ-OAR-2003-0119-1438
R. Pooni	none	EPA-HQ-OAR-2003-0119-1439
M. Bartleman	none	EPA-HQ-OAR-2003-0119-1440
S. Monteiro	none	EPA-HQ-OAR-2003-0119-1441
H. Reading	none	EPA-HQ-OAR-2003-0119-1442
W. Montgomery	none	EPA-HQ-OAR-2003-0119-1443
P. Jardine	none	EPA-HQ-OAR-2003-0119-1444
D. Geraghty	none	EPA-HQ-OAR-2003-0119-1445
P. Sims	none	EPA-HQ-OAR-2003-0119-1446
J. Jordan	none	EPA-HQ-OAR-2003-0119-1447
C. Lewis-Dougherty	none	EPA-HQ-OAR-2003-0119-1448
A. Klein	none	EPA-HQ-OAR-2003-0119-1449
K. G. Gubrud	none	EPA-HQ-OAR-2003-0119-1450
C. Pado	none	EPA-HQ-OAR-2003-0119-1451
E. Obenaus	none	EPA-HQ-OAR-2003-0119-1452
C. Venable	none	EPA-HQ-OAR-2003-0119-1455
N. Small	none	EPA-HQ-OAR-2003-0119-1456

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Commenter	Affiliate	DCN
A. Gramstedt	none	EPA-HQ-OAR-2003-0119-1457
P. Le Roux	none	EPA-HQ-OAR-2003-0119-1458
C. C. Gartland	none	EPA-HQ-OAR-2003-0119-1469
A. Abdalian	none	EPA-HQ-OAR-2003-0119-1472
C. Appenseller	none	EPA-HQ-OAR-2003-0119-1474
C. Arnold	none	EPA-HQ-OAR-2003-0119-1475
C. Vallone	none	EPA-HQ-OAR-2003-0119-1476
C. Fowler	none	EPA-HQ-OAR-2003-0119-1477
C. Moss	none	EPA-HQ-OAR-2003-0119-1478
C. Garcia	none	EPA-HQ-OAR-2003-0119-1479
M. Shaw	none	EPA-HQ-OAR-2003-0119-1483
D. Costine	none	EPA-HQ-OAR-2003-0119-1484
A. Oshiro	none	EPA-HQ-OAR-2003-0119-1485
B. Coulson	none	EPA-HQ-OAR-2003-0119-1486
M. Schwartz	none	EPA-HQ-OAR-2003-0119-1487
D. Duda	none	EPA-HQ-OAR-2003-0119-1488
E. Spalding	none	EPA-HQ-OAR-2003-0119-1489
C. Holland	none	EPA-HQ-OAR-2003-0119-1490
K. McCoy	none	EPA-HQ-OAR-2003-0119-1491
W. Neill	none	EPA-HQ-OAR-2003-0119-1492
R. Flory	none	EPA-HQ-OAR-2003-0119-1493
C. Soraghan	none	EPA-HQ-OAR-2003-0119-1495
P. Kerman	none	EPA-HQ-OAR-2003-0119-1496
J. Kennedy	none	EPA-HQ-OAR-2003-0119-1497
L. Burlingame	none	EPA-HQ-OAR-2003-0119-1498

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Commenter	Affiliate	DCN
A. Daniels-Grefelt	none	EPA-HQ-OAR-2003-0119-1499
D. Swarts	none	EPA-HQ-OAR-2003-0119-1500
F. Guerrero	none	EPA-HQ-OAR-2003-0119-1501
R. Werner	none	EPA-HQ-OAR-2003-0119-1502
M. Bergman	none	EPA-HQ-OAR-2003-0119-1503
H. Wilson	none	EPA-HQ-OAR-2003-0119-1504
M. Andren	none	EPA-HQ-OAR-2003-0119-1505
B. Hughes	none	EPA-HQ-OAR-2003-0119-1506
G. Crouse	none	EPA-HQ-OAR-2003-0119-1507
P. Mann	none	EPA-HQ-OAR-2003-0119-1508
M. Lackey	none	EPA-HQ-OAR-2003-0119-1509
A. Gayler	none	EPA-HQ-OAR-2003-0119-1510
Helen Durst	none	EPA-HQ-OAR-2003-0119-1511
D. Stanko	none	EPA-HQ-OAR-2003-0119-1513
E. Kompanek	none	EPA-HQ-OAR-2003-0119-1514
J. Ahearn	none	EPA-HQ-OAR-2003-0119-1515
J. Koss	none	EPA-HQ-OAR-2003-0119-1516
J. Fitzgerald	none	EPA-HQ-OAR-2003-0119-1538
G. Taylor	none	EPA-HQ-OAR-2003-0119-1539
J. Taylor	none	EPA-HQ-OAR-2003-0119-1540
T. Jackson	none	EPA-HQ-OAR-2003-0119-1541
W. and P. Talbert	none	EPA-HQ-OAR-2003-0119-1542
J. Lynch	none	EPA-HQ-OAR-2003-0119-1543
J. Engel	none	EPA-HQ-OAR-2003-0119-1544
K. Brecka	none	EPA-HQ-OAR-2003-0119-1545

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
E. Kernaghan	none	EPA-HQ-OAR-2003-0119-1546
K. Egan	none	EPA-HQ-OAR-2003-0119-1547
T. L. Hamzy	none	EPA-HQ-OAR-2003-0119-1548
M. Kohn	none	EPA-HQ-OAR-2003-0119-1549
T. Hazelleaf	none	EPA-HQ-OAR-2003-0119-1550
J. Kozak	none	EPA-HQ-OAR-2003-0119-1551
J. Lang	none	EPA-HQ-OAR-2003-0119-1552
K. Webers	none	EPA-HQ-OAR-2003-0119-1553
J. Bicking	none	EPA-HQ-OAR-2003-0119-1554
L. Inman	none	EPA-HQ-OAR-2003-0119-1555
L. Penney	none	EPA-HQ-OAR-2003-0119-1556
J. Mahnken	none	EPA-HQ-OAR-2003-0119-1557
J. Marsh	none	EPA-HQ-OAR-2003-0119-1558
J. Thacker	none	EPA-HQ-OAR-2003-0119-1559
C. Lavelle-pahl	none	EPA-HQ-OAR-2003-0119-1560
H. Curtler III	none	EPA-HQ-OAR-2003-0119-1561
P. Brownlee	none	EPA-HQ-OAR-2003-0119-1562
L. Kierig	none	EPA-HQ-OAR-2003-0119-1563
E. Hatleberg	none	EPA-HQ-OAR-2003-0119-1564
D. Vines-Sharp	none	EPA-HQ-OAR-2003-0119-1565
P. Fallon	none	EPA-HQ-OAR-2003-0119-1566
D. Forshtay	none	EPA-HQ-OAR-2003-0119-1567
L. Fowler	none	EPA-HQ-OAR-2003-0119-1568
G. Countryman-Mills	none	EPA-HQ-OAR-2003-0119-1569
L. Lithgow	none	EPA-HQ-OAR-2003-0119-1570

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
M. Graf	none	EPA-HQ-OAR-2003-0119-1571
J. Nichols	none	EPA-HQ-OAR-2003-0119-1572
A. Bonvouloir	none	EPA-HQ-OAR-2003-0119-1573
R. Ruggles	none	EPA-HQ-OAR-2003-0119-1574
R. Philbrick	none	EPA-HQ-OAR-2003-0119-1575
D. Brandt	none	EPA-HQ-OAR-2003-0119-1576
L. B. Smith	none	EPA-HQ-OAR-2003-0119-1577
J. Curtis	none	EPA-HQ-OAR-2003-0119-1578
J. Mucci	none	EPA-HQ-OAR-2003-0119-1579
J. Wagner	none	EPA-HQ-OAR-2003-0119-1580
D. Artemis	none	EPA-HQ-OAR-2003-0119-1581
A. Moffat	none	EPA-HQ-OAR-2003-0119-1582
S. Baudo	none	EPA-HQ-OAR-2003-0119-1583
B. Fitzpatrick	none	EPA-HQ-OAR-2003-0119-1584
M. Shimizu	none	EPA-HQ-OAR-2003-0119-1585
M. Weimer	none	EPA-HQ-OAR-2003-0119-1586
J. McCreary	none	EPA-HQ-OAR-2003-0119-1587
C. Hall	none	EPA-HQ-OAR-2003-0119-1588
D. Slater	none	EPA-HQ-OAR-2003-0119-1589
C. Rendzio	none	EPA-HQ-OAR-2003-0119-1590
Corey E. Olson	Pipe Organs/Golden Ponds Farm	EPA-HQ-OAR-2003-0119-1591
D. Turner	none	EPA-HQ-OAR-2003-0119-1592
J. Sorrells	none	EPA-HQ-OAR-2003-0119-1593
J. Viriolic	none	EPA-HQ-OAR-2003-0119-1594
K. Knudsen	none	EPA-HQ-OAR-2003-0119-1595

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
K. Kula	none	EPA-HQ-OAR-2003-0119-1596
L. Jobe	none	EPA-HQ-OAR-2003-0119-1597
L. Boyd	none	EPA-HQ-OAR-2003-0119-1598
T. Litwak	none	EPA-HQ-OAR-2003-0119-1599
M. Flanagan	none	EPA-HQ-OAR-2003-0119-1600
G. James	none	EPA-HQ-OAR-2003-0119-1601
D. Weise	none	EPA-HQ-OAR-2003-0119-1602
E. Powell	none	EPA-HQ-OAR-2003-0119-1603
J. B. Wilson	none	EPA-HQ-OAR-2003-0119-1604
C. Easterling	none	EPA-HQ-OAR-2003-0119-1605
A. McGarry	none	EPA-HQ-OAR-2003-0119-1606
J. Larson	none	EPA-HQ-OAR-2003-0119-1607
N. Charlton	none	EPA-HQ-OAR-2003-0119-1608
C. Franklin	none	EPA-HQ-OAR-2003-0119-1610
D. Kleiman	none	EPA-HQ-OAR-2003-0119-1612
C. Siewert	none	EPA-HQ-OAR-2003-0119-1613
H. Freiberg	none	EPA-HQ-OAR-2003-0119-1615
H. Halvorson	none	EPA-HQ-OAR-2003-0119-1616
R. Tschudy	none	EPA-HQ-OAR-2003-0119-1618
D. Burns	none	EPA-HQ-OAR-2003-0119-1619
R. Mihaly	none	EPA-HQ-OAR-2003-0119-1621
A. Ambler	none	EPA-HQ-OAR-2003-0119-1622
B. Gudac	none	EPA-HQ-OAR-2003-0119-1623
B. Hutchingson	none	EPA-HQ-OAR-2003-0119-1624
M. Framson	none	EPA-HQ-OAR-2003-0119-1625

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
L. E. Johnson	none	EPA-HQ-OAR-2003-0119-1626
D. Boothe	none	EPA-HQ-OAR-2003-0119-1628
A. Kampf	none	EPA-HQ-OAR-2003-0119-1629
M. Haines	none	EPA-HQ-OAR-2003-0119-1630
K. Moore	none	EPA-HQ-OAR-2003-0119-1631
D. Collings	none	EPA-HQ-OAR-2003-0119-1632
F. Elliott	none	EPA-HQ-OAR-2003-0119-1633
E. Lanum	none	EPA-HQ-OAR-2003-0119-1634
G. Watanabe	none	EPA-HQ-OAR-2003-0119-1635
N. Hartz	none	EPA-HQ-OAR-2003-0119-1636
G. Kerber	none	EPA-HQ-OAR-2003-0119-1637
G. Cadieux	none	EPA-HQ-OAR-2003-0119-1638
K. Morris	none	EPA-HQ-OAR-2003-0119-1643
W. Jones	none	EPA-HQ-OAR-2003-0119-1644
L. Capizzi	none	EPA-HQ-OAR-2003-0119-1645
A. Smith	none	EPA-HQ-OAR-2003-0119-1650
E. Bindseil	none	EPA-HQ-OAR-2003-0119-1651
E. Claman	none	EPA-HQ-OAR-2003-0119-1652
K. Hanratty	none	EPA-HQ-OAR-2003-0119-1653
P. Morello	none	EPA-HQ-OAR-2003-0119-1654
M. Gleason	none	EPA-HQ-OAR-2003-0119-1655
R. Valdez	none	EPA-HQ-OAR-2003-0119-1666
P. Abbott	none	EPA-HQ-OAR-2003-0119-1713
T. G. Fox	none	EPA-HQ-OAR-2003-0119-1720
N. Stecker	none	EPA-HQ-OAR-2003-0119-1721

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
L. Harter	none	EPA-HQ-OAR-2003-0119-1722
J. De Guzman	none	EPA-HQ-OAR-2003-0119-1723
S. Holford	none	EPA-HQ-OAR-2003-0119-1724
L. Stanfield	none	EPA-HQ-OAR-2003-0119-1725
T. Foster	none	EPA-HQ-OAR-2003-0119-1726
M. Engelman	none	EPA-HQ-OAR-2003-0119-1727
J. Ehrlich	none	EPA-HQ-OAR-2003-0119-1728
J. Blair	none	EPA-HQ-OAR-2003-0119-1729
J. Streble	none	EPA-HQ-OAR-2003-0119-1730
J. Seymour, Jr.	none	EPA-HQ-OAR-2003-0119-1731
J. and P. Hockett	none	EPA-HQ-OAR-2003-0119-1732
J. Books	none	EPA-HQ-OAR-2003-0119-1770
K. McAnally	none	EPA-HQ-OAR-2003-0119-1771
K. Kwong	none	EPA-HQ-OAR-2003-0119-1772
J. W. McManus	none	EPA-HQ-OAR-2003-0119-1773
W. L. Boucher	none	EPA-HQ-OAR-2003-0119-1774
L. Touchstone	none	EPA-HQ-OAR-2003-0119-1775
L. Foster	none	EPA-HQ-OAR-2003-0119-1776
L. Porteous	none	EPA-HQ-OAR-2003-0119-1777
A. Palmer	none	EPA-HQ-OAR-2003-0119-1778
M. Pfund	none	EPA-HQ-OAR-2003-0119-1779
N. Echols	none	EPA-HQ-OAR-2003-0119-1780
P. Mumm	none	EPA-HQ-OAR-2003-0119-1781
P. Lambert	none	EPA-HQ-OAR-2003-0119-1782
B. LeBeau	none	EPA-HQ-OAR-2003-0119-1783

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
C. Okimoto	none	EPA-HQ-OAR-2003-0119-1784
D. Potter	none	EPA-HQ-OAR-2003-0119-1785
P. Baker	none	EPA-HQ-OAR-2003-0119-1786
T. Mason	none	EPA-HQ-OAR-2003-0119-1790
T. Valentin	none	EPA-HQ-OAR-2003-0119-1791
V. Tupper Morehead	none	EPA-HQ-OAR-2003-0119-1792
L. Fronce and T. Hall	none	EPA-HQ-OAR-2003-0119-1793
C. Thompson	none	EPA-HQ-OAR-2003-0119-1794
J. S. Fritz	none	EPA-HQ-OAR-2003-0119-1795
M. Dillon	none	EPA-HQ-OAR-2003-0119-1796
J. Applebaum	none	EPA-HQ-OAR-2003-0119-1797
J. Hamann	none	EPA-HQ-OAR-2003-0119-1812
J. Butler	none	EPA-HQ-OAR-2003-0119-1814
J. Hartman	none	EPA-HQ-OAR-2003-0119-1815
J. Franklin	none	EPA-HQ-OAR-2003-0119-1816
J. Phillips	none	EPA-HQ-OAR-2003-0119-1817
A. Cheng	none	EPA-HQ-OAR-2003-0119-1818
K. Williams	none	EPA-HQ-OAR-2003-0119-1819
J. Peres	none	EPA-HQ-OAR-2003-0119-1820
T. Watts	none	EPA-HQ-OAR-2003-0119-1821
C. Lynt	none	EPA-HQ-OAR-2003-0119-1822
S. Futrell	none	EPA-HQ-OAR-2003-0119-1823
V. Terry	none	EPA-HQ-OAR-2003-0119-1824
C. Mead	none	EPA-HQ-OAR-2003-0119-1825
M. Buncik	none	EPA-HQ-OAR-2003-0119-1826

Table 9. Form Letter EPA-HQ-OAR-2003-0119-0072

Commenter	Affiliate	DCN
S. Flick	none	EPA-HQ-OAR-2003-0119-1827
G. Boyer	none	EPA-HQ-OAR-2003-0119-1828
E. Ball	none	EPA-HQ-OAR-2003-0119-1829
M. Leven	none	EPA-HQ-OAR-2003-0119-1831
A. Villegas	none	EPA-HQ-OAR-2003-0119-1976
M. Hodie	none	EPA-HQ-OAR-2003-0119-1977
S. Bensel	none	EPA-HQ-OAR-2003-0119-1978
P. Jones	none	EPA-HQ-OAR-2003-0119-1979
J. Steiner	none	EPA-HQ-OAR-2003-0119-1980
S. Llorca	none	EPA-HQ-OAR-2003-0119-1981
T. Thompson	none	EPA-HQ-OAR-2003-0119-1982
D. Pedersen	none	EPA-HQ-OAR-2003-0119-1983
T. Ivanow	none	EPA-HQ-OAR-2003-0119-1984
M. Wilkie	none	EPA-HQ-OAR-2003-0119-1985
F. Hill	none	EPA-HQ-OAR-2003-0119-1986
V. Markham	none	EPA-HQ-OAR-2003-0119-1987
B. Arana	none	EPA-HQ-OAR-2003-0119-1996
J. Rogers	none	EPA-HQ-OAR-2003-0119-2014
P. Scheirer	none	EPA-HQ-OAR-2003-0119-2030
S. Heffernon	none	EPA-HQ-OAR-2003-0119-2031
S. Simmons	none	EPA-HQ-OAR-2003-0119-2032
T. Mason	none	EPA-HQ-OAR-2003-0119-2033
G. Blomberg	none	EPA-HQ-OAR-2003-0119-2034
P. Quillian	none	EPA-HQ-OAR-2003-0119-2035
B. Mellgren	none	EPA-HQ-OAR-2003-0119-2036

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Commenter	Affiliate	DCN
D. Little Eagle	none	EPA-HQ-OAR-2003-0119-2037
B. Bean	none	EPA-HQ-OAR-2003-0119-2038
R. Spenser	none	EPA-HQ-OAR-2003-0119-2039
B. Weimann	none	EPA-HQ-OAR-2003-0119-2049
E. D'Urso	none	EPA-HQ-OAR-2003-0119-2050
A. Trenholme	none	EPA-HQ-OAR-2003-0119-2051
M. Wood	none	EPA-HQ-OAR-2003-0119-2052
N. York	none	EPA-HQ-OAR-2003-0119-2053
M. Mouna	none	EPA-HQ-OAR-2003-0119-2054
M. Davey	none	EPA-HQ-OAR-2003-0119-2056
P. Martin	none	EPA-HQ-OAR-2003-0119-2058
M. Kissinger	none	EPA-HQ-OAR-2003-0119-2059
B. Vigars	none	EPA-HQ-OAR-2003-0119-2060
S. Cardwell	none	EPA-HQ-OAR-2003-0119-2061
C. Mullen	none	EPA-HQ-OAR-2003-0119-2062
J. Hassberg	none	EPA-HQ-OAR-2003-0119-2063
S. Rekdal	none	EPA-HQ-OAR-2003-0119-2064
T. and B. Ferguson	none	EPA-HQ-OAR-2003-0119-2065
L. Bodiford	none	EPA-HQ-OAR-2003-0119-2066
B. Winholtz	none	EPA-HQ-OAR-2003-0119-2067
B. Brown	none	EPA-HQ-OAR-2003-0119-2068
P. Katz	none	EPA-HQ-OAR-2003-0119-2069
C. Glatt	none	EPA-HQ-OAR-2003-0119-2070
C. Woodcock	none	EPA-HQ-OAR-2003-0119-2071
Mass Comment Campaign	none	EPA-HQ-OAR-2003-0119-2454

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Commenter	Affiliate	DCN
Sherilyn Coldwell	Sierra Club	EPA-HQ-OAR-2003-0119-0074
Peter Kallay	Sierra Club	EPA-HQ-OAR-2003-0119-0076
G. V. Christensen	Sierra Club	EPA-HQ-OAR-2003-0119-0077
August Cardea	Sierra Club	EPA-HQ-OAR-2003-0119-0078
Mary Gutzwiller	Sierra Club	EPA-HQ-OAR-2003-0119-0079
Ronald Davis	Sierra Club	EPA-HQ-OAR-2003-0119-0080
Judy Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0081
Eugenia Holliday	Sierra Club	EPA-HQ-OAR-2003-0119-0082
Cheryl & Fred Heinecke	Sierra Club	EPA-HQ-OAR-2003-0119-0083
John Delgado	Sierra Club	EPA-HQ-OAR-2003-0119-0084
Gay Block	Sierra Club	EPA-HQ-OAR-2003-0119-0085
Allen & Jean Coffin	Sierra Club	EPA-HQ-OAR-2003-0119-0086
Cathy Caldie	Sierra Club	EPA-HQ-OAR-2003-0119-0087
Judith Rosenblatt	Sierra Club	EPA-HQ-OAR-2003-0119-0088
Piper Burch	Sierra Club	EPA-HQ-OAR-2003-0119-0090
Charles Fletcher	Sierra Club	EPA-HQ-OAR-2003-0119-0091
Lori Lydic	Sierra Club	EPA-HQ-OAR-2003-0119-0092
Sharon Furlong	Sierra Club	EPA-HQ-OAR-2003-0119-0093
Bob Fusinato	Sierra Club	EPA-HQ-OAR-2003-0119-0094
Stephen Snyder	Sierra Club	EPA-HQ-OAR-2003-0119-0096
Catherine Goldwater	Sierra Club	EPA-HQ-OAR-2003-0119-0097
Cathy Scott	Sierra Club	EPA-HQ-OAR-2003-0119-0098
Cecelia Vidmar	Sierra Club	EPA-HQ-OAR-2003-0119-0099

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Commenter	Affiliate	DCN
Cheryl Mark	Sierra Club	EPA-HQ-OAR-2003-0119-0100
Christopher Laing	Sierra Club	EPA-HQ-OAR-2003-0119-0101
Curtiss Barron	Sierra Club	EPA-HQ-OAR-2003-0119-0102
Amy Kellum	Sierra Club	EPA-HQ-OAR-2003-0119-0103
Danielle Logue	Sierra Club	EPA-HQ-OAR-2003-0119-0104
Darby Tarr	Sierra Club	EPA-HQ-OAR-2003-0119-0105
Debbie Barnt	Sierra Club	EPA-HQ-OAR-2003-0119-0106
Deborah Clayton	Sierra Club	EPA-HQ-OAR-2003-0119-0107
Edward Struthers	Sierra Club	EPA-HQ-OAR-2003-0119-0108
Ellen Keiter	Sierra Club	EPA-HQ-OAR-2003-0119-0109
Emily Anderson	Sierra Club	EPA-HQ-OAR-2003-0119-0110
Emily Dale	Sierra Club	EPA-HQ-OAR-2003-0119-0111
Emma Withers	Sierra Club	EPA-HQ-OAR-2003-0119-0112
Frank Pilholski	Sierra Club	EPA-HQ-OAR-2003-0119-0113
Angela Rhoads	Sierra Club	EPA-HQ-OAR-2003-0119-0114
Gary Simpson	Sierra Club	EPA-HQ-OAR-2003-0119-0115
Gary Warren	Sierra Club	EPA-HQ-OAR-2003-0119-0116
Avraam Dectis	Sierra Club	EPA-HQ-OAR-2003-0119-0117
Cyndi Hitchcock	Sierra Club	EPA-HQ-OAR-2003-0119-0118
Betty Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0119
Stan Arledge	Sierra Club	EPA-HQ-OAR-2003-0119-0120
Stacy Green	Sierra Club	EPA-HQ-OAR-2003-0119-0121
Robert Hyer	Sierra Club	EPA-HQ-OAR-2003-0119-0122
Robert Whitman	Sierra Club	EPA-HQ-OAR-2003-0119-0123
Robin Chambers	Sierra Club	EPA-HQ-OAR-2003-0119-0124

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Commenter	Affiliate	DCN
Ron Farnsworth	Sierra Club	EPA-HQ-OAR-2003-0119-0125
Sara Beth Cowgill	Sierra Club	EPA-HQ-OAR-2003-0119-0126
Sara Michl	Sierra Club	EPA-HQ-OAR-2003-0119-0127
Sheelagh Oliveria	Sierra Club	EPA-HQ-OAR-2003-0119-0128
Sheila Sewell	Sierra Club	EPA-HQ-OAR-2003-0119-0129
Sherrie Day	Sierra Club	EPA-HQ-OAR-2003-0119-0130
Sister Anne Michel	Sierra Club	EPA-HQ-OAR-2003-0119-0131
Sue Mcglothlin	Sierra Club	EPA-HQ-OAR-2003-0119-0132
Kathleen Querner	Sierra Club	EPA-HQ-OAR-2003-0119-0133
Nick Bartol	Sierra Club	EPA-HQ-OAR-2003-0119-0134
Richard Odgers	Sierra Club	EPA-HQ-OAR-2003-0119-0135
Bruce Ensor	Sierra Club	EPA-HQ-OAR-2003-0119-0136
Joan Davis	Sierra Club	EPA-HQ-OAR-2003-0119-0137
Art Vatsky	Sierra Club	EPA-HQ-OAR-2003-0119-0138
Linda Mulka	Sierra Club	EPA-HQ-OAR-2003-0119-0139
Mary Freed	Sierra Club	EPA-HQ-OAR-2003-0119-0140
Judith Humburg	Sierra Club	EPA-HQ-OAR-2003-0119-0141
Carol Boschert	Sierra Club	EPA-HQ-OAR-2003-0119-0142
P Williams	Sierra Club	EPA-HQ-OAR-2003-0119-0143
Elizabeth Beasley	Sierra Club	EPA-HQ-OAR-2003-0119-0144
Roger Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0145
Peter Hall	Sierra Club	EPA-HQ-OAR-2003-0119-0146
Jane McCloskey	Sierra Club	EPA-HQ-OAR-2003-0119-0147
Martha Willis	Sierra Club	EPA-HQ-OAR-2003-0119-0148
Linda Allen-Tawes	Sierra Club	EPA-HQ-OAR-2003-0119-0149

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Commenter	Affiliate	DCN
Helen Touster	Sierra Club	EPA-HQ-OAR-2003-0119-0150
Michele Hale	Sierra Club	EPA-HQ-OAR-2003-0119-0151
Janet Kitiyakara	Sierra Club	EPA-HQ-OAR-2003-0119-0152
Donna Newman	Sierra Club	EPA-HQ-OAR-2003-0119-0153
Andrew Lawrence	Sierra Club	EPA-HQ-OAR-2003-0119-0154
William Wing	Sierra Club	EPA-HQ-OAR-2003-0119-0155
David Parker	Sierra Club	EPA-HQ-OAR-2003-0119-0156
Richard Abruscato	Sierra Club	EPA-HQ-OAR-2003-0119-0157
Mike & Marga Filip	Sierra Club	EPA-HQ-OAR-2003-0119-0158
Abby Leigh	Sierra Club	EPA-HQ-OAR-2003-0119-0159
Liz Amsden	Sierra Club	EPA-HQ-OAR-2003-0119-0160
Jerry And Jane Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0161
Doug Mikkelsen	Sierra Club	EPA-HQ-OAR-2003-0119-0162
Jennifer Norman	Sierra Club	EPA-HQ-OAR-2003-0119-0163
Sharon Holmes	Sierra Club	EPA-HQ-OAR-2003-0119-0164
Laura Schlegel	Sierra Club	EPA-HQ-OAR-2003-0119-0165
Charles And Susan A Hammond	Sierra Club	EPA-HQ-OAR-2003-0119-0166
Chuck Wyrostok	Sierra Club	EPA-HQ-OAR-2003-0119-0167
Mary Holm	Sierra Club	EPA-HQ-OAR-2003-0119-0168
Lynn Ziegler	Sierra Club	EPA-HQ-OAR-2003-0119-0169
Prof. J. M. Stewart	Sierra Club	EPA-HQ-OAR-2003-0119-0170
Mary Ann Cusimano	Sierra Club	EPA-HQ-OAR-2003-0119-0171
Stefani Mistretta	Sierra Club	EPA-HQ-OAR-2003-0119-0172
Beate Nilsen	Sierra Club	EPA-HQ-OAR-2003-0119-0173
Jo-Ann Savoia	Sierra Club	EPA-HQ-OAR-2003-0119-0174

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Commenter	Affiliate	DCN
Eris Migliorini	Sierra Club	EPA-HQ-OAR-2003-0119-0175
Donald Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0176
Reed Stahl	Sierra Club	EPA-HQ-OAR-2003-0119-0177
Jessica Douglas	Sierra Club	EPA-HQ-OAR-2003-0119-0178
Thomas Wells	Sierra Club	EPA-HQ-OAR-2003-0119-0179
Katherine Cooper	Sierra Club	EPA-HQ-OAR-2003-0119-0180
Paula Katz	Sierra Club	EPA-HQ-OAR-2003-0119-0181
Abra and Diane Gwartney	Sierra Club	EPA-HQ-OAR-2003-0119-0182
Arthur Mink	Sierra Club	EPA-HQ-OAR-2003-0119-0183
John Zeigler	Sierra Club	EPA-HQ-OAR-2003-0119-0184
Arvin Eyre	Sierra Club	EPA-HQ-OAR-2003-0119-0185
Aurora Hunter	Sierra Club	EPA-HQ-OAR-2003-0119-0186
Barbara Dennie	Sierra Club	EPA-HQ-OAR-2003-0119-0187
Barbara Hughes	Sierra Club	EPA-HQ-OAR-2003-0119-0188
Barbara Rierson	Sierra Club	EPA-HQ-OAR-2003-0119-0189
Beatriz & Thomas Ferguson	Sierra Club	EPA-HQ-OAR-2003-0119-0190
Betty Coleman	Sierra Club	EPA-HQ-OAR-2003-0119-0191
Betty Donaldson	Sierra Club	EPA-HQ-OAR-2003-0119-0192
Mari Nichols	Sierra Club	EPA-HQ-OAR-2003-0119-0193
Betty W. Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0194
Adrienne Inglis	Sierra Club	EPA-HQ-OAR-2003-0119-0195
Caitlin Stuart	Sierra Club	EPA-HQ-OAR-2003-0119-0196
Bill Calhoun	Sierra Club	EPA-HQ-OAR-2003-0119-0197
Carilyn Goldammer	Sierra Club	EPA-HQ-OAR-2003-0119-0198
Carolyn Shaw	Sierra Club	EPA-HQ-OAR-2003-0119-0199

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Commenter	Affiliate	DCN
Celia Kutcher	Sierra Club	EPA-HQ-OAR-2003-0119-0200
Charlotte Pisoni	Sierra Club	EPA-HQ-OAR-2003-0119-0201
Christine Erb	Sierra Club	EPA-HQ-OAR-2003-0119-0202
Alisa Eilenberg	Sierra Club	EPA-HQ-OAR-2003-0119-0203
Hans & Alice Tischler	Sierra Club	EPA-HQ-OAR-2003-0119-0204
Virginia Wilt	Sierra Club	EPA-HQ-OAR-2003-0119-0205
Barbara Werner	Sierra Club	EPA-HQ-OAR-2003-0119-0206
Jonathan Weidman	Sierra Club	EPA-HQ-OAR-2003-0119-0207
Phillip Notz	Sierra Club	EPA-HQ-OAR-2003-0119-0208
Sarah McKee	Sierra Club	EPA-HQ-OAR-2003-0119-0209
Carol & Nils Bahringer	Sierra Club	EPA-HQ-OAR-2003-0119-0210
Douglas Evans	Sierra Club	EPA-HQ-OAR-2003-0119-0211
Mary Picardi, M.D.	Sierra Club	EPA-HQ-OAR-2003-0119-0212
David Von Seggern	Sierra Club	EPA-HQ-OAR-2003-0119-0213
Barry Rogers	Sierra Club	EPA-HQ-OAR-2003-0119-0214
Donald Rauenzahn	Sierra Club	EPA-HQ-OAR-2003-0119-0215
Francisco Roque	Sierra Club	EPA-HQ-OAR-2003-0119-0216
Kate Orecchio	Sierra Club	EPA-HQ-OAR-2003-0119-0217
Rik Farrow	Sierra Club	EPA-HQ-OAR-2003-0119-0218
Carla Meyer	Sierra Club	EPA-HQ-OAR-2003-0119-0219
Lonnie Ward	Sierra Club	EPA-HQ-OAR-2003-0119-0220
Susan Parker	Sierra Club	EPA-HQ-OAR-2003-0119-0221
Robert Kalisz	Sierra Club	EPA-HQ-OAR-2003-0119-0222
Sam Sibley	Sierra Club	EPA-HQ-OAR-2003-0119-0223
Barbara VanHanken	Sierra Club	EPA-HQ-OAR-2003-0119-0224

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Commenter	Affiliate	DCN
Wendy Futrick	Sierra Club	EPA-HQ-OAR-2003-0119-0225
Keshini Ladduwahetty	Sierra Club	EPA-HQ-OAR-2003-0119-0226
Margaret Mcbride	Sierra Club	EPA-HQ-OAR-2003-0119-0227
Kelly Vresilovic	Sierra Club	EPA-HQ-OAR-2003-0119-0228
John & Christina Hendershot	Sierra Club	EPA-HQ-OAR-2003-0119-0229
Cathy Lewis-Dougherty	Sierra Club	EPA-HQ-OAR-2003-0119-0230
Mary Marshall	Sierra Club	EPA-HQ-OAR-2003-0119-0231
Alan Gaylord	Sierra Club	EPA-HQ-OAR-2003-0119-0232
Diane Rehner	Sierra Club	EPA-HQ-OAR-2003-0119-0233
Debbie Leo	Sierra Club	EPA-HQ-OAR-2003-0119-0234
Kay Bedingfield	Sierra Club	EPA-HQ-OAR-2003-0119-0235
J Heffington	Sierra Club	EPA-HQ-OAR-2003-0119-0236
Tom DiGrazia	Sierra Club	EPA-HQ-OAR-2003-0119-0237
Nancy Forehand	Sierra Club	EPA-HQ-OAR-2003-0119-0238
William McHenry	Sierra Club	EPA-HQ-OAR-2003-0119-0239
Karen Cappa	Sierra Club	EPA-HQ-OAR-2003-0119-0240
Jeff Guay	Sierra Club	EPA-HQ-OAR-2003-0119-0241
Trisha Lotus	Sierra Club	EPA-HQ-OAR-2003-0119-0242
Delton Johnson	Sierra Club	EPA-HQ-OAR-2003-0119-0243
Deby Jizi	Sierra Club	EPA-HQ-OAR-2003-0119-0244
Laurie Stetzler	Sierra Club	EPA-HQ-OAR-2003-0119-0245
Karen Lee	Sierra Club	EPA-HQ-OAR-2003-0119-0246
Nicky Neau	Sierra Club	EPA-HQ-OAR-2003-0119-0247
Robert Madison	Sierra Club	EPA-HQ-OAR-2003-0119-0248
Terri Armao	Sierra Club	EPA-HQ-OAR-2003-0119-0249

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Commenter	Affiliate	DCN
Margie Manuel	Sierra Club	EPA-HQ-OAR-2003-0119-0250
Marie Kadan	Sierra Club	EPA-HQ-OAR-2003-0119-0251
Henry Frank	Sierra Club	EPA-HQ-OAR-2003-0119-0252
Michael & Sandra Coleman	Sierra Club	EPA-HQ-OAR-2003-0119-0253
Wayne Rowe	Sierra Club	EPA-HQ-OAR-2003-0119-0254
Emily Kimball	Sierra Club	EPA-HQ-OAR-2003-0119-0255
Lawrence Thompson	Sierra Club	EPA-HQ-OAR-2003-0119-0256
Deborah and Michael Gilman	Sierra Club	EPA-HQ-OAR-2003-0119-0257
Vicky Prater	Sierra Club	EPA-HQ-OAR-2003-0119-0258
Diana Claitor	Sierra Club	EPA-HQ-OAR-2003-0119-0259
Ilene Sievert	Sierra Club	EPA-HQ-OAR-2003-0119-0260
Victoria Beardsley	Sierra Club	EPA-HQ-OAR-2003-0119-0261
Barbara Harrington	Sierra Club	EPA-HQ-OAR-2003-0119-0262
Muriel Christen	Sierra Club	EPA-HQ-OAR-2003-0119-0263
Robert Dickinson	Sierra Club	EPA-HQ-OAR-2003-0119-0264
Anne Mates	Sierra Club	EPA-HQ-OAR-2003-0119-0265
Karen Erlandson	Sierra Club	EPA-HQ-OAR-2003-0119-0266
Vince and Sandi Vanacore	Sierra Club	EPA-HQ-OAR-2003-0119-0267
Virginia Lindsey	Sierra Club	EPA-HQ-OAR-2003-0119-0268
Watson Gooch	Sierra Club	EPA-HQ-OAR-2003-0119-0269
William Dent	Sierra Club	EPA-HQ-OAR-2003-0119-0270
Jan Nelson	Sierra Club	EPA-HQ-OAR-2003-0119-0271
Geoff Daly	Sierra Club	EPA-HQ-OAR-2003-0119-0272
James O'Malley	Sierra Club	EPA-HQ-OAR-2003-0119-0273
Dave Luckens	Sierra Club	EPA-HQ-OAR-2003-0119-0275

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Commenter	Affiliate	DCN
Alexandra Grabbe	Sierra Club	EPA-HQ-OAR-2003-0119-0276
Bo Baggs	Sierra Club	EPA-HQ-OAR-2003-0119-0277
Bruce Berger	Sierra Club	EPA-HQ-OAR-2003-0119-0278
Carol Tansey	Sierra Club	EPA-HQ-OAR-2003-0119-0279
Carol Weingeist	Sierra Club	EPA-HQ-OAR-2003-0119-0280
George Michaels	Sierra Club	EPA-HQ-OAR-2003-0119-0281
Gerald Mayer	Sierra Club	EPA-HQ-OAR-2003-0119-0282
Jed Fuhrman	Sierra Club	EPA-HQ-OAR-2003-0119-0283
Martha Boice	Sierra Club	EPA-HQ-OAR-2003-0119-0284
Naima Shea	Sierra Club	EPA-HQ-OAR-2003-0119-0285
Tanya Roland	Sierra Club	EPA-HQ-OAR-2003-0119-0286
Geraldine Brenia	Sierra Club	EPA-HQ-OAR-2003-0119-0287
H R and Betsy Malpass	Sierra Club	EPA-HQ-OAR-2003-0119-0288
Herbert Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-0289
Holly Hamilton	Sierra Club	EPA-HQ-OAR-2003-0119-0290
Jab Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-0291
James Canoy	Sierra Club	EPA-HQ-OAR-2003-0119-0292
Anne Hodgkinson	Sierra Club	EPA-HQ-OAR-2003-0119-0293
James Lazell	Sierra Club	EPA-HQ-OAR-2003-0119-0294
Pamela Johnston	Sierra Club	EPA-HQ-OAR-2003-0119-0295
Gloria Hutchinson	Sierra Club	EPA-HQ-OAR-2003-0119-0296
Judith Holstein	Sierra Club	EPA-HQ-OAR-2003-0119-0297
Reba Armstrong	Sierra Club	EPA-HQ-OAR-2003-0119-0298
James Melloh	Sierra Club	EPA-HQ-OAR-2003-0119-0299
Jay Byerley	Sierra Club	EPA-HQ-OAR-2003-0119-0300

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Commenter	Affiliate	DCN
Jean Jackman	Sierra Club	EPA-HQ-OAR-2003-0119-0301
Jean Lamberty	Sierra Club	EPA-HQ-OAR-2003-0119-0302
Jeanette Bajorek	Sierra Club	EPA-HQ-OAR-2003-0119-0303
Jennifer Fisk	Sierra Club	EPA-HQ-OAR-2003-0119-0304
Jennifer Karches	Sierra Club	EPA-HQ-OAR-2003-0119-0305
Jerry Mayeux	Sierra Club	EPA-HQ-OAR-2003-0119-0306
Joan and John Kyler	Sierra Club	EPA-HQ-OAR-2003-0119-0307
Antonia Griffin	Sierra Club	EPA-HQ-OAR-2003-0119-0308
John Andes	Sierra Club	EPA-HQ-OAR-2003-0119-0309
Bahri Aliriza	Sierra Club	EPA-HQ-OAR-2003-0119-0310
Barbara Schaible	Sierra Club	EPA-HQ-OAR-2003-0119-0311
Barbara Strell	Sierra Club	EPA-HQ-OAR-2003-0119-0312
Betty Westman	Sierra Club	EPA-HQ-OAR-2003-0119-0313
Steve Jones	Sierra Club	EPA-HQ-OAR-2003-0119-0314
Louise Silver	Sierra Club	EPA-HQ-OAR-2003-0119-0315
Steven Petersen	Sierra Club	EPA-HQ-OAR-2003-0119-0316
Susan and Bill Schmidt	Sierra Club	EPA-HQ-OAR-2003-0119-0317
Susan Blain	Sierra Club	EPA-HQ-OAR-2003-0119-0318
Susan Martin	Sierra Club	EPA-HQ-OAR-2003-0119-0319
Terry & Martin Horwitz	Sierra Club	EPA-HQ-OAR-2003-0119-0320
Thalia Potter	Sierra Club	EPA-HQ-OAR-2003-0119-0321
Thomas Higgins	Sierra Club	EPA-HQ-OAR-2003-0119-0322
Thora Lares	Sierra Club	EPA-HQ-OAR-2003-0119-0323
Timothy Reuter	Sierra Club	EPA-HQ-OAR-2003-0119-0324
Tom Kociemba	Sierra Club	EPA-HQ-OAR-2003-0119-0325

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Commenter	Affiliate	DCN
Tracey DeMiero-Noreen	Sierra Club	EPA-HQ-OAR-2003-0119-0326
Ursula & Herbert Cohrs	Sierra Club	EPA-HQ-OAR-2003-0119-0327
Verna Winters	Sierra Club	EPA-HQ-OAR-2003-0119-0328
Alan Hausrath	Sierra Club	EPA-HQ-OAR-2003-0119-0329
Anthony Byrne	Sierra Club	EPA-HQ-OAR-2003-0119-0330
Jeanette King	Sierra Club	EPA-HQ-OAR-2003-0119-0331
Ardys Flavelle	Sierra Club	EPA-HQ-OAR-2003-0119-0332
Arlene Goodenough	Sierra Club	EPA-HQ-OAR-2003-0119-0333
Barbara Bell	Sierra Club	EPA-HQ-OAR-2003-0119-0334
Barbara Duncan	Sierra Club	EPA-HQ-OAR-2003-0119-0335
Barbara Fitzpatrick	Sierra Club	EPA-HQ-OAR-2003-0119-0336
Barbara G Vinson	Sierra Club	EPA-HQ-OAR-2003-0119-0337
Barbara Juszkiewicz	Sierra Club	EPA-HQ-OAR-2003-0119-0338
Barbara Moszynski	Sierra Club	EPA-HQ-OAR-2003-0119-0339
Barbara Quigley	Sierra Club	EPA-HQ-OAR-2003-0119-0340
Albert Sanchez	Sierra Club	EPA-HQ-OAR-2003-0119-0341
Bayle Emlein	Sierra Club	EPA-HQ-OAR-2003-0119-0342
Becky Bell-Greenstreet	Sierra Club	EPA-HQ-OAR-2003-0119-0343
Betty Winholtz	Sierra Club	EPA-HQ-OAR-2003-0119-0344
Linda Busche	Sierra Club	EPA-HQ-OAR-2003-0119-0345
Ira Marks	Sierra Club	EPA-HQ-OAR-2003-0119-0346
Wren Osborn	Sierra Club	EPA-HQ-OAR-2003-0119-0347
Jerry Greenstein	Sierra Club	EPA-HQ-OAR-2003-0119-0348
Patricia Ward	Sierra Club	EPA-HQ-OAR-2003-0119-0349
Mary Mckenzie	Sierra Club	EPA-HQ-OAR-2003-0119-0350

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Commenter	Affiliate	DCN
Janet Neff	Sierra Club	EPA-HQ-OAR-2003-0119-0351
Denise Featherstone	Sierra Club	EPA-HQ-OAR-2003-0119-0352
Diana Somerville	Sierra Club	EPA-HQ-OAR-2003-0119-0353
Patricia Ross	Sierra Club	EPA-HQ-OAR-2003-0119-0355
Patti Holmlund	Sierra Club	EPA-HQ-OAR-2003-0119-0356
Paul Cardwell	Sierra Club	EPA-HQ-OAR-2003-0119-0357
Paul Deleon	Sierra Club	EPA-HQ-OAR-2003-0119-0358
Jerome Peltier	Sierra Club	EPA-HQ-OAR-2003-0119-0359
Peggy Melville	Sierra Club	EPA-HQ-OAR-2003-0119-0360
Katie Miller	Sierra Club	EPA-HQ-OAR-2003-0119-0361
Carol Dewald	Sierra Club	EPA-HQ-OAR-2003-0119-0362
Carol Dewald	Sierra Club	EPA-HQ-OAR-2003-0119-0363
Peter Poage	Sierra Club	EPA-HQ-OAR-2003-0119-0364
John Maruskin	Sierra Club	EPA-HQ-OAR-2003-0119-0365
Terry and Jack Drucker	Sierra Club	EPA-HQ-OAR-2003-0119-0366
Tynan Wyatt	Sierra Club	EPA-HQ-OAR-2003-0119-0367
Linda Mayerik	Sierra Club	EPA-HQ-OAR-2003-0119-0368
Christine G & Gordon Cohen	Sierra Club	EPA-HQ-OAR-2003-0119-0369
Claudia Halsell	Sierra Club	EPA-HQ-OAR-2003-0119-0370
Conley Watson	Sierra Club	EPA-HQ-OAR-2003-0119-0371
Alice Crawford	Sierra Club	EPA-HQ-OAR-2003-0119-0372
Corbett Kroehler	Sierra Club	EPA-HQ-OAR-2003-0119-0373
Cornelius Dykema	Sierra Club	EPA-HQ-OAR-2003-0119-0374
Paul Noeldner	Sierra Club	EPA-HQ-OAR-2003-0119-0375
Paula Manor	Sierra Club	EPA-HQ-OAR-2003-0119-0376

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Commenter	Affiliate	DCN
Cort Brumfield	Sierra Club	EPA-HQ-OAR-2003-0119-0377
Craig Watson	Sierra Club	EPA-HQ-OAR-2003-0119-0378
Cynthia Gallion	Sierra Club	EPA-HQ-OAR-2003-0119-0379
Cynthia Manley	Sierra Club	EPA-HQ-OAR-2003-0119-0380
Peggy Richardson	Sierra Club	EPA-HQ-OAR-2003-0119-0381
Peter Delcore	Sierra Club	EPA-HQ-OAR-2003-0119-0382
Priscilla Stanley	Sierra Club	EPA-HQ-OAR-2003-0119-0383
Rachel Roberts	Sierra Club	EPA-HQ-OAR-2003-0119-0384
Dale Mckenna	Sierra Club	EPA-HQ-OAR-2003-0119-0385
Daniel J. Pennings	Sierra Club	EPA-HQ-OAR-2003-0119-0386
Danielle Foullon	Sierra Club	EPA-HQ-OAR-2003-0119-0387
Dar Broughton	Sierra Club	EPA-HQ-OAR-2003-0119-0388
Raymond Gettins	Sierra Club	EPA-HQ-OAR-2003-0119-0389
Rebecca Lewis	Sierra Club	EPA-HQ-OAR-2003-0119-0390
Rene Estes	Sierra Club	EPA-HQ-OAR-2003-0119-0391
Ria Tanz Kubota	Sierra Club	EPA-HQ-OAR-2003-0119-0392
Richard Friedman	Sierra Club	EPA-HQ-OAR-2003-0119-0393
Anita Walsh	Sierra Club	EPA-HQ-OAR-2003-0119-0394
Darcy Skarada	Sierra Club	EPA-HQ-OAR-2003-0119-0395
Darla Ritchie	Sierra Club	EPA-HQ-OAR-2003-0119-0396
David Pedersen	Sierra Club	EPA-HQ-OAR-2003-0119-0397
David Vanhouten	Sierra Club	EPA-HQ-OAR-2003-0119-0398
Deborah Soper	Sierra Club	EPA-HQ-OAR-2003-0119-0399
Richard Hubacek	Sierra Club	EPA-HQ-OAR-2003-0119-0400
Richard McBroom	Sierra Club	EPA-HQ-OAR-2003-0119-0401

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Commenter	Affiliate	DCN
Richard Schwager	Sierra Club	EPA-HQ-OAR-2003-0119-0402
Rita Moore	Sierra Club	EPA-HQ-OAR-2003-0119-0403
Robbie Fearon	Sierra Club	EPA-HQ-OAR-2003-0119-0404
Robert Clay	Sierra Club	EPA-HQ-OAR-2003-0119-0405
Robert Jones	Sierra Club	EPA-HQ-OAR-2003-0119-0406
Robert Keiser	Sierra Club	EPA-HQ-OAR-2003-0119-0407
Robert Maines	Sierra Club	EPA-HQ-OAR-2003-0119-0408
Robert R. Holt	Sierra Club	EPA-HQ-OAR-2003-0119-0409
Roy Lambrecht	Sierra Club	EPA-HQ-OAR-2003-0119-0410
Sandra Salzer	Sierra Club	EPA-HQ-OAR-2003-0119-0411
Sarah Kemp	Sierra Club	EPA-HQ-OAR-2003-0119-0412
Selma Algur	Sierra Club	EPA-HQ-OAR-2003-0119-0413
Sharon Bubel	Sierra Club	EPA-HQ-OAR-2003-0119-0414
Shellee Davis	Sierra Club	EPA-HQ-OAR-2003-0119-0415
Stacy & Dale Karacostas	Sierra Club	EPA-HQ-OAR-2003-0119-0416
Stanley & Donna Whitmarsh	Sierra Club	EPA-HQ-OAR-2003-0119-0417
Steven Skal	Sierra Club	EPA-HQ-OAR-2003-0119-0418
Susan Lea	Sierra Club	EPA-HQ-OAR-2003-0119-0419
Susan & William Bartovics	Sierra Club	EPA-HQ-OAR-2003-0119-0420
Sylvia Clark	Sierra Club	EPA-HQ-OAR-2003-0119-0421
Ted Lapage	Sierra Club	EPA-HQ-OAR-2003-0119-0422
Terelle Terry	Sierra Club	EPA-HQ-OAR-2003-0119-0423
Terry Peterson	Sierra Club	EPA-HQ-OAR-2003-0119-0424
Thamar Wherrit	Sierra Club	EPA-HQ-OAR-2003-0119-0425
Theresa Kardos	Sierra Club	EPA-HQ-OAR-2003-0119-0426

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Commenter	Affiliate	DCN
Thomas Johnson	Sierra Club	EPA-HQ-OAR-2003-0119-0427
Thomasin Kellermann	Sierra Club	EPA-HQ-OAR-2003-0119-0428
Tim Durnell	Sierra Club	EPA-HQ-OAR-2003-0119-0429
Tom Kabat	Sierra Club	EPA-HQ-OAR-2003-0119-0430
Tom Mcmurray	Sierra Club	EPA-HQ-OAR-2003-0119-0431
Tom Trainum	Sierra Club	EPA-HQ-OAR-2003-0119-0432
Travis Richardson	Sierra Club	EPA-HQ-OAR-2003-0119-0433
Vic Mayer	Sierra Club	EPA-HQ-OAR-2003-0119-0434
Chris Eaton	Sierra Club	EPA-HQ-OAR-2003-0119-0435
Deborah Wagner	Sierra Club	EPA-HQ-OAR-2003-0119-0436
Beverley Tierney	Sierra Club	EPA-HQ-OAR-2003-0119-0438
Beverly Cummings	Sierra Club	EPA-HQ-OAR-2003-0119-0439
Beverly Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0440
Bill Moser	Sierra Club	EPA-HQ-OAR-2003-0119-0441
Bruce Donnell	Sierra Club	EPA-HQ-OAR-2003-0119-0442
Bruce Luecke	Sierra Club	EPA-HQ-OAR-2003-0119-0443
Bryce Corlett	Sierra Club	EPA-HQ-OAR-2003-0119-0444
Alicia Evans	Sierra Club	EPA-HQ-OAR-2003-0119-0445
Candice Johnson	Sierra Club	EPA-HQ-OAR-2003-0119-0446
Carey Randall	Sierra Club	EPA-HQ-OAR-2003-0119-0447
Linda De Leon	Sierra Club	EPA-HQ-OAR-2003-0119-0448
Linda Howe	Sierra Club	EPA-HQ-OAR-2003-0119-0449
Diane Dillard	Sierra Club	EPA-HQ-OAR-2003-0119-0450
Diane Rabinowitz	Sierra Club	EPA-HQ-OAR-2003-0119-0451
Dianne Miller-Boyle	Sierra Club	EPA-HQ-OAR-2003-0119-0452

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Commenter	Affiliate	DCN
Lindy Hutchison	Sierra Club	EPA-HQ-OAR-2003-0119-0453
Lisa Bowles-Goldstein	Sierra Club	EPA-HQ-OAR-2003-0119-0454
Lisa Casteel-Mcmahon	Sierra Club	EPA-HQ-OAR-2003-0119-0455
Lorran Meares	Sierra Club	EPA-HQ-OAR-2003-0119-0456
Lynn Brevig	Sierra Club	EPA-HQ-OAR-2003-0119-0457
Marcus Lanskey	Sierra Club	EPA-HQ-OAR-2003-0119-0458
Margaret Schiltz	Sierra Club	EPA-HQ-OAR-2003-0119-0459
Mariana Mellor	Sierra Club	EPA-HQ-OAR-2003-0119-0460
Marianne Mabbitt	Sierra Club	EPA-HQ-OAR-2003-0119-0461
Maris Arnold	Sierra Club	EPA-HQ-OAR-2003-0119-0462
Mark Lundholm	Sierra Club	EPA-HQ-OAR-2003-0119-0463
Martha Vinson	Sierra Club	EPA-HQ-OAR-2003-0119-0464
Mary Donald	Sierra Club	EPA-HQ-OAR-2003-0119-0465
Mary Ellen Porter	Sierra Club	EPA-HQ-OAR-2003-0119-0466
Mary Mcbride	Sierra Club	EPA-HQ-OAR-2003-0119-0467
Mia Goldman	Sierra Club	EPA-HQ-OAR-2003-0119-0468
Michael Linvill	Sierra Club	EPA-HQ-OAR-2003-0119-0469
Michael Shaw	Sierra Club	EPA-HQ-OAR-2003-0119-0470
Nancy Akerley	Sierra Club	EPA-HQ-OAR-2003-0119-0471
Necia Refes	Sierra Club	EPA-HQ-OAR-2003-0119-0472
Nelda Mills	Sierra Club	EPA-HQ-OAR-2003-0119-0473
Niechele Gambill	Sierra Club	EPA-HQ-OAR-2003-0119-0474
Ann Baker	Sierra Club	EPA-HQ-OAR-2003-0119-0475
Dianne Nezgoda	Sierra Club	EPA-HQ-OAR-2003-0119-0476
Dick Artley	Sierra Club	EPA-HQ-OAR-2003-0119-0477

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Commenter	Affiliate	DCN
Donald Bierman	Sierra Club	EPA-HQ-OAR-2003-0119-0478
Doris Ferm	Sierra Club	EPA-HQ-OAR-2003-0119-0479
Dorothy Decker	Sierra Club	EPA-HQ-OAR-2003-0119-0480
Earl Stevens	Sierra Club	EPA-HQ-OAR-2003-0119-0481
Echo Turner	Sierra Club	EPA-HQ-OAR-2003-0119-0482
Edward Syrett	Sierra Club	EPA-HQ-OAR-2003-0119-0483
Eileen Lamar	Sierra Club	EPA-HQ-OAR-2003-0119-0484
Elaine Mayer	Sierra Club	EPA-HQ-OAR-2003-0119-0485
Anne Cheng	Sierra Club	EPA-HQ-OAR-2003-0119-0486
Carla Stoutamyer	Sierra Club	EPA-HQ-OAR-2003-0119-0487
Carmen Dutack	Sierra Club	EPA-HQ-OAR-2003-0119-0488
Carol Clemens	Sierra Club	EPA-HQ-OAR-2003-0119-0489
Carol Jackson	Sierra Club	EPA-HQ-OAR-2003-0119-0490
Carolyn Moon	Sierra Club	EPA-HQ-OAR-2003-0119-0491
Carolyn Turner	Sierra Club	EPA-HQ-OAR-2003-0119-0492
Cecily Ricard	Sierra Club	EPA-HQ-OAR-2003-0119-0493
Chara Armon	Sierra Club	EPA-HQ-OAR-2003-0119-0494
Amy Johnson M.D.	Sierra Club	EPA-HQ-OAR-2003-0119-0495
Charlie Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-0496
Olivia Lim	Sierra Club	EPA-HQ-OAR-2003-0119-0497
Pamela Hampton	Sierra Club	EPA-HQ-OAR-2003-0119-0498
Patricia Grames	Sierra Club	EPA-HQ-OAR-2003-0119-0499
Patricia M. Williams	Sierra Club	EPA-HQ-OAR-2003-0119-0500
Vicki Cyr	Sierra Club	EPA-HQ-OAR-2003-0119-0501
Virginia and Jim Wagner	Sierra Club	EPA-HQ-OAR-2003-0119-0502

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Commenter	Affiliate	DCN
Wanda Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0503
Wayne York	Sierra Club	EPA-HQ-OAR-2003-0119-0504
Wendy Fast	Sierra Club	EPA-HQ-OAR-2003-0119-0505
William Mason	Sierra Club	EPA-HQ-OAR-2003-0119-0506
William Swanson	Sierra Club	EPA-HQ-OAR-2003-0119-0507
Steve & Linda Bryan	Sierra Club	EPA-HQ-OAR-2003-0119-0508
Marie Lefebvre	Sierra Club	EPA-HQ-OAR-2003-0119-0509
David Dow	Sierra Club	EPA-HQ-OAR-2003-0119-0510
Carole Bretschneider	Sierra Club	EPA-HQ-OAR-2003-0119-0511
Christie Wray	Sierra Club	EPA-HQ-OAR-2003-0119-0513
Christine Boyette	Sierra Club	EPA-HQ-OAR-2003-0119-0514
Cindy Segal	Sierra Club	EPA-HQ-OAR-2003-0119-0515
Claire Broome	Sierra Club	EPA-HQ-OAR-2003-0119-0516
Colin Shepard	Sierra Club	EPA-HQ-OAR-2003-0119-0517
Crystal Foster	Sierra Club	EPA-HQ-OAR-2003-0119-0518
Daniel Pawling	Sierra Club	EPA-HQ-OAR-2003-0119-0519
David Cottle	Sierra Club	EPA-HQ-OAR-2003-0119-0520
Andrew Lueth	Sierra Club	EPA-HQ-OAR-2003-0119-0521
David Gladstone	Sierra Club	EPA-HQ-OAR-2003-0119-0522
David La Vallee	Sierra Club	EPA-HQ-OAR-2003-0119-0523
David Shearer	Sierra Club	EPA-HQ-OAR-2003-0119-0524
David Slobodkin	Sierra Club	EPA-HQ-OAR-2003-0119-0525
David Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0526
David Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-0527
Diana Artemis	Sierra Club	EPA-HQ-OAR-2003-0119-0528

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Commenter	Affiliate	DCN
Diana Lee	Sierra Club	EPA-HQ-OAR-2003-0119-0529
Diedra Booker	Sierra Club	EPA-HQ-OAR-2003-0119-0530
Don Bonnell	Sierra Club	EPA-HQ-OAR-2003-0119-0531
Ann Catherine Keirns	Sierra Club	EPA-HQ-OAR-2003-0119-0532
Donald & Deanna Barnett	Sierra Club	EPA-HQ-OAR-2003-0119-0533
Doug Landau	Sierra Club	EPA-HQ-OAR-2003-0119-0534
Ed Dassow	Sierra Club	EPA-HQ-OAR-2003-0119-0535
Ed Salmon	Sierra Club	EPA-HQ-OAR-2003-0119-0536
Elizabeth Ezerman	Sierra Club	EPA-HQ-OAR-2003-0119-0537
Ellen Amba & David Caldwell	Sierra Club	EPA-HQ-OAR-2003-0119-0538
Jacob Goldberg	Sierra Club	EPA-HQ-OAR-2003-0119-0539
Elsa Leviseur	Sierra Club	EPA-HQ-OAR-2003-0119-0540
Emelie Olson	Sierra Club	EPA-HQ-OAR-2003-0119-0541
E. Frank	Sierra Club	EPA-HQ-OAR-2003-0119-0542
Francis Schilling	Sierra Club	EPA-HQ-OAR-2003-0119-0543
Ann Hollyfield	Sierra Club	EPA-HQ-OAR-2003-0119-0544
Gabriela Espinoza	Sierra Club	EPA-HQ-OAR-2003-0119-0545
Gary Washburn	Sierra Club	EPA-HQ-OAR-2003-0119-0546
George M. Williams	Sierra Club	EPA-HQ-OAR-2003-0119-0547
Gina Garcia	Sierra Club	EPA-HQ-OAR-2003-0119-0548
Ginger Sikes	Sierra Club	EPA-HQ-OAR-2003-0119-0549
Harold Tate	Sierra Club	EPA-HQ-OAR-2003-0119-0550
Heide Jenkins	Sierra Club	EPA-HQ-OAR-2003-0119-0551
Helen Crawford	Sierra Club	EPA-HQ-OAR-2003-0119-0552
Helen Knopoff	Sierra Club	EPA-HQ-OAR-2003-0119-0553

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Commenter	Affiliate	DCN
Hilary Brown	Sierra Club	EPA-HQ-OAR-2003-0119-0554
Ann Shaver	Sierra Club	EPA-HQ-OAR-2003-0119-0555
Ian Cree	Sierra Club	EPA-HQ-OAR-2003-0119-0556
Ira Josephs	Sierra Club	EPA-HQ-OAR-2003-0119-0557
Ivo Mutaftchiev	Sierra Club	EPA-HQ-OAR-2003-0119-0558
Eldon Wedlock	Sierra Club	EPA-HQ-OAR-2003-0119-0559
Elizabeth Akennon Williams	Sierra Club	EPA-HQ-OAR-2003-0119-0560
Ellen Sussman	Sierra Club	EPA-HQ-OAR-2003-0119-0561
Eric Kennedy	Sierra Club	EPA-HQ-OAR-2003-0119-0562
Erin McCarthy	Sierra Club	EPA-HQ-OAR-2003-0119-0564
Evelyn Billo	Sierra Club	EPA-HQ-OAR-2003-0119-0565
Gail Jackson	Sierra Club	EPA-HQ-OAR-2003-0119-0566
Gary Carone	Sierra Club	EPA-HQ-OAR-2003-0119-0567
Gene Corl	Sierra Club	EPA-HQ-OAR-2003-0119-0568
George Williams	Sierra Club	EPA-HQ-OAR-2003-0119-0569
Lawrence Cassada Jr.	Sierra Club	EPA-HQ-OAR-2003-0119-0570
Leah Grant	Sierra Club	EPA-HQ-OAR-2003-0119-0571
Leo Kretzner	Sierra Club	EPA-HQ-OAR-2003-0119-0572
Leslie Berger	Sierra Club	EPA-HQ-OAR-2003-0119-0573
Leslie Blanchard	Sierra Club	EPA-HQ-OAR-2003-0119-0574
Lois Fournier	Sierra Club	EPA-HQ-OAR-2003-0119-0575
Lynn Glesne	Sierra Club	EPA-HQ-OAR-2003-0119-0576
Madeline Studer	Sierra Club	EPA-HQ-OAR-2003-0119-0577
J David Gillanders	Sierra Club	EPA-HQ-OAR-2003-0119-0578
J Mac Queen	Sierra Club	EPA-HQ-OAR-2003-0119-0579

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Commenter	Affiliate	DCN
Jack Marden	Sierra Club	EPA-HQ-OAR-2003-0119-0580
Joseph Keogh	Sierra Club	EPA-HQ-OAR-2003-0119-0581
Jeanne Comeau	Sierra Club	EPA-HQ-OAR-2003-0119-0582
Mar Kemp	Sierra Club	EPA-HQ-OAR-2003-0119-0583
Barbara Raymond	Sierra Club	EPA-HQ-OAR-2003-0119-0584
Magie Read	Sierra Club	EPA-HQ-OAR-2003-0119-0585
Julie Richardson	Sierra Club	EPA-HQ-OAR-2003-0119-0586
Nelle McKay	Sierra Club	EPA-HQ-OAR-2003-0119-0587
Michael Stocker	Sierra Club	EPA-HQ-OAR-2003-0119-0588
Justine King	Sierra Club	EPA-HQ-OAR-2003-0119-0589
Karen Herman	Sierra Club	EPA-HQ-OAR-2003-0119-0590
Kathryn Floyd	Sierra Club	EPA-HQ-OAR-2003-0119-0591
Kathy Ryan	Sierra Club	EPA-HQ-OAR-2003-0119-0592
Suzanna van der Voort	Sierra Club	EPA-HQ-OAR-2003-0119-0593
Dr. Eliza Hegeman	Sierra Club	EPA-HQ-OAR-2003-0119-0594
Ralph Dell	Sierra Club	EPA-HQ-OAR-2003-0119-0595
Pamela Carter	Sierra Club	EPA-HQ-OAR-2003-0119-0596
Martha Bartlett	Sierra Club	EPA-HQ-OAR-2003-0119-0597
Paula Holmes	Sierra Club	EPA-HQ-OAR-2003-0119-0598
John Costello	Sierra Club	EPA-HQ-OAR-2003-0119-0599
Belinda Higuera	Sierra Club	EPA-HQ-OAR-2003-0119-0600
Andrea Haresign	Sierra Club	EPA-HQ-OAR-2003-0119-0601
Janet Matthews	Sierra Club	EPA-HQ-OAR-2003-0119-0602
Teresa Mueller	Sierra Club	EPA-HQ-OAR-2003-0119-0603
Ken Connell	Sierra Club	EPA-HQ-OAR-2003-0119-0604

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Commenter	Affiliate	DCN
James Hankins	Sierra Club	EPA-HQ-OAR-2003-0119-0605
Sandra Michael	Sierra Club	EPA-HQ-OAR-2003-0119-0606
Lisa Knezha	Sierra Club	EPA-HQ-OAR-2003-0119-0607
Sid and Carol Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0608
Gene & Sharon Waggoner	Sierra Club	EPA-HQ-OAR-2003-0119-0609
Dawn Laughlin	Sierra Club	EPA-HQ-OAR-2003-0119-0610
Sally Hoover	Sierra Club	EPA-HQ-OAR-2003-0119-0611
Jean Auris	Sierra Club	EPA-HQ-OAR-2003-0119-0612
Lawrence Kassan	Sierra Club	EPA-HQ-OAR-2003-0119-0613
Cynthia Schwinn	Sierra Club	EPA-HQ-OAR-2003-0119-0614
Peter Sigmann	Sierra Club	EPA-HQ-OAR-2003-0119-0616
Mary Jean Kindschuh, Esq.	Sierra Club	EPA-HQ-OAR-2003-0119-0617
Jerry Greenstein	Sierra Club	EPA-HQ-OAR-2003-0119-0618
James Denisor	Sierra Club	EPA-HQ-OAR-2003-0119-0619
Jan-Joy Sax	Sierra Club	EPA-HQ-OAR-2003-0119-0620
Janet Steinberg	Sierra Club	EPA-HQ-OAR-2003-0119-0621
Jay Harter	Sierra Club	EPA-HQ-OAR-2003-0119-0623
Jean Rinaldo	Sierra Club	EPA-HQ-OAR-2003-0119-0624
Arnold Lelis	Sierra Club	EPA-HQ-OAR-2003-0119-0625
Jennifer Messina	Sierra Club	EPA-HQ-OAR-2003-0119-0626
Jerda Smeltzer	Sierra Club	EPA-HQ-OAR-2003-0119-0627
Joan Brubaker	Sierra Club	EPA-HQ-OAR-2003-0119-0628
Joan Hemmert	Sierra Club	EPA-HQ-OAR-2003-0119-0629
Joann Feist	Sierra Club	EPA-HQ-OAR-2003-0119-0630
John Barbetta	Sierra Club	EPA-HQ-OAR-2003-0119-0631

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Commenter	Affiliate	DCN
John Faust	Sierra Club	EPA-HQ-OAR-2003-0119-0632
John Koch	Sierra Club	EPA-HQ-OAR-2003-0119-0634
John Morgen	Sierra Club	EPA-HQ-OAR-2003-0119-0635
John & Paula Mitchell	Sierra Club	EPA-HQ-OAR-2003-0119-0636
Joseph Smith	Sierra Club	EPA-HQ-OAR-2003-0119-0638
Joseph Wasserman	Sierra Club	EPA-HQ-OAR-2003-0119-0639
Marcia Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-0640
Margaret Copi	Sierra Club	EPA-HQ-OAR-2003-0119-0641
Margaret Evans	Sierra Club	EPA-HQ-OAR-2003-0119-0642
Margaret Porter-Daniel	Sierra Club	EPA-HQ-OAR-2003-0119-0643
Mariah Forrest	Sierra Club	EPA-HQ-OAR-2003-0119-0644
Marjorie C. Nothern	Sierra Club	EPA-HQ-OAR-2003-0119-0645
Mark Hansen	Sierra Club	EPA-HQ-OAR-2003-0119-0646
Marlina Rinzen	Sierra Club	EPA-HQ-OAR-2003-0119-0647
Martha Devernoe	Sierra Club	EPA-HQ-OAR-2003-0119-0648
Martha Hyde	Sierra Club	EPA-HQ-OAR-2003-0119-0649
Mary Ellen Snyder	Sierra Club	EPA-HQ-OAR-2003-0119-0650
Kathleen Gresham	Sierra Club	EPA-HQ-OAR-2003-0119-0651
Louise Esther Rothstein	Sierra Club	EPA-HQ-OAR-2003-0119-0652
Steve and Jill Ball	Sierra Club	EPA-HQ-OAR-2003-0119-0653
Elizabeth & Terrence McCloskey	Sierra Club	EPA-HQ-OAR-2003-0119-0654
Elaine Henderson	Sierra Club	EPA-HQ-OAR-2003-0119-0655
Jewels Stratton	Sierra Club	EPA-HQ-OAR-2003-0119-0656
Eddie Vigil	Sierra Club	EPA-HQ-OAR-2003-0119-0657

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Commenter	Affiliate	DCN
Alahna Weller	Sierra Club	EPA-HQ-OAR-2003-0119-0658
Lynne Marko	Sierra Club	EPA-HQ-OAR-2003-0119-0659
Alex Dor	Sierra Club	EPA-HQ-OAR-2003-0119-0660
Patricia Gilberg	Sierra Club	EPA-HQ-OAR-2003-0119-0661
Nike Stevens	Sierra Club	EPA-HQ-OAR-2003-0119-0662
Patty Campbell	Sierra Club	EPA-HQ-OAR-2003-0119-0663
Meredith Holley-Miers	Sierra Club	EPA-HQ-OAR-2003-0119-0664
Elizabeth Meyer	Sierra Club	EPA-HQ-OAR-2003-0119-0665
Ann English	Sierra Club	EPA-HQ-OAR-2003-0119-0666
Kayla Mineau	Sierra Club	EPA-HQ-OAR-2003-0119-0667
Hekela Green	Sierra Club	EPA-HQ-OAR-2003-0119-0668
Gladwyn D'Souza	Sierra Club	EPA-HQ-OAR-2003-0119-0669
Barbara Correro	Sierra Club	EPA-HQ-OAR-2003-0119-0670
Kara O'Neill	Sierra Club	EPA-HQ-OAR-2003-0119-0671
Phyllis Mcculley	Sierra Club	EPA-HQ-OAR-2003-0119-0672
Kit Mason	Sierra Club	EPA-HQ-OAR-2003-0119-0674
Larry & Leneta Kitchel	Sierra Club	EPA-HQ-OAR-2003-0119-0675
Lilli Sanchez	Sierra Club	EPA-HQ-OAR-2003-0119-0676
Lily Diament-Hansen	Sierra Club	EPA-HQ-OAR-2003-0119-0677
Linda Nicholas	Sierra Club	EPA-HQ-OAR-2003-0119-0678
Linnea Hartmark	Sierra Club	EPA-HQ-OAR-2003-0119-0679
Lou Gonzalez	Sierra Club	EPA-HQ-OAR-2003-0119-0680
Marsha Greer	Sierra Club	EPA-HQ-OAR-2003-0119-0681
Martha Carbone	Sierra Club	EPA-HQ-OAR-2003-0119-0682
Martha Hansen	Sierra Club	EPA-HQ-OAR-2003-0119-0683

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Commenter	Affiliate	DCN
Martha Nochimson	Sierra Club	EPA-HQ-OAR-2003-0119-0684
Mary Barbara Walters	Sierra Club	EPA-HQ-OAR-2003-0119-0685
Mary Shays	Sierra Club	EPA-HQ-OAR-2003-0119-0686
Mary Sue Rose	Sierra Club	EPA-HQ-OAR-2003-0119-0687
Matt Kolbet	Sierra Club	EPA-HQ-OAR-2003-0119-0688
Matt Voltoline	Sierra Club	EPA-HQ-OAR-2003-0119-0689
Maury Hopson	Sierra Club	EPA-HQ-OAR-2003-0119-0690
Michael Palmer	Sierra Club	EPA-HQ-OAR-2003-0119-0691
Millicent Cleary	Sierra Club	EPA-HQ-OAR-2003-0119-0692
Melissa Mead	Sierra Club	EPA-HQ-OAR-2003-0119-0699
Mike Martinez	Sierra Club	EPA-HQ-OAR-2003-0119-0700
Miriam Kiss	Sierra Club	EPA-HQ-OAR-2003-0119-0701
Nancy Roth	Sierra Club	EPA-HQ-OAR-2003-0119-0702
Nancy & Ken Macy	Sierra Club	EPA-HQ-OAR-2003-0119-0703
Neil Stecker	Sierra Club	EPA-HQ-OAR-2003-0119-0704
Pamela Check	Sierra Club	EPA-HQ-OAR-2003-0119-0705
Pamela Gonzalez	Sierra Club	EPA-HQ-OAR-2003-0119-0706
Patt Doyle	Sierra Club	EPA-HQ-OAR-2003-0119-0707
Paul Converse	Sierra Club	EPA-HQ-OAR-2003-0119-0708
Paula Bourgeois	Sierra Club	EPA-HQ-OAR-2003-0119-0709
Peter Curia	Sierra Club	EPA-HQ-OAR-2003-0119-0710
Phyllis Comstock	Sierra Club	EPA-HQ-OAR-2003-0119-0711
Rebecca Shedd	Sierra Club	EPA-HQ-OAR-2003-0119-0712
Renee Payton	Sierra Club	EPA-HQ-OAR-2003-0119-0713
Richard Kranzdorf	Sierra Club	EPA-HQ-OAR-2003-0119-0714

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Commenter	Affiliate	DCN
Richard Redman	Sierra Club	EPA-HQ-OAR-2003-0119-0716
Robert Alico	Sierra Club	EPA-HQ-OAR-2003-0119-0717
Robert Cerello	Sierra Club	EPA-HQ-OAR-2003-0119-0718
Robert Fletcher	Sierra Club	EPA-HQ-OAR-2003-0119-0719
Robert Mihaly	Sierra Club	EPA-HQ-OAR-2003-0119-0720
Robert S Arnold Jr	Sierra Club	EPA-HQ-OAR-2003-0119-0722
Robert Tallon	Sierra Club	EPA-HQ-OAR-2003-0119-0723
Mona Phillips	Sierra Club	EPA-HQ-OAR-2003-0119-0724
Nancy Goodspeed	Sierra Club	EPA-HQ-OAR-2003-0119-0725
Neville Rapp	Sierra Club	EPA-HQ-OAR-2003-0119-0726
Parrie Pinyan	Sierra Club	EPA-HQ-OAR-2003-0119-0727
Patricia Livingston	Sierra Club	EPA-HQ-OAR-2003-0119-0728
Paul Belote	Sierra Club	EPA-HQ-OAR-2003-0119-0729
Paul Ryan	Sierra Club	EPA-HQ-OAR-2003-0119-0730
Rayna Caldwell	Sierra Club	EPA-HQ-OAR-2003-0119-0731
Retha Dooley	Sierra Club	EPA-HQ-OAR-2003-0119-0732
Richard Newcomb	Sierra Club	EPA-HQ-OAR-2003-0119-0733
Richard Steeves	Sierra Club	EPA-HQ-OAR-2003-0119-0734
Richard Tidemann	Sierra Club	EPA-HQ-OAR-2003-0119-0735
Robert and Erika Toon	Sierra Club	EPA-HQ-OAR-2003-0119-0736
Robert Hirsch	Sierra Club	EPA-HQ-OAR-2003-0119-0737
Caroline Zaworski	Sierra Club	EPA-HQ-OAR-2003-0119-0738
Nove Lupo	Sierra Club	EPA-HQ-OAR-2003-0119-0739
Karl & Chris Bremer	Sierra Club	EPA-HQ-OAR-2003-0119-0740
Colleen Rogal	Sierra Club	EPA-HQ-OAR-2003-0119-0741

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Commenter	Affiliate	DCN
Tina Henize	Sierra Club	EPA-HQ-OAR-2003-0119-0742
Bruce Atkinson	Sierra Club	EPA-HQ-OAR-2003-0119-0743
Susan Beard	Sierra Club	EPA-HQ-OAR-2003-0119-0744
D F Deloff	Sierra Club	EPA-HQ-OAR-2003-0119-0745
Brett Governanti	Sierra Club	EPA-HQ-OAR-2003-0119-0746
David Cawston	Sierra Club	EPA-HQ-OAR-2003-0119-0747
Judith Foreman	Sierra Club	EPA-HQ-OAR-2003-0119-0748
Patsy Lowe	Sierra Club	EPA-HQ-OAR-2003-0119-0750
Ed & Harriet Griffith	Sierra Club	EPA-HQ-OAR-2003-0119-0751
Talula Cartwright	Sierra Club	EPA-HQ-OAR-2003-0119-0752
Winifred Foster	Sierra Club	EPA-HQ-OAR-2003-0119-0753
David & Marsha Low	Sierra Club	EPA-HQ-OAR-2003-0119-0754
Elizabeth Palter	Sierra Club	EPA-HQ-OAR-2003-0119-0755
Dan Scribner	Sierra Club	EPA-HQ-OAR-2003-0119-0756
Christian Blake	Sierra Club	EPA-HQ-OAR-2003-0119-0757
Therese Van Buskirk	Sierra Club	EPA-HQ-OAR-2003-0119-0758
Elizabeth Palter	Sierra Club	EPA-HQ-OAR-2003-0119-0759
Gerrit Crouse	Sierra Club	EPA-HQ-OAR-2003-0119-0760
Mary Lidkea	Sierra Club	EPA-HQ-OAR-2003-0119-0761
Merideth Genin	Sierra Club	EPA-HQ-OAR-2003-0119-0762
Richard Van Aken	Sierra Club	EPA-HQ-OAR-2003-0119-0763
Robert Giese	Sierra Club	EPA-HQ-OAR-2003-0119-0764
Sandra Noll	Sierra Club	EPA-HQ-OAR-2003-0119-0766
Nicola Nelson	Sierra Club	EPA-HQ-OAR-2003-0119-0767
Tom Wood	Sierra Club	EPA-HQ-OAR-2003-0119-0768

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Commenter	Affiliate	DCN
Michael Shook	Sierra Club	EPA-HQ-OAR-2003-0119-0769
Jeffrey Panciera	Sierra Club	EPA-HQ-OAR-2003-0119-0770
Alan Shapiro	Sierra Club	EPA-HQ-OAR-2003-0119-0771
David Bridgeman	Sierra Club	EPA-HQ-OAR-2003-0119-0772
Ellen Bryant	Sierra Club	EPA-HQ-OAR-2003-0119-0773
Jan & Bill Tache	Sierra Club	EPA-HQ-OAR-2003-0119-0774
Joan Kramer	Sierra Club	EPA-HQ-OAR-2003-0119-0775
Sam Teaford	Sierra Club	EPA-HQ-OAR-2003-0119-0776
Brooks Anderson	Sierra Club	EPA-HQ-OAR-2003-0119-0778
Marsha Osbaldeston	Sierra Club	EPA-HQ-OAR-2003-0119-0779
Elizabeth Moore	Sierra Club	EPA-HQ-OAR-2003-0119-0780
Dr. John Gardiner	Sierra Club	EPA-HQ-OAR-2003-0119-0781
Linda Schulz	Sierra Club	EPA-HQ-OAR-2003-0119-0782
Susan Dawson	Sierra Club	EPA-HQ-OAR-2003-0119-0783
Al Benford	Sierra Club	EPA-HQ-OAR-2003-0119-0784
Lawrence Schuchart	Sierra Club	EPA-HQ-OAR-2003-0119-0785
Susan Mucha	Sierra Club	EPA-HQ-OAR-2003-0119-0786
Laverne Moore	Sierra Club	EPA-HQ-OAR-2003-0119-0787
Marianne Duke	Sierra Club	EPA-HQ-OAR-2003-0119-0788
Catherine Milbourn	Sierra Club	EPA-HQ-OAR-2003-0119-0789
Mike Higgins	Sierra Club	EPA-HQ-OAR-2003-0119-0790
Gayle Countryman-Mills	Sierra Club	EPA-HQ-OAR-2003-0119-0791
L.L. Kauffman	Sierra Club	EPA-HQ-OAR-2003-0119-0792
Bernard Martin	Sierra Club	EPA-HQ-OAR-2003-0119-0793
Helen Sanders	Sierra Club	EPA-HQ-OAR-2003-0119-0794

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Commenter	Affiliate	DCN
Albert Rouffa	Sierra Club	EPA-HQ-OAR-2003-0119-0795
Angela Little	Sierra Club	EPA-HQ-OAR-2003-0119-0796
Carol Jurczewski	Sierra Club	EPA-HQ-OAR-2003-0119-0797
Andrew Randazzo	Sierra Club	EPA-HQ-OAR-2003-0119-0798
Marlena East	Sierra Club	EPA-HQ-OAR-2003-0119-0799
May Dorn	Sierra Club	EPA-HQ-OAR-2003-0119-0800
Rob Truitt	Sierra Club	EPA-HQ-OAR-2003-0119-0801
Steve Dickman	Sierra Club	EPA-HQ-OAR-2003-0119-0802
Mary Margaret Switlik	Sierra Club	EPA-HQ-OAR-2003-0119-0803
Cheri Langlois	Sierra Club	EPA-HQ-OAR-2003-0119-0805
Arlynn & Steve Bottomley	Sierra Club	EPA-HQ-OAR-2003-0119-0806
Lee Bartell	Sierra Club	EPA-HQ-OAR-2003-0119-0807
Ruth Skaar	Sierra Club	EPA-HQ-OAR-2003-0119-0808
Michelle Pivonka	Sierra Club	EPA-HQ-OAR-2003-0119-0809
Carolyn Wolf	Sierra Club	EPA-HQ-OAR-2003-0119-0810
Eleanor Fry	Sierra Club	EPA-HQ-OAR-2003-0119-0811
David Eggleston	Sierra Club	EPA-HQ-OAR-2003-0119-0812
Lavonnne Schackmann	Sierra Club	EPA-HQ-OAR-2003-0119-0813
Carole Chowen	Sierra Club	EPA-HQ-OAR-2003-0119-0814
Robert Mason	Sierra Club	EPA-HQ-OAR-2003-0119-0815
Tony Frabasilio	Sierra Club	EPA-HQ-OAR-2003-0119-0816
Beverly Flores	Sierra Club	EPA-HQ-OAR-2003-0119-0817
Philip Stern	Sierra Club	EPA-HQ-OAR-2003-0119-0818
Lucas Hart	Sierra Club	EPA-HQ-OAR-2003-0119-0819
Barbara Dietz	Sierra Club	EPA-HQ-OAR-2003-0119-0820

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Commenter	Affiliate	DCN
Louise Brodman	Sierra Club	EPA-HQ-OAR-2003-0119-0821
A Cuppy	Sierra Club	EPA-HQ-OAR-2003-0119-0822
Anne Jackson	Sierra Club	EPA-HQ-OAR-2003-0119-0823
Georgia Locker	Sierra Club	EPA-HQ-OAR-2003-0119-0824
Glenn R. Stewart, Ph.D.	Sierra Club	EPA-HQ-OAR-2003-0119-0825
Gloria Clements	Sierra Club	EPA-HQ-OAR-2003-0119-0826
Grace Marvin	Sierra Club	EPA-HQ-OAR-2003-0119-0827
Gray Puryear	Sierra Club	EPA-HQ-OAR-2003-0119-0828
Gretchen Berger	Sierra Club	EPA-HQ-OAR-2003-0119-0829
Harmon E. Chamberlin	Sierra Club	EPA-HQ-OAR-2003-0119-0830
Hedy Doederlein	Sierra Club	EPA-HQ-OAR-2003-0119-0831
Horace Gray	Sierra Club	EPA-HQ-OAR-2003-0119-0832
Hugh Curtler III	Sierra Club	EPA-HQ-OAR-2003-0119-0833
Anne Tiracchia	Sierra Club	EPA-HQ-OAR-2003-0119-0834
Ian Boardman	Sierra Club	EPA-HQ-OAR-2003-0119-0835
Irma Wuertz	Sierra Club	EPA-HQ-OAR-2003-0119-0836
Jac Campbell	Sierra Club	EPA-HQ-OAR-2003-0119-0837
Jack Dolejsi	Sierra Club	EPA-HQ-OAR-2003-0119-0838
Joyce Jensen	Sierra Club	EPA-HQ-OAR-2003-0119-0840
Joyce Kahle	Sierra Club	EPA-HQ-OAR-2003-0119-0841
JT Tuck	Sierra Club	EPA-HQ-OAR-2003-0119-0842
Judith Mitchell	Sierra Club	EPA-HQ-OAR-2003-0119-0843
Julia Allen	Sierra Club	EPA-HQ-OAR-2003-0119-0844
Julia Glover	Sierra Club	EPA-HQ-OAR-2003-0119-0845
J. David Tholl	Sierra Club	EPA-HQ-OAR-2003-0119-0846

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Commenter	Affiliate	DCN
K Higgins	Sierra Club	EPA-HQ-OAR-2003-0119-0847
Kalanit Barson	Sierra Club	EPA-HQ-OAR-2003-0119-0848
Karen and Sam Naifeh	Sierra Club	EPA-HQ-OAR-2003-0119-0849
Karen Rapp	Sierra Club	EPA-HQ-OAR-2003-0119-0850
Karen Rosenbaum	Sierra Club	EPA-HQ-OAR-2003-0119-0851
Karolyn Burdick	Sierra Club	EPA-HQ-OAR-2003-0119-0852
Kathleen Mead	Sierra Club	EPA-HQ-OAR-2003-0119-0853
Kathleen Volling	Sierra Club	EPA-HQ-OAR-2003-0119-0854
Kathleen Wolney	Sierra Club	EPA-HQ-OAR-2003-0119-0855
Kathleen & Harvey Cohon	Sierra Club	EPA-HQ-OAR-2003-0119-0856
Kay Campbell	Sierra Club	EPA-HQ-OAR-2003-0119-0857
Keith Wells	Sierra Club	EPA-HQ-OAR-2003-0119-0858
Kelly Pomeroy	Sierra Club	EPA-HQ-OAR-2003-0119-0859
Ken Mayer	Sierra Club	EPA-HQ-OAR-2003-0119-0860
Kent Snyder	Sierra Club	EPA-HQ-OAR-2003-0119-0861
Kimberly Ellis	Sierra Club	EPA-HQ-OAR-2003-0119-0862
Larry Ridenour	Sierra Club	EPA-HQ-OAR-2003-0119-0863
Laura Sorenson-Ashenden	Sierra Club	EPA-HQ-OAR-2003-0119-0864
Laurel Stranaghan	Sierra Club	EPA-HQ-OAR-2003-0119-0865
Laurence Burdick	Sierra Club	EPA-HQ-OAR-2003-0119-0866
Mary Kay Martin	Sierra Club	EPA-HQ-OAR-2003-0119-0867
Mary Klein	Sierra Club	EPA-HQ-OAR-2003-0119-0868
Mary Pilla	Sierra Club	EPA-HQ-OAR-2003-0119-0869
Mary Reese-Upton	Sierra Club	EPA-HQ-OAR-2003-0119-0870
Mary Sullivan	Sierra Club	EPA-HQ-OAR-2003-0119-0871

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Commenter	Affiliate	DCN
Steven Mandel MD	Sierra Club	EPA-HQ-OAR-2003-0119-0872
Amy Huebner	Sierra Club	EPA-HQ-OAR-2003-0119-0873
Janet Smarr	Sierra Club	EPA-HQ-OAR-2003-0119-0874
Frances Harkins	Sierra Club	EPA-HQ-OAR-2003-0119-0875
Jackie Marini	Sierra Club	EPA-HQ-OAR-2003-0119-0876
Linda McCracken	Sierra Club	EPA-HQ-OAR-2003-0119-0877
Karen Parks	Sierra Club	EPA-HQ-OAR-2003-0119-0878
James Kambeitz	Sierra Club	EPA-HQ-OAR-2003-0119-0881
Ann Worth	Sierra Club	EPA-HQ-OAR-2003-0119-0882
James More	Sierra Club	EPA-HQ-OAR-2003-0119-0888
Jan Summers	Sierra Club	EPA-HQ-OAR-2003-0119-0889
Jan Tervydis	Sierra Club	EPA-HQ-OAR-2003-0119-0890
Jane Whiteside	Sierra Club	EPA-HQ-OAR-2003-0119-0891
Janice Marshall	Sierra Club	EPA-HQ-OAR-2003-0119-0892
Janice Rubbel	Sierra Club	EPA-HQ-OAR-2003-0119-0893
Jay Taylor	Sierra Club	EPA-HQ-OAR-2003-0119-0894
Jean G. Cochran	Sierra Club	EPA-HQ-OAR-2003-0119-0895
Jeanne Grossetti	Sierra Club	EPA-HQ-OAR-2003-0119-0896
Jeanne Lebow	Sierra Club	EPA-HQ-OAR-2003-0119-0898
Jeanne Ruggles	Sierra Club	EPA-HQ-OAR-2003-0119-0899
Jeanne Wheeler	Sierra Club	EPA-HQ-OAR-2003-0119-0900
Jennifer Clark	Sierra Club	EPA-HQ-OAR-2003-0119-0901
Jennifer Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-0902
Jenny Saar	Sierra Club	EPA-HQ-OAR-2003-0119-0904
Jerome Stanley	Sierra Club	EPA-HQ-OAR-2003-0119-0905

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Commenter	Affiliate	DCN
Jessica LeClair	Sierra Club	EPA-HQ-OAR-2003-0119-0906
Joan Philips	Sierra Club	EPA-HQ-OAR-2003-0119-0907
Joan & Wallace MacDonald	Sierra Club	EPA-HQ-OAR-2003-0119-0908
Joann Henkel	Sierra Club	EPA-HQ-OAR-2003-0119-0909
Joe Minenna	Sierra Club	EPA-HQ-OAR-2003-0119-0910
John and Linda Curtis	Sierra Club	EPA-HQ-OAR-2003-0119-0911
John Blouch	Sierra Club	EPA-HQ-OAR-2003-0119-0912
John Kraemer	Sierra Club	EPA-HQ-OAR-2003-0119-0913
John Monacci	Sierra Club	EPA-HQ-OAR-2003-0119-0914
John Terninko	Sierra Club	EPA-HQ-OAR-2003-0119-0915
John Witte	Sierra Club	EPA-HQ-OAR-2003-0119-0916
Liisa Church	Sierra Club	EPA-HQ-OAR-2003-0119-0917
Trudy Loy	Sierra Club	EPA-HQ-OAR-2003-0119-0918
Diana Nasser	Sierra Club	EPA-HQ-OAR-2003-0119-0919
Angela Plagge	Sierra Club	EPA-HQ-OAR-2003-0119-0920
George Seman	Sierra Club	EPA-HQ-OAR-2003-0119-0922
Dante Heinrichson	Sierra Club	EPA-HQ-OAR-2003-0119-0923
Victor Cummings	Sierra Club	EPA-HQ-OAR-2003-0119-0924
Julie Broido	Sierra Club	EPA-HQ-OAR-2003-0119-0925
Holly Malarney	Sierra Club	EPA-HQ-OAR-2003-0119-0926
Darlene Morris	Sierra Club	EPA-HQ-OAR-2003-0119-0928
John Melquist	Sierra Club	EPA-HQ-OAR-2003-0119-0929
Kathleen Bannerman	Sierra Club	EPA-HQ-OAR-2003-0119-0930
Rebecca Burns	Sierra Club	EPA-HQ-OAR-2003-0119-0931
William Crane	Sierra Club	EPA-HQ-OAR-2003-0119-0932

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Commenter	Affiliate	DCN
Donald & Vivien Trichter	Sierra Club	EPA-HQ-OAR-2003-0119-0933
B Morello	Sierra Club	EPA-HQ-OAR-2003-0119-0934
Brian O'Brien	Sierra Club	EPA-HQ-OAR-2003-0119-0935
Perry Fletcher	Sierra Club	EPA-HQ-OAR-2003-0119-0936
Kevin Hughes	Sierra Club	EPA-HQ-OAR-2003-0119-0938
Katherine Miller	Sierra Club	EPA-HQ-OAR-2003-0119-0939
Ronald Zumstein	Sierra Club	EPA-HQ-OAR-2003-0119-0940
Peter Pappas	Sierra Club	EPA-HQ-OAR-2003-0119-0941
Richard Pasichnyk	Sierra Club	EPA-HQ-OAR-2003-0119-0942
Sherman Waring	Sierra Club	EPA-HQ-OAR-2003-0119-0943
Linda Neil	Sierra Club	EPA-HQ-OAR-2003-0119-0944
Robert Schwartz	Sierra Club	EPA-HQ-OAR-2003-0119-0946
Joan Goodell	Sierra Club	EPA-HQ-OAR-2003-0119-0947
Julie Thacker	Sierra Club	EPA-HQ-OAR-2003-0119-0978
Justine Capcara	Sierra Club	EPA-HQ-OAR-2003-0119-0979
J. Naomi Linzer	Sierra Club	EPA-HQ-OAR-2003-0119-0980
Kari Parfait	Sierra Club	EPA-HQ-OAR-2003-0119-0981
Karin Winegar	Sierra Club	EPA-HQ-OAR-2003-0119-0982
Karl Stoszek	Sierra Club	EPA-HQ-OAR-2003-0119-0983
Kate Greising	Sierra Club	EPA-HQ-OAR-2003-0119-0984
Katherine Podlewski	Sierra Club	EPA-HQ-OAR-2003-0119-0985
Robert & Susan Pratt	Sierra Club	EPA-HQ-OAR-2003-0119-0996
Roberta Paro	Sierra Club	EPA-HQ-OAR-2003-0119-0997
Robin Gulling	Sierra Club	EPA-HQ-OAR-2003-0119-0998
Rosanna Walker	Sierra Club	EPA-HQ-OAR-2003-0119-0999

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Commenter	Affiliate	DCN
Rose Lernberg	Sierra Club	EPA-HQ-OAR-2003-0119-1000
Russ Josephson	Sierra Club	EPA-HQ-OAR-2003-0119-1001
Ruth Foster	Sierra Club	EPA-HQ-OAR-2003-0119-1002
Ruth Larkin	Sierra Club	EPA-HQ-OAR-2003-0119-1003
Ruth Yehle	Sierra Club	EPA-HQ-OAR-2003-0119-1004
Sally Aslan	Sierra Club	EPA-HQ-OAR-2003-0119-1005
Sandra Sobek	Sierra Club	EPA-HQ-OAR-2003-0119-1006
Scott Callaway	Sierra Club	EPA-HQ-OAR-2003-0119-1007
Scott Johnsen	Sierra Club	EPA-HQ-OAR-2003-0119-1008
Siddharth Mehrotra	Sierra Club	EPA-HQ-OAR-2003-0119-1009
Steve Drucker	Sierra Club	EPA-HQ-OAR-2003-0119-1010
Kathleen Blair Grantham	Sierra Club	EPA-HQ-OAR-2003-0119-1011
Kathryn Peterson	Sierra Club	EPA-HQ-OAR-2003-0119-1012
Kathy Pinckney	Sierra Club	EPA-HQ-OAR-2003-0119-1013
Keenan Sheedy	Sierra Club	EPA-HQ-OAR-2003-0119-1014
Kim Dees	Sierra Club	EPA-HQ-OAR-2003-0119-1015
Larry La Caille	Sierra Club	EPA-HQ-OAR-2003-0119-1016
Laura Castaneda	Sierra Club	EPA-HQ-OAR-2003-0119-1017
Michael Guest	Sierra Club	EPA-HQ-OAR-2003-0119-1018
Diana Roe	Sierra Club	EPA-HQ-OAR-2003-0119-1128
Eva & Jim Powers	Sierra Club	EPA-HQ-OAR-2003-0119-1161
Don Cadenhead	Sierra Club	EPA-HQ-OAR-2003-0119-1164
Carol Keltner	Sierra Club	EPA-HQ-OAR-2003-0119-1165
Karen Yinger	Sierra Club	EPA-HQ-OAR-2003-0119-1166
Phyllis Frazell	Sierra Club	EPA-HQ-OAR-2003-0119-1167

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Commenter	Affiliate	DCN
Bruce Young	Sierra Club	EPA-HQ-OAR-2003-0119-1168
Joel Leventhal	Sierra Club	EPA-HQ-OAR-2003-0119-1169
Roni Jo Patterson	Sierra Club	EPA-HQ-OAR-2003-0119-1171
William Atkison	Sierra Club	EPA-HQ-OAR-2003-0119-1172
Mary Lou Finley	Sierra Club	EPA-HQ-OAR-2003-0119-1173
Patricia Westerfer	Sierra Club	EPA-HQ-OAR-2003-0119-1174
Kim Oblak	Sierra Club	EPA-HQ-OAR-2003-0119-1175
Rick Chamberlin	Sierra Club	EPA-HQ-OAR-2003-0119-1177
Lillian Schulz	Sierra Club	EPA-HQ-OAR-2003-0119-1178
Jean Naples	Sierra Club	EPA-HQ-OAR-2003-0119-1179
Vu Nguyen	Sierra Club	EPA-HQ-OAR-2003-0119-1180
Bernadette Keenan	Sierra Club	EPA-HQ-OAR-2003-0119-1181
Joan Wilcox	Sierra Club	EPA-HQ-OAR-2003-0119-1182
Elaine Lowry	Sierra Club	EPA-HQ-OAR-2003-0119-1184
Helen Van Hoozer	Sierra Club	EPA-HQ-OAR-2003-0119-1199
Bruce White	Sierra Club	EPA-HQ-OAR-2003-0119-1200
Shelley Lane	Sierra Club	EPA-HQ-OAR-2003-0119-1201
Craig Liddy	Sierra Club	EPA-HQ-OAR-2003-0119-1202
Perry Fletcher	Sierra Club	EPA-HQ-OAR-2003-0119-1382
Diana Nasser	Sierra Club	EPA-HQ-OAR-2003-0119-1527
Trudy Loy	Sierra Club	EPA-HQ-OAR-2003-0119-1528
Joan Goodell	Sierra Club	EPA-HQ-OAR-2003-0119-1529
Robert Schwartz	Sierra Club	EPA-HQ-OAR-2003-0119-1530
Gene Killway	Sierra Club	EPA-HQ-OAR-2003-0119-1531
Linda Neil	Sierra Club	EPA-HQ-OAR-2003-0119-1532

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Commenter	Affiliate	DCN
Sherman Waring	Sierra Club	EPA-HQ-OAR-2003-0119-1533
Richard Pasichnyk	Sierra Club	EPA-HQ-OAR-2003-0119-1534
Kevin Hughes	Sierra Club	EPA-HQ-OAR-2003-0119-1535
Jennifer Krause	Sierra Club	EPA-HQ-OAR-2003-0119-1536
Sue Christiansen	Sierra Club	EPA-HQ-OAR-2003-0119-1609
Karen Woods	Sierra Club	EPA-HQ-OAR-2003-0119-1611
Rosemary Hanville	Sierra Club	EPA-HQ-OAR-2003-0119-1614
Glen Anderson	Sierra Club	EPA-HQ-OAR-2003-0119-1617
Joseph Basralian	Sierra Club	EPA-HQ-OAR-2003-0119-1620
Michael Porubcan	Sierra Club	EPA-HQ-OAR-2003-0119-1627
Todd Eddy	Sierra Club	EPA-HQ-OAR-2003-0119-1639
Maia Wolff	Sierra Club	EPA-HQ-OAR-2003-0119-1640
Suzana Li	Sierra Club	EPA-HQ-OAR-2003-0119-1641
Elizabeth Essman	Sierra Club	EPA-HQ-OAR-2003-0119-1642
Lorraine Sarhage	Sierra Club	EPA-HQ-OAR-2003-0119-1646
Nancy Kingston	Sierra Club	EPA-HQ-OAR-2003-0119-1647
Joy Cassidy	Sierra Club	EPA-HQ-OAR-2003-0119-1648
Michelle Rice	Sierra Club	EPA-HQ-OAR-2003-0119-1649
Lauri Kallio	Sierra Club	EPA-HQ-OAR-2003-0119-1656
Gladys Gustafson	Sierra Club	EPA-HQ-OAR-2003-0119-1657
Richard Nunno	Sierra Club	EPA-HQ-OAR-2003-0119-1658
Robert & Lovicy Lockwood	Sierra Club	EPA-HQ-OAR-2003-0119-1659
Ilse Meyer	Sierra Club	EPA-HQ-OAR-2003-0119-1660
Linda Green	Sierra Club	EPA-HQ-OAR-2003-0119-1661
Tricia Gerrodette	Sierra Club	EPA-HQ-OAR-2003-0119-1662

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Commenter	Affiliate	DCN
Lois Sturm	Sierra Club	EPA-HQ-OAR-2003-0119-1663
Irene Smith	Sierra Club	EPA-HQ-OAR-2003-0119-1664
Jack Roberts	Sierra Club	EPA-HQ-OAR-2003-0119-1665
Jan Marie Rushforth	Sierra Club	EPA-HQ-OAR-2003-0119-1668
Guillemette Epailly	Sierra Club	EPA-HQ-OAR-2003-0119-1669
Carol Watson	Sierra Club	EPA-HQ-OAR-2003-0119-1670
Terry Mclachlan	Sierra Club	EPA-HQ-OAR-2003-0119-1671
Jane Fasullo	Sierra Club	EPA-HQ-OAR-2003-0119-1674
Jann Mcguire	Sierra Club	EPA-HQ-OAR-2003-0119-1675
Jeanne Doherty	Sierra Club	EPA-HQ-OAR-2003-0119-1676
Jenni Parmalee	Sierra Club	EPA-HQ-OAR-2003-0119-1677
Anne Emerson	Sierra Club	EPA-HQ-OAR-2003-0119-1678
George Loveday	Sierra Club	EPA-HQ-OAR-2003-0119-1679
Adrian Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-1680
Jeremy Hinsdale	Sierra Club	EPA-HQ-OAR-2003-0119-1681
AnnKristine Hellgren	Sierra Club	EPA-HQ-OAR-2003-0119-1682
Anthony Bartleson	Sierra Club	EPA-HQ-OAR-2003-0119-1683
Bill Thompson	Sierra Club	EPA-HQ-OAR-2003-0119-1684
Barbara Fukumoto	Sierra Club	EPA-HQ-OAR-2003-0119-1685
Beatrice Michot	Sierra Club	EPA-HQ-OAR-2003-0119-1686
Bradley Hodgin	Sierra Club	EPA-HQ-OAR-2003-0119-1687
Jessica Eisenhauer	Sierra Club	EPA-HQ-OAR-2003-0119-1688
Kathy Hurley	Sierra Club	EPA-HQ-OAR-2003-0119-1689
Kelly Pomeroy	Sierra Club	EPA-HQ-OAR-2003-0119-1690
Kenneth Gibson	Sierra Club	EPA-HQ-OAR-2003-0119-1691

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Commenter	Affiliate	DCN
Kimberly Zimmermam	Sierra Club	EPA-HQ-OAR-2003-0119-1692
K. Marlin	Sierra Club	EPA-HQ-OAR-2003-0119-1693
Laura Magzis	Sierra Club	EPA-HQ-OAR-2003-0119-1694
Brodie Hilp	Sierra Club	EPA-HQ-OAR-2003-0119-1695
Bruce & Shirley Gordon	Sierra Club	EPA-HQ-OAR-2003-0119-1696
Byron Collie	Sierra Club	EPA-HQ-OAR-2003-0119-1697
Carol Jurczewski	Sierra Club	EPA-HQ-OAR-2003-0119-1698
Carol Vanek	Sierra Club	EPA-HQ-OAR-2003-0119-1699
Lawrence Haines	Sierra Club	EPA-HQ-OAR-2003-0119-1700
Leonard Cook	Sierra Club	EPA-HQ-OAR-2003-0119-1701
Lesly Van Dame	Sierra Club	EPA-HQ-OAR-2003-0119-1702
Caroline Charonko	Sierra Club	EPA-HQ-OAR-2003-0119-1703
Joe Betz	Sierra Club	EPA-HQ-OAR-2003-0119-1704
Lin Butler	Sierra Club	EPA-HQ-OAR-2003-0119-1705
Linc Cole	Sierra Club	EPA-HQ-OAR-2003-0119-1706
Linda Driggers	Sierra Club	EPA-HQ-OAR-2003-0119-1707
Lorraine Sarhage	Sierra Club	EPA-HQ-OAR-2003-0119-1708
Lynn and Jim Derck	Sierra Club	EPA-HQ-OAR-2003-0119-1709
Margaret Holton	Sierra Club	EPA-HQ-OAR-2003-0119-1710
Margaret Hubbert	Sierra Club	EPA-HQ-OAR-2003-0119-1711
Marguerite Loddengaard	Sierra Club	EPA-HQ-OAR-2003-0119-1712
Christian Blake	Sierra Club	EPA-HQ-OAR-2003-0119-1714
Christine Rufflo	Sierra Club	EPA-HQ-OAR-2003-0119-1715
Larry Stevens	Sierra Club	EPA-HQ-OAR-2003-0119-1716
Trudy Loy	Sierra Club	EPA-HQ-OAR-2003-0119-1719

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Commenter	Affiliate	DCN
Bill Thompson	Sierra Club	EPA-HQ-OAR-2003-0119-1733
Doug Landau	Sierra Club	EPA-HQ-OAR-2003-0119-1734
Marlena East	Sierra Club	EPA-HQ-OAR-2003-0119-1735
Marlena East	Sierra Club	EPA-HQ-OAR-2003-0119-1736
John Harvey	Sierra Club	EPA-HQ-OAR-2003-0119-1737
Martha Novak	Sierra Club	EPA-HQ-OAR-2003-0119-1738
Mary Alma Vandervest	Sierra Club	EPA-HQ-OAR-2003-0119-1739
Mary Tryba	Sierra Club	EPA-HQ-OAR-2003-0119-1740
Michael Madrigal	Sierra Club	EPA-HQ-OAR-2003-0119-1741
Miriam Joscelyn	Sierra Club	EPA-HQ-OAR-2003-0119-1742
Nadine Aydt	Sierra Club	EPA-HQ-OAR-2003-0119-1743
Nancy Brandt	Sierra Club	EPA-HQ-OAR-2003-0119-1744
Nancy Goodspeed	Sierra Club	EPA-HQ-OAR-2003-0119-1745
Pat Dentremont	Sierra Club	EPA-HQ-OAR-2003-0119-1746
Patrice Schexnayder	Sierra Club	EPA-HQ-OAR-2003-0119-1747
John V. Knapp	Sierra Club	EPA-HQ-OAR-2003-0119-1748
Patricia Murphy Pizzo	Sierra Club	EPA-HQ-OAR-2003-0119-1749
Peter & Mary Belov	Sierra Club	EPA-HQ-OAR-2003-0119-1750
Phillip Wood	Sierra Club	EPA-HQ-OAR-2003-0119-1751
Rich Archdeacon	Sierra Club	EPA-HQ-OAR-2003-0119-1752
Rich Archdeacon	Sierra Club	EPA-HQ-OAR-2003-0119-1753
Richard Galloway	Sierra Club	EPA-HQ-OAR-2003-0119-1754
Richard Schwager	Sierra Club	EPA-HQ-OAR-2003-0119-1755
Robert Haverlock	Sierra Club	EPA-HQ-OAR-2003-0119-1756
Robert Kosuth	Sierra Club	EPA-HQ-OAR-2003-0119-1757

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Commenter	Affiliate	DCN
Robert Liebman	Sierra Club	EPA-HQ-OAR-2003-0119-1758
Juanita Mangan-Vanham	Sierra Club	EPA-HQ-OAR-2003-0119-1759
Rollie Devlin	Sierra Club	EPA-HQ-OAR-2003-0119-1760
Judith Castiano	Sierra Club	EPA-HQ-OAR-2003-0119-1761
Kamol and Pawadee Lohavanichbutr	Sierra Club	EPA-HQ-OAR-2003-0119-1762
Karen Kearney	Sierra Club	EPA-HQ-OAR-2003-0119-1763
Karen Keating-Secular	Sierra Club	EPA-HQ-OAR-2003-0119-1764
Adrian Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-1769
Virginia Russell	Sierra Club	EPA-HQ-OAR-2003-0119-1789
Alexander & Jeanne Brown	Sierra Club	EPA-HQ-OAR-2003-0119-1798
Christine Rufflo	Sierra Club	EPA-HQ-OAR-2003-0119-1799
Curtine Metcalf	Sierra Club	EPA-HQ-OAR-2003-0119-1800
Cyrus Dawson	Sierra Club	EPA-HQ-OAR-2003-0119-1801
D Orellana	Sierra Club	EPA-HQ-OAR-2003-0119-1802
Dan Chapman	Sierra Club	EPA-HQ-OAR-2003-0119-1803
Dee Schiavone	Sierra Club	EPA-HQ-OAR-2003-0119-1804
Diana Bolte-Silverman	Sierra Club	EPA-HQ-OAR-2003-0119-1805
Don Woodworth	Sierra Club	EPA-HQ-OAR-2003-0119-1806
Donald Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-1807
Donald Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-1808
Amy Grishaber	Sierra Club	EPA-HQ-OAR-2003-0119-1809
Donna Alalem	Sierra Club	EPA-HQ-OAR-2003-0119-1810
Brodie Hilp	Sierra Club	EPA-HQ-OAR-2003-0119-1846
Bruce & Shirley Gordon	Sierra Club	EPA-HQ-OAR-2003-0119-1847

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Commenter	Affiliate	DCN
Byron Collie	Sierra Club	EPA-HQ-OAR-2003-0119-1848
Carol Jurczewski	Sierra Club	EPA-HQ-OAR-2003-0119-1849
Carol Vanek	Sierra Club	EPA-HQ-OAR-2003-0119-1850
Caroline Charonko	Sierra Club	EPA-HQ-OAR-2003-0119-1851
Alexander & Jeanne Brown	Sierra Club	EPA-HQ-OAR-2003-0119-1852
Christine Rufflo	Sierra Club	EPA-HQ-OAR-2003-0119-1853
Curtine Metcalf	Sierra Club	EPA-HQ-OAR-2003-0119-1854
Cyrus Dawson	Sierra Club	EPA-HQ-OAR-2003-0119-1855
D Orellana	Sierra Club	EPA-HQ-OAR-2003-0119-1856
Dan Chapman	Sierra Club	EPA-HQ-OAR-2003-0119-1857
Dee Schiavone	Sierra Club	EPA-HQ-OAR-2003-0119-1858
Diana Bolte-Silverman	Sierra Club	EPA-HQ-OAR-2003-0119-1859
Don Woodworth	Sierra Club	EPA-HQ-OAR-2003-0119-1860
Donald Robinson	Sierra Club	EPA-HQ-OAR-2003-0119-1861
Donald Wilson	Sierra Club	EPA-HQ-OAR-2003-0119-1862
Amy Grishaber	Sierra Club	EPA-HQ-OAR-2003-0119-1863
Donna Alalem	Sierra Club	EPA-HQ-OAR-2003-0119-1864
Doug Landau	Sierra Club	EPA-HQ-OAR-2003-0119-1865
Duncan Cottrell	Sierra Club	EPA-HQ-OAR-2003-0119-1866
Elizabeth Gottlieb	Sierra Club	EPA-HQ-OAR-2003-0119-1867
Ester Fuchs	Sierra Club	EPA-HQ-OAR-2003-0119-1868
Francine Infortunio	Sierra Club	EPA-HQ-OAR-2003-0119-1869
Gene Corl	Sierra Club	EPA-HQ-OAR-2003-0119-1870
Gerry Bley	Sierra Club	EPA-HQ-OAR-2003-0119-1871
Glenn True	Sierra Club	EPA-HQ-OAR-2003-0119-1872

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Commenter	Affiliate	DCN
Gus Preschle	Sierra Club	EPA-HQ-OAR-2003-0119-1873
Andrew Larson	Sierra Club	EPA-HQ-OAR-2003-0119-1874
Harold Jones	Sierra Club	EPA-HQ-OAR-2003-0119-1875
Helen James	Sierra Club	EPA-HQ-OAR-2003-0119-1876
Ilse Meyer	Sierra Club	EPA-HQ-OAR-2003-0119-1877
Irene Smith	Sierra Club	EPA-HQ-OAR-2003-0119-1878
Jack Roberts	Sierra Club	EPA-HQ-OAR-2003-0119-1879
Jan Marie Rushforth	Sierra Club	EPA-HQ-OAR-2003-0119-1880
Jane Fasullo	Sierra Club	EPA-HQ-OAR-2003-0119-1881
Robert Haverlock	Sierra Club	EPA-HQ-OAR-2003-0119-1882
Robert Kosuth	Sierra Club	EPA-HQ-OAR-2003-0119-1883
John Harvey	Sierra Club	EPA-HQ-OAR-2003-0119-1884
John V. Knapp	Sierra Club	EPA-HQ-OAR-2003-0119-1885
Juanita Mangan-Vanham	Sierra Club	EPA-HQ-OAR-2003-0119-1886
Judith Castiano	Sierra Club	EPA-HQ-OAR-2003-0119-1887
Kamol and Pawadee Lohavanichbutr	Sierra Club	EPA-HQ-OAR-2003-0119-1888
Karen Kearney	Sierra Club	EPA-HQ-OAR-2003-0119-1889
Kathy Hurley	Sierra Club	EPA-HQ-OAR-2003-0119-1890
Kelly Pomeroy	Sierra Club	EPA-HQ-OAR-2003-0119-1891
Kenneth Gibson	Sierra Club	EPA-HQ-OAR-2003-0119-1892
Kimberly Zimmermam	Sierra Club	EPA-HQ-OAR-2003-0119-1893
K. Marlin	Sierra Club	EPA-HQ-OAR-2003-0119-1894
Larry Stevens	Sierra Club	EPA-HQ-OAR-2003-0119-1895
Laura Magzis	Sierra Club	EPA-HQ-OAR-2003-0119-1896

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Commenter	Affiliate	DCN
Lawrence Haines	Sierra Club	EPA-HQ-OAR-2003-0119-1897
Leonard Cook	Sierra Club	EPA-HQ-OAR-2003-0119-1898
Lesly Van Dame	Sierra Club	EPA-HQ-OAR-2003-0119-1899
Lin Butler	Sierra Club	EPA-HQ-OAR-2003-0119-1900
Jann Mcguire	Sierra Club	EPA-HQ-OAR-2003-0119-1909
Jeanne Doherty	Sierra Club	EPA-HQ-OAR-2003-0119-1910
Jenni Parmalee	Sierra Club	EPA-HQ-OAR-2003-0119-1911
Linc Cole	Sierra Club	EPA-HQ-OAR-2003-0119-1912
Linda Driggers	Sierra Club	EPA-HQ-OAR-2003-0119-1913
Lorraine Sarhage	Sierra Club	EPA-HQ-OAR-2003-0119-1914
Lynn and Jim Derck	Sierra Club	EPA-HQ-OAR-2003-0119-1915
Margaret Holton	Sierra Club	EPA-HQ-OAR-2003-0119-1916
Margaret Hubbert	Sierra Club	EPA-HQ-OAR-2003-0119-1917
Marguerite Loddengaard	Sierra Club	EPA-HQ-OAR-2003-0119-1918
Marlena East	Sierra Club	EPA-HQ-OAR-2003-0119-1919
Marlena East	Sierra Club	EPA-HQ-OAR-2003-0119-1920
Martha Novak	Sierra Club	EPA-HQ-OAR-2003-0119-1921
Mary Alma Vandervest	Sierra Club	EPA-HQ-OAR-2003-0119-1922
Mary Tryba	Sierra Club	EPA-HQ-OAR-2003-0119-1923
Michael Madrigal	Sierra Club	EPA-HQ-OAR-2003-0119-1924
Miriam Joscelyn	Sierra Club	EPA-HQ-OAR-2003-0119-1925
Nadine Aydt	Sierra Club	EPA-HQ-OAR-2003-0119-1926
Nancy Brandt	Sierra Club	EPA-HQ-OAR-2003-0119-1927
Nancy Goodspeed	Sierra Club	EPA-HQ-OAR-2003-0119-1928
Pat Dentremont	Sierra Club	EPA-HQ-OAR-2003-0119-1929

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Commenter	Affiliate	DCN
Anne Emerson	Sierra Club	EPA-HQ-OAR-2003-0119-1931
Jeremy Hinsdale	Sierra Club	EPA-HQ-OAR-2003-0119-1932
Jessica Eisenhauer	Sierra Club	EPA-HQ-OAR-2003-0119-1933
Joe Betz	Sierra Club	EPA-HQ-OAR-2003-0119-1934
Patrice Schexnayder	Sierra Club	EPA-HQ-OAR-2003-0119-1935
Patricia Murphy Pizzo	Sierra Club	EPA-HQ-OAR-2003-0119-1936
Peter & Mary Belov	Sierra Club	EPA-HQ-OAR-2003-0119-1937
Phillip Wood	Sierra Club	EPA-HQ-OAR-2003-0119-1938
Rich Archdeacon	Sierra Club	EPA-HQ-OAR-2003-0119-1939
Rich Archdeacon	Sierra Club	EPA-HQ-OAR-2003-0119-1940
Richard Galloway	Sierra Club	EPA-HQ-OAR-2003-0119-1941
Richard Schwager	Sierra Club	EPA-HQ-OAR-2003-0119-1942
AnnKristine Hellgren	Sierra Club	EPA-HQ-OAR-2003-0119-1943
Anthony Bartleson	Sierra Club	EPA-HQ-OAR-2003-0119-1944
Barbara Fukumoto	Sierra Club	EPA-HQ-OAR-2003-0119-1946
Beatrice Michot	Sierra Club	EPA-HQ-OAR-2003-0119-1947
Bradley Hodgin	Sierra Club	EPA-HQ-OAR-2003-0119-1955
Peter Pappas	Sierra Club	EPA-HQ-OAR-2003-0119-1988
Ronald Zumstein	Sierra Club	EPA-HQ-OAR-2003-0119-1989
Katherine Miller	Sierra Club	EPA-HQ-OAR-2003-0119-1990
Cristina Lorga	Sierra Club	EPA-HQ-OAR-2003-0119-1991
Brian O'Brien	Sierra Club	EPA-HQ-OAR-2003-0119-1992
B Morello	Sierra Club	EPA-HQ-OAR-2003-0119-1993
Donald & Vivien Trichter	Sierra Club	EPA-HQ-OAR-2003-0119-1994
William Crane	Sierra Club	EPA-HQ-OAR-2003-0119-1995

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Commenter	Affiliate	DCN
Rebecca Burns	Sierra Club	EPA-HQ-OAR-2003-0119-1997
Kathleen Bannerman	Sierra Club	EPA-HQ-OAR-2003-0119-1998
John Melquist	Sierra Club	EPA-HQ-OAR-2003-0119-1999
Darlene Morris	Sierra Club	EPA-HQ-OAR-2003-0119-2000
Holly Malarney	Sierra Club	EPA-HQ-OAR-2003-0119-2001
Julie Broido	Sierra Club	EPA-HQ-OAR-2003-0119-2002
Victor Cummings	Sierra Club	EPA-HQ-OAR-2003-0119-2003
Dante Heinrichson	Sierra Club	EPA-HQ-OAR-2003-0119-2004
George Seman	Sierra Club	EPA-HQ-OAR-2003-0119-2005
Duncan Cottrell	Sierra Club	EPA-HQ-OAR-2003-0119-2006
Elizabeth Gottlieb	Sierra Club	EPA-HQ-OAR-2003-0119-2007
Ester Fuchs	Sierra Club	EPA-HQ-OAR-2003-0119-2008
Francine Infortunio	Sierra Club	EPA-HQ-OAR-2003-0119-2009
Gene Corl	Sierra Club	EPA-HQ-OAR-2003-0119-2010
Gerry Bley	Sierra Club	EPA-HQ-OAR-2003-0119-2011
Harold Jones	Sierra Club	EPA-HQ-OAR-2003-0119-2012
Helen James	Sierra Club	EPA-HQ-OAR-2003-0119-2013
Glenn True	Sierra Club	EPA-HQ-OAR-2003-0119-2024
Gus Preschle	Sierra Club	EPA-HQ-OAR-2003-0119-2025
Andrew Larson	Sierra Club	EPA-HQ-OAR-2003-0119-2026
George Kreider	Sierra Club	EPA-HQ-OAR-2003-0119-2055
Angela Plagge	Sierra Club	EPA-HQ-OAR-2003-0119-2057
Liisa Church	Sierra Club	EPA-HQ-OAR-2003-0119-2072
Sara Darby	Sierra Club	EPA-HQ-OAR-2003-0119-2073
Richard and Lenore Macomber	Sierra Club	EPA-HQ-OAR-2003-0119-2074

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Commenter	Affiliate	DCN
Lisa Garcia	Sierra Club	EPA-HQ-OAR-2003-0119-2075
Marilyn Green	Sierra Club	EPA-HQ-OAR-2003-0119-2076
Myrna Mukherjee	Sierra Club	EPA-HQ-OAR-2003-0119-2077
Peter Gollon	Sierra Club	EPA-HQ-OAR-2003-0119-2078
Katherine Keating	Sierra Club	EPA-HQ-OAR-2003-0119-2079
Rich Meier	Sierra Club	EPA-HQ-OAR-2003-0119-2081
Sandra Stevenson	Sierra Club	EPA-HQ-OAR-2003-0119-2082
James Pisano	Sierra Club	EPA-HQ-OAR-2003-0119-2083
Janice Gintzler	Sierra Club	EPA-HQ-OAR-2003-0119-2084
David Randall	Sierra Club	EPA-HQ-OAR-2003-0119-2085
Anand Pillai	Sierra Club	EPA-HQ-OAR-2003-0119-2086
Peter Ewing	Sierra Club	EPA-HQ-OAR-2003-0119-2087
Eileen Kuch	Sierra Club	EPA-HQ-OAR-2003-0119-2130
Mary Alsentzer	Sierra Club	EPA-HQ-OAR-2003-0119-2131
Penelope Ward	Sierra Club	EPA-HQ-OAR-2003-0119-2132
Kathleen Pape	Sierra Club	EPA-HQ-OAR-2003-0119-2133
Carolyn Horner	Sierra Club	EPA-HQ-OAR-2003-0119-2134
Bill Carter	Sierra Club	EPA-HQ-OAR-2003-0119-2135
Heather Larson	Sierra Club	EPA-HQ-OAR-2003-0119-2136
Ruth Skaar	Sierra Club	EPA-HQ-OAR-2003-0119-2137
David Jones	Sierra Club	EPA-HQ-OAR-2003-0119-2138
Frances Strege, RN	Sierra Club	EPA-HQ-OAR-2003-0119-2139
Mark Pool	Sierra Club	EPA-HQ-OAR-2003-0119-2140
Ellen Amba & David Caldwell	Sierra Club	EPA-HQ-OAR-2003-0119-2141
Mary Picardi	Sierra Club	EPA-HQ-OAR-2003-0119-2142

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Commenter	Affiliate	DCN
Joseph Louis Mazztelli	Sierra Club	EPA-HQ-OAR-2003-0119-2143
Darcy Skarada	Sierra Club	EPA-HQ-OAR-2003-0119-2152
Dale Armstrong	Sierra Club	EPA-HQ-OAR-2003-0119-2153
Dale Armstrong	Sierra Club	EPA-HQ-OAR-2003-0119-2154
Ginger Girard	Sierra Club	EPA-HQ-OAR-2003-0119-2155
Annemarie Avanti	Sierra Club	EPA-HQ-OAR-2003-0119-2156
Charlotte Alexandre	Sierra Club	EPA-HQ-OAR-2003-0119-2157
Linda Layne	Sierra Club	EPA-HQ-OAR-2003-0119-2158
Kevin Barber	Sierra Club	EPA-HQ-OAR-2003-0119-2159
Susan Rudnicki	Sierra Club	EPA-HQ-OAR-2003-0119-2160
Amanda Moore	Sierra Club	EPA-HQ-OAR-2003-0119-2161
Scott Morrow	Sierra Club	EPA-HQ-OAR-2003-0119-2162
William Schoene	Sierra Club	EPA-HQ-OAR-2003-0119-2163
Virginia Jones	Sierra Club	EPA-HQ-OAR-2003-0119-2164
Laura McIntyre	Sierra Club	EPA-HQ-OAR-2003-0119-2165
Paul O'Byrne	Sierra Club	EPA-HQ-OAR-2003-0119-2166
Janet Sears	Sierra Club	EPA-HQ-OAR-2003-0119-2167
Ellen Gachesa	Sierra Club	EPA-HQ-OAR-2003-0119-2168
Ed Carter	Sierra Club	EPA-HQ-OAR-2003-0119-2169
Bobby Baxter	Sierra Club	EPA-HQ-OAR-2003-0119-2170
Mary Rausch	Sierra Club	EPA-HQ-OAR-2003-0119-2171
Martha Fitzgerald	Sierra Club	EPA-HQ-OAR-2003-0119-2172
Alene Cisney	Sierra Club	EPA-HQ-OAR-2003-0119-2173
Brinton Culp	Sierra Club	EPA-HQ-OAR-2003-0119-2174
Carol Tansey	Sierra Club	EPA-HQ-OAR-2003-0119-2175

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Commenter	Affiliate	DCN
Celestine Arndt	Sierra Club	EPA-HQ-OAR-2003-0119-2176
Chad Schoen	Sierra Club	EPA-HQ-OAR-2003-0119-2177
Charles Mies	Sierra Club	EPA-HQ-OAR-2003-0119-2178
Chris Jacobs	Sierra Club	EPA-HQ-OAR-2003-0119-2179
Christina Farnsworth	Sierra Club	EPA-HQ-OAR-2003-0119-2180
John Sullivan	Sierra Club	EPA-HQ-OAR-2003-0119-2181
John & Janice Turney	Sierra Club	EPA-HQ-OAR-2003-0119-2182
Joshua Kneidl	Sierra Club	EPA-HQ-OAR-2003-0119-2183
Judy Smith	Sierra Club	EPA-HQ-OAR-2003-0119-2184
Katherine Jain	Sierra Club	EPA-HQ-OAR-2003-0119-2185
Anne Bastian	Sierra Club	EPA-HQ-OAR-2003-0119-2186
Kathy Trochlell	Sierra Club	EPA-HQ-OAR-2003-0119-2187
Keith Schiller	Sierra Club	EPA-HQ-OAR-2003-0119-2188
Kelly Brignell	Sierra Club	EPA-HQ-OAR-2003-0119-2190
Kelly Peterson	Sierra Club	EPA-HQ-OAR-2003-0119-2191
Lisanne Freese	Sierra Club	EPA-HQ-OAR-2003-0119-2192
Lori Hein	Sierra Club	EPA-HQ-OAR-2003-0119-2193
Lynn Glesne	Sierra Club	EPA-HQ-OAR-2003-0119-2194
Mark Thomas	Sierra Club	EPA-HQ-OAR-2003-0119-2195
Mary Ann & Frank Graffagnino	Sierra Club	EPA-HQ-OAR-2003-0119-2196
Sara Ransom	Sierra Club	EPA-HQ-OAR-2003-0119-2197
Sarah Deflon	Sierra Club	EPA-HQ-OAR-2003-0119-2198
Scott D. Deutsch	Sierra Club	EPA-HQ-OAR-2003-0119-2199
Sheila Calderon	Sierra Club	EPA-HQ-OAR-2003-0119-2200
Sheila Golden	Sierra Club	EPA-HQ-OAR-2003-0119-2201

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Commenter	Affiliate	DCN
Sister Anne Michel	Sierra Club	EPA-HQ-OAR-2003-0119-2202
Stephanie Linn	Sierra Club	EPA-HQ-OAR-2003-0119-2203
Steva Stowell-Hardcastle	Sierra Club	EPA-HQ-OAR-2003-0119-2204
Steven Skal	Sierra Club	EPA-HQ-OAR-2003-0119-2205
Michael Beczkiewicz	Sierra Club	EPA-HQ-OAR-2003-0119-2206
Stuart Smith	Sierra Club	EPA-HQ-OAR-2003-0119-2207
Summer Payer	Sierra Club	EPA-HQ-OAR-2003-0119-2208
Patricia Amazalorso	Sierra Club	EPA-HQ-OAR-2003-0119-2209
Patricia Moran	Sierra Club	EPA-HQ-OAR-2003-0119-2210
Susan Bischoff	Sierra Club	EPA-HQ-OAR-2003-0119-2212
Susan Kennedy	Sierra Club	EPA-HQ-OAR-2003-0119-2223
Susanna Sorin	Sierra Club	EPA-HQ-OAR-2003-0119-2224
Susan Gworek	Sierra Club	EPA-HQ-OAR-2003-0119-2226
Teresa Thomas	Sierra Club	EPA-HQ-OAR-2003-0119-2227
Terry Cook	Sierra Club	EPA-HQ-OAR-2003-0119-2228
Theresa Kardos	Sierra Club	EPA-HQ-OAR-2003-0119-2229
Thomas and Kerstin Stempel	Sierra Club	EPA-HQ-OAR-2003-0119-2230
Michael Decker	Sierra Club	EPA-HQ-OAR-2003-0119-2232
Thomas Au	Sierra Club	EPA-HQ-OAR-2003-0119-2233
Thomas Mac Krell	Sierra Club	EPA-HQ-OAR-2003-0119-2234
Tim Derf	Sierra Club	EPA-HQ-OAR-2003-0119-2235
Tina Londino	Sierra Club	EPA-HQ-OAR-2003-0119-2236
Veronica Dickey	Sierra Club	EPA-HQ-OAR-2003-0119-2237
Nick Bartol	Sierra Club	EPA-HQ-OAR-2003-0119-2257
Heather Cantino	Sierra Club	EPA-HQ-OAR-2003-0119-2317

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Commenter	Affiliate	DCN
Mary Markus	Sierra Club	EPA-HQ-OAR-2003-0119-2330
Antonio D'Amico	Sierra Club	EPA-HQ-OAR-2003-0119-2335
Mary Mathews	Sierra Club	EPA-HQ-OAR-2003-0119-2336
Art Kolter	Sierra Club	EPA-HQ-OAR-2003-0119-2337
Barbara Naber	Sierra Club	EPA-HQ-OAR-2003-0119-2338
Billi Hanlon	Sierra Club	EPA-HQ-OAR-2003-0119-2339
Brian O'Donnell	Sierra Club	EPA-HQ-OAR-2003-0119-2340
Laura Jobe	Sierra Club	EPA-HQ-OAR-2003-0119-2341
Penelope Grover	Sierra Club	EPA-HQ-OAR-2003-0119-2342
Phoebe Oaks	Sierra Club	EPA-HQ-OAR-2003-0119-2343
Phyllis & Jerry Meshulam	Sierra Club	EPA-HQ-OAR-2003-0119-2344
Richard Dunterman	Sierra Club	EPA-HQ-OAR-2003-0119-2345
Robert Kosuth	Sierra Club	EPA-HQ-OAR-2003-0119-2346
Robert Liebman	Sierra Club	EPA-HQ-OAR-2003-0119-2347
Robert Rinker	Sierra Club	EPA-HQ-OAR-2003-0119-2348
Rollie Devlin	Sierra Club	EPA-HQ-OAR-2003-0119-2349
Sam Parsons	Sierra Club	EPA-HQ-OAR-2003-0119-2350
Sandra Noll	Sierra Club	EPA-HQ-OAR-2003-0119-2351
Meredith McGuire	Sierra Club	EPA-HQ-OAR-2003-0119-2352
Sandy Bahr	Sierra Club	EPA-HQ-OAR-2003-0119-2354
Julie Poulton	Sierra Club	EPA-HQ-OAR-2003-0119-2362
Michael H. Miller, Jr.	Sierra Club	EPA-HQ-OAR-2003-0119-2363
Marie Lefebvre	Sierra Club	EPA-HQ-OAR-2003-0119-2364
Richard Silverman	Sierra Club	EPA-HQ-OAR-2003-0119-2365
Jerry Redpath	Sierra Club	EPA-HQ-OAR-2003-0119-2366

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Commenter	Affiliate	DCN
Linda Guthrie	Sierra Club	EPA-HQ-OAR-2003-0119-2367
John Viacrucis	Sierra Club	EPA-HQ-OAR-2003-0119-2368
Catherine Basciano	Sierra Club	EPA-HQ-OAR-2003-0119-2369
Marjorie Rogalski	Sierra Club	EPA-HQ-OAR-2003-0119-2370
Roger Soldano	Sierra Club	EPA-HQ-OAR-2003-0119-2373
Joan LaChapelle	Sierra Club	EPA-HQ-OAR-2003-0119-2374
Angelique Parks	Sierra Club	EPA-HQ-OAR-2003-0119-2375
Karen Hennigan	Sierra Club	EPA-HQ-OAR-2003-0119-2376
Maureen Groves	Sierra Club	EPA-HQ-OAR-2003-0119-2377
Eugene Hecker	Sierra Club	EPA-HQ-OAR-2003-0119-2378
Christina Farnsworth	Sierra Club	EPA-HQ-OAR-2003-0119-2379
David Pedersen	Sierra Club	EPA-HQ-OAR-2003-0119-2380
David Scott	Sierra Club	EPA-HQ-OAR-2003-0119-2383
Aloma Dew	Sierra Club	EPA-HQ-OAR-2003-0119-2385
Dennis & Sharon Ryan	Sierra Club	EPA-HQ-OAR-2003-0119-2386
Diane Baker	Sierra Club	EPA-HQ-OAR-2003-0119-2387
Dinah Jentgen	Sierra Club	EPA-HQ-OAR-2003-0119-2388
Etta Albright	Sierra Club	EPA-HQ-OAR-2003-0119-2389
Felicia Kongable	Sierra Club	EPA-HQ-OAR-2003-0119-2390
Francis Gilbert	Sierra Club	EPA-HQ-OAR-2003-0119-2391
Francis Scheuer LI	Sierra Club	EPA-HQ-OAR-2003-0119-2392
Greta Fridlund	Sierra Club	EPA-HQ-OAR-2003-0119-2393
Jack & Susan Cooper	Sierra Club	EPA-HQ-OAR-2003-0119-2394
James Davis	Sierra Club	EPA-HQ-OAR-2003-0119-2395
Amy Harlib	Sierra Club	EPA-HQ-OAR-2003-0119-2396

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Commenter	Affiliate	DCN
Jan Schweig	Sierra Club	EPA-HQ-OAR-2003-0119-2397
Jane Deming	Sierra Club	EPA-HQ-OAR-2003-0119-2398
Janiece Staton	Sierra Club	EPA-HQ-OAR-2003-0119-2399
Jean Wright	Sierra Club	EPA-HQ-OAR-2003-0119-2400
Jeannine Jacobs	Sierra Club	EPA-HQ-OAR-2003-0119-2401
Kathleen Mulligan	Sierra Club	EPA-HQ-OAR-2003-0119-2402
Victoria Vernon	Sierra Club	EPA-HQ-OAR-2003-0119-2246
Virginia Walsh	Sierra Club	EPA-HQ-OAR-2003-0119-2247
Vita and Michael Miller	Sierra Club	EPA-HQ-OAR-2003-0119-2248
Wayne Branson	Sierra Club	EPA-HQ-OAR-2003-0119-2249
Wendell Otu'Upu	Sierra Club	EPA-HQ-OAR-2003-0119-2250
Michael Gates	Sierra Club	EPA-HQ-OAR-2003-0119-2251
William Krakauer	Sierra Club	EPA-HQ-OAR-2003-0119-2252
Millicent Cleary	Sierra Club	EPA-HQ-OAR-2003-0119-2253

Table 11. Incorporation By Reference (IBR)

DCN	Affiliation	IBR DCN	IBR Affiliation
EPA-HQ-OAR-2003-0119-0903.1	Nucor Corporation	EPA-HQ-OAR-2003-0119-2111	American Iron and Steel Institute
EPA-HQ-OAR-2003-0119-1708.1	Composite Panel Association (CPA)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1708.1	Composite Panel Association (CPA)	EPA-HQ-OAR-2003-0119-1952.1	American Wood Council (AWC)
EPA-HQ-OAR-2003-0119-1717.1	Domtar	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1766.1	Dow	EPA-HQ-OAR-2003-0119-2092.1	American Chemisty Council (ACC)

Table 11. Incorporation By Reference (IBR)

DCN	Affiliation	IBR DCN	IBR Affiliation
EPA-HQ-OAR-2003-0119-1766.1	Dow	EPA-HQ-OAR-2003-0119-2128.1	Coalition for Responsible Waste Incineration (CRWI)
EPA-HQ-OAR-2003-0119-1841.1	Michigan Biomass	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-2094.1	Weyerhaeuser	EPA-HQ-OAR-2003-0119-1952.1	American Wood Council (AWC)
EPA-HQ-OAR-2003-0119-2094.1	Weyerhaeuser	EPA-HQ-OAR-2003-0119-1834.1	Council of Industrial Boiler Owners (CIBO)
EPA-HQ-OAR-2003-0119-2094.1	Weyerhaeuser	EPA-HQ-OAR-2003-0119-1811.1	Treated Wood Council
EPA-HQ-OAR-2003-0119-2094.1	Weyerhaeuser	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1960.1	Southern Pressure Treaters' Association (SPTA)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1962.1	MeadWestvaco (MWV)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1953.1	Arkema	EPA-HQ-OAR-2003-0119-2092.1	American Chemisty Council (ACC)
EPA-HQ-OAR-2003-0119-2090.1	Wheelabrator Technologies Inc.	EPA-HQ-OAR-2003-0119-2088.1	Energy Recovery Council (ERC)
EPA-HQ-OAR-2003-0119-1904.1	INVISTA	EPA-HQ-OAR-2003-0119-2128.1	Coalition for Responsible Waste Incineration (CRWI)
EPA-HQ-OAR-2003-0119-2089.1	DuPont	EPA-HQ-OAR-2003-0119-1834	Council of Industrial Boiler Owners (CIBO)
EPA-HQ-OAR-2003-0119-2089.1	DuPont	EPA-HQ-OAR-2003-0119-2092.1	American Chemisty Council (ACC)
EPA-HQ-OAR-2003-0119-2100.1	Industrial Container Services	EPA-HQ-OAR-2003-0119-2214.1	Reusable Industrial Packaging Association (RIPA)
EPA-HQ-OAR-2003-0119-1930.1	The Brick Industry Association (BIA)	EPA-HQ-OAR-2003-0119-1930.1	American Petroleum Institute (API)
EPA-HQ-OAR-2003-0119-2105.1	Port Townsend Paper Corporation (PTPC)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)

Table 11. Incorporation By Reference (IBR)

DCN	Affiliation	IBR DCN	IBR Affiliation
EPA-HQ-OAR-2003-0119-1963.1	International Paper Company (IP)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1963.1	International Paper Company (IP)	See Major Boiler Docket	National Council for Air and Stream Improvement, Inc. (NCASI)
EPA-HQ-OAR-2003-0119-2353.1	Foley & Lardner LLP	EPA-HQ-OAR-2003-0119-2214.1	Reusable Industrial Packaging Association (RIPA)
EPA-HQ-OAR-2003-0119-1945.1	National Alliance of Forest Owners (NAFO)	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2003-0119-1945.1	National Alliance of Forest Owners (NAFO)	EPA-HQ-OAR-2003-0119-1952.1	American Wood Council (AWC)
EPA-HQ-OAR-2003-0119-2145.1	Ash Grove Cement Company	EPA-HQ-OAR-2003-0119-1107	Portland Cement Association (PCA)
EPA-HQ-OAR-2003-0119-2145.1	Ash Grove Cement Company	EPA-HQ-OAR-2003-0119-1970.1	Cement Kiln Recycling Coalition (CKRC)
EPA-HQ-OAR-2003-0119-2021.1	Lafarge North America Inc.	EPA-HQ-OAR-2003-0119-1107	Portland Cement Association (PCA)
EPA-HQ-OAR-2003-0119-2021.1	Lafarge North America Inc.	EPA-HQ-OAR-2003-0119-1970.1	Cement Kiln Recycling Coalition (CKRC)
EPA-HQ-OAR-2003-0119-2222.1	California Forestry Association (CFA)	EPA-HQ-OAR-2003-0119-2108	Governer Arnold Schwarzenegger
EPA-HQ-OAR-2003-0119-2222.1	California Forestry Association (CFA)	See Major Boiler Docket	Thomas J. Christofk (CA Placer County Air Pollution)
EPA-HQ-OAR-2003-0119-2222.1	California Forestry Association (CFA)	See Area Boiler Docket	Biomass Thremal Energy Council (BTEC)
EPA-HQ-OAR-2003-0119-2455.1	RE-Gen	EPA-HQ-OAR-2003-0119-2221.1	Biomass Power Association
EPA-HQ-OAR-2003-0119-2216.1	GDF SUEZ	EPA-HQ-OAR-2003-0119-1834	Council of Industrial Boiler Owners (CIBO)
EPA-HQ-OAR-2003-0119-2216.1	GDF SUEZ	EPA-HQ-OAR-2003-0119-2221.1	Biomass Power Association
EPA-HQ-OAR-2003-	GDF SUEZ	EPA-HQ-OAR-2003-	Michigan Biomass

Table 11. Incorporation By Reference (IBR)

DCN	Affiliation	IBR DCN	IBR Affiliation
0119-2216.1		0119-1841.1	Association
EPA-HQ-OAR-2003-0119-2216.1	GDF SUEZ	EPA-HQ-OAR-2003-0119-1951.1	American Forest & Paper Association (AF&PA)