

March 12, 2013

VIA EMAIL & OVERNIGHT DELIVERY

Information Quality Guidelines Staff
Mail Code 2811T
U.S. EPA West (Old Customs Building)
1301 Constitution Avenue, NW
OEI Quality Staff, Suite 2335
Washington, DC 20004

**Re: Walter Coke petition to correct EPA-disseminated information on
RCRA Administrative Order on Consent, Docket No. RCRA-04-2012-
4255 (Sept. 17, 2012)**

Dear Sir or Madam:

We are counsel to Walter Coke, Inc. (Walter Coke) regarding environmental matters at its facility located in Birmingham, Alabama. On Walter Coke's behalf, we hereby submit the attached Petition requesting that EPA promptly correct inaccurate and misleading information it has disseminated and continues to disseminate about Walter Coke and about a September 2012 Administrative Order on Consent relating to Walter Coke's RCRA corrective action at its facility.

Walter Coke looks forward to the prompt removal and public retraction of the Pollution Claims and welcomes any productive dialogue during EPA's evaluation of this Petition.

Respectfully,



ROBERT D. MOWREY
C. MAX ZYGMONT

cc: The Honorable Jeff Sessions, U.S. Senator for Alabama
The Honorable Richard C. Shelby, U.S. Senator for Alabama
The Honorable Terry Sewell, U.S. House of Representatives, 7th District, Alabama
The Honorable Spencer Bachus, U.S. House of Representatives, 6th District, Alabama
Gwendolyn Keyes-Flemming, Regional Administrator, EPA Region 4
Stan Meiburg, Deputy Regional Administrator, EPA Region 4

Jeffrey Pallas, RCRA Division Acting Deputy Director, EPA Region 4
Joan Redleaf-Durbin, Associate Regional Counsel, EPA Region 4
The Honorable William A. Bell, Mayor for Birmingham, Alabama
The Honorable David Carrington, President of Jefferson County Commission
The Honorable Jimmie Stephens, Jefferson County Commissioner, District 3
The Honorable George Bowman, Jefferson County Commissioner, District 1

**WALTER COKE INC. INFORMATION QUALITY ACT PETITION TO
CORRECT EPA-DISSEMINATED INFORMATION
ON RCRA ADMINISTRATIVE ORDER ON CONSENT
DOCKET NO. RCRA-04-2012-4255 (SEPT. 17, 2012)**

Walter Coke, Inc. hereby petitions EPA to promptly correct inaccurate and misleading information that it has disseminated and continues to disseminate about Walter Coke and about a September 2012 Administrative Order on Consent (the “2012 AOC”)(Exhibit A)¹ relating to corrective action at Walter Coke’s facility.²

Specifically, the Enforcement & Compliance History Online (ECHO) page for the 2012 AOC (Exhibit B), as well as the EPA’s Fiscal Year 2012 EPA Enforcement & Compliance Annual Results (“Annual Results Presentation”)(Exhibit C), improperly overstate and prematurely claim specific and significant amounts (*1.4 billion pounds and 38 million cubic yards*) of “pollution reductions” supposedly attributable to the 2012 AOC. By extension, EPA’s unsubstantiated claims³ create a grossly misleading impression about the amount of “pollution” existing at the facility in the first place. These Pollution Claims are factually erroneous, and they have been generated in a manner inconsistent with the Agency’s own guidance on calculating such “pollution reductions.” As such, EPA’s Pollution Claims fail to meet the basic requirements of ensuring “the quality, objectivity, utility and integrity” of information disseminated by EPA, as required by the 2001 Information Quality Act (IQA).

Executive Summary

EPA’s Pollution Claims are a set of public assertions about Walter Coke that are, under EPA’s own 250-page 2012 Guidance for Calculating the Environmental Benefits from EPA Enforcement Cases (the “Pollution Reduction Guidance”), supposed to be the product of a careful and documented process for calculating “pollution reductions.” The purposes of the extensive Pollution Reduction Guidance include ensuring the integrity of EPA assertions, informing the public, helping Congress and the White House formulate public

¹September 17, 2012 Resource Conservation and Recovery Act Administrative Order on Consent, Docket No. RCRA-04-2012-4255.

²This Request is made pursuant to the IQA as well as the Office of Management and Budget’s “Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies” (67 Fed. Reg. 8452 (Feb. 22, 2002)) and EPA’s “Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by [EPA]” (Oct. 2002, as amended) (OMB’s and EPA’s “IQA Guidelines,” respectively).

³The pollution reductions EPA attributes to the 2012 AOC in ECHO and the Annual Results Presentation, and anywhere else EPA has disseminated or may disseminate such information, are collectively referred to herein as the “Pollution Claims.”

policy and oversee EPA, and ensuring national consistency in calculating enforcement benefits. The Pollution Reduction Guidance thus focuses extensively on the proper methodology for generating a Case Conclusion Data Sheet (CCDS) that, in turn, is designed to support Agency claims about pollution reductions in any particular instance.

The Pollution Claims at issue stem from entry of the 2012 AOC, which provides for Walter Coke's continuation of a RCRA corrective action process it has been conducting since 1989. As explained further herein, the 2012 AOC provides initially for the Corrective Measures Study (CMS) phase of the RCRA corrective action process. The CMS phase, which includes underlying risk assessment work, has just begun and will involve detailed study of solid waste management units and other "areas of concern."

In making its claims about the 2012 AOC, EPA has at best ignored or misapplied the Pollution Reduction Guidance. As a result, the Pollution Claims at issue are:

- **Completely unsubstantiated**—EPA affirmatively refuses to back up its own Pollution Claims with the provision of any of the underlying data, calculations, or other substantive information that was used to arrive at or support those claims;
- **Facially inaccurate and unreliable**—because the information and analysis (including risk assessment work) necessary to make any such claims do not yet exist and are very unlikely to support the Pollution Claims when eventually generated;
- **Substantively improper and premature**—because EPA's guidance makes clear that certain pollution reduction calculations should await the completion of the above-referenced information and analysis, in the form of the CMSs that the 2012 AOC requires; and
- **Procedurally improper**—because EPA has admitted that no CCDS was ever created with respect to the 2012 AOC, making the Pollution Claims inherently lacking in quality and integrity.

As EPA well knows, the entire point of the 2012 AOC was to update a 1989 RCRA order (the "1989 Order") (Exhibit D)⁴ and thereby set forth a framework for completing the ongoing RCRA corrective action process. The first steps involve the detailed evaluation necessary to decide what, if any, remedial action is appropriate. In other words, the relevant determinations necessary to support EPA's Pollution Claims have not yet been made. Tellingly, when EPA made the Pollution Claims, it had not even completed its review of Walter Coke's submitted risk assessment planning documents that are designed to provide

⁴ The 1989 RCRA order was modified in 1990 (*see* Exhibit D) as a result of Walter Coke's (then known as Sloss Industries) appeal of the initial order. For simplicity, this Petition refers to these two orders collectively as the "1989 Order."

the process for determining cleanup standards and to support remedial action decisions. At best, by making the Pollution Claims, EPA seemingly ignored the decision-making process provided for in the 2012 AOC altogether; at worst, EPA appears to have improperly prejudged the process.

Unfortunately, EPA has repeatedly made misleading public assertions about Walter Coke in a highly-charged setting involving, among other things, third party lawsuits against the company related to alleged environmental impacts. Thus, it was particularly inappropriate for EPA to disseminate information suggesting that Walter Coke is one of the nation's two "largest polluters" in direct reliance on its improper Pollution Claims. *See* Ex. C, Annual Results Presentation at 3. Such an inflammatory (and false) characterization unduly injures Walter Coke's reputation, generates unwarranted fears among its neighbors, and hurts the morale of the company's valued employees. Predictably, EPA's characterization is now being used in advertising by plaintiffs' lawyers to attract clients for baseless claims against the company.⁵

EPA refuses to disclose the basis for its Pollution Claims (except to admit that it did not comply with its own procedures to document such Claims in a properly-completed CCDS), and Walter Coke is unable to replicate the calculations. One possibility is that EPA's Pollution Claims may be based on the non-sequitur that the horizontal and vertical extent of *all* soils in *any* of the nearly 50 acres at the facility that are subject to study under the 2012 AOC should be counted as "pollution" to be "reduced" simply because they will be studied. But even that approach appears not to fully explain the huge amounts that EPA claims.

While Walter Coke should not be forced to guess at EPA's basis for making highly inflammatory claims about the company, whatever EPA's approach may have been, it was plainly flawed for the simple reason that *no determinations have yet been made* on whether, much less to what extent, any remedial action is needed in any of the areas to be studied.

Further, the Pollution Claims were made in a manner that both procedurally and substantively failed to comply with EPA's own Pollution Reduction Guidance. And EPA's Pollution Claims are inconsistent with the facts known to EPA—that extensive data from soils in significant portions of the study areas shows levels well within applicable industrial soil standards and, therefore, will very likely not be subject to remedial action.

⁵ Even if it had any underlying merit, this claim indicates the prejudicial nature of EPA's overall characterizations of Walter Coke. As EPA well knows, the 1989 Order and 2012 AOC relate to conditions that are virtually all historic in nature, relating as far back as the 1920s and in any event largely predating the 1989 Order itself. For the Agency to now characterize Walter Coke—using the present tense—as one of the "largest polluters" as if current operations were the focus of the 2012 AOC reflects how casual and misrepresentative the Agency's treatment of the truth has been.

The Pollution Claims at issue are not trivial. Remarkably, EPA asserts that the 2012 AOC accounts for more than 63 percent of all pollution reduced, treated, or eliminated by its enforcement efforts *nationwide* in 2012. *See id.* Even more remarkably, due to the Pollution Claims, Region 4's claimed pollution reduction "accomplishments" dwarf the reported accomplishments of any other region. Indeed, Region 4 claims reductions more than *ten times* greater than any other individual region, and more than *100 times* greater than fully half of the nation's ten regions. If any regulated party submitted data to the Agency containing such a self-serving and inexplicable outlier, EPA would unquestionably demand further substantiation or dismiss it altogether.

EPA's dissemination of the Pollution Claims was improper under the IQA and has inflicted damage on Walter Coke. Such claims are misleading, irresponsible, and prejudicial and should be retracted promptly. Additionally, the retraction should be publicized to the same extent as the original claims.

Discussion

Walter Coke is a leading producer of coke from coal for use in iron- and steel-making processes. Walter Coke has operated a coke-manufacturing facility in North Birmingham, Alabama, since the 1920s and has been working with EPA through the RCRA corrective action process since approximately 1989 for certain alleged past releases almost exclusively within the facility's fenceline. On September 17, 2012, EPA and Walter Coke agreed to the 2012 AOC to govern the remaining aspects of that process—essentially CMSs followed by remedy selection and implementation. This Petition stems from the "pollution reductions" EPA claims result from the 2012 AOC.

EPA uses the term-of-art "pollution reduction" to gauge the success of its individual and overall enforcement efforts. For the 2012 AOC, EPA has disseminated its claimed pollution reduction for the 2012 AOC as part of its Pollution Claims. Specifically, ECHO indicates that the 2012 AOC achieves over 1.4 billion pounds and over 38 million cubic yards of pollution reduction.⁶ *See* Ex. B, 2012 AOC ECHO Page, available at <http://www.epa-echo.gov/cgi-bin/get1cReport.cgi?IDNumber=%2204-2012-4255%22&tool=eici> (last visited Mar. 7, 2013). Likewise, the Annual Results Presentation indicates that the 2012 AOC "will reduce, treat, or eliminate" 1.4 billion pounds of pollution reduction—an astonishing 63.6 percent of EPA's reported total 2012 nationwide reduction, treatment, or elimination of pollution. *See* Ex. C, Annual Results Presentation p.3, available at <http://www.epa.gov/enforcement/data/eoy2012/fy2012annualresults-analysistrends.pdf>

⁶ The approximately 1.4 billion pounds of alleged pollution reduction reported at the 2012 AOC ECHO page is actually a downwardly revised, but still grossly over-stated, figure. Walter Coke is not aware of precisely when EPA revised the page, but, as of February 4, 2012, the page reported a pollution reduction in excess of 5 billion pounds. That EPA's pollution reduction claims for the 2012 AOC can vary so wildly is an additional indication that the Pollution Reports are of poor data quality.

(last visited Mar. 7, 2013). Neither claim is substantiated, and each is misleading and/or false.

For the reasons set forth herein, Walter Coke hereby petitions EPA pursuant to its IQA Guidelines to:

- Immediately remove any and all of the Pollution Claims from public access, including from EPA's website;
- Publicly retract the Pollution Claims with at least an equal level of publicity as that which was associated with those claims; and
- Make future pollution reduction claims in a manner consistent with the IQA Guidelines and Pollution Reduction Guidance.

I. The 1989 Order and the 2012 AOC

Walter Coke has worked with EPA under a RCRA corrective action order since 1989. The 1989 Order was issued due to the operation of a RCRA-regulated hazardous waste treatment, disposal, or storage unit as of November 19, 1980, when facilities first became subject to the relevant RCRA requirements. Subsequently, Congress enacted the 1984 Hazardous and Solid Waste Amendments, directing EPA to require "corrective action" for releases from "solid waste management units" (SWMUs) located at facilities applying for a RCRA permit, regardless of the time of such releases. As of the time of the 1989 Order, Alabama had not been delegated authority to implement the RCRA corrective action program. Under applicable EPA guidance, EPA therefore undertook to administer the corrective action program for the Walter Coke facility under the auspices of the 1989 Order.

The initial 1989 Order provided for a RCRA Facility Investigation (RFI) at specified SWMUs and "areas of concern" (AOCs) identified at the facility. It also provided for preparation of a CMS at the completion of the RFI process. Walter Coke was in compliance with the 1989 Order; it submitted all the required RFI reports and never received from EPA the requisite direction to proceed with CMS work. After the passage of significant time without EPA action under the 1989 Order, and related public criticism of perceived EPA inaction, EPA requested that a replacement order be negotiated due to what EPA said was a desire to "update" the 1989 Order. Walter Coke's willingness to accommodate EPA's request ultimately led to the entry of the 2012 AOC. The 2012 AOC provides for the completion of the RCRA corrective action process at the facility, starting with the CMS phase.

The key operative terms of the 2012 AOC are fairly straightforward. Walter Coke is to perform CMSs on the timelines indicated in the document. The CMSs are to be done in accordance with EPA Guidance on CMSs. Thus, amongst their purposes, the CMSs are to determine whether and the extent to which corrective action at the Walter Coke facility is needed to protect human health or the environment. *See* Ex. A, 2012 AOC Section X

(incorporating EPA CMS guidance by reference). Subsequently, the CMSs will be followed by a remedy selection process. Thus, definition of remedial action and scope cannot be known until the CMSs are complete and remedies selected.

As of the date of the Pollution Claims, the CMS phase had barely started. In fact, EPA had not yet even completed its review of a risk assessment planning document that Walter Coke had presented after the September 2012 execution of the 2012 AOC. Of course, risk assessment is a key for supporting final decision-making as to what if any corrective action is needed at a site. Until the CMSs are completed and these potential risks are assessed, it is wholly inappropriate to speculate regarding the remedial action warranted at Walter Coke or that will be implemented under the 2012 AOC. Further, any such speculation is likely to portray a false sense of risk related to alleged conditions at Walter Coke's facility.

II. Walter Coke is entitled to seek corrective measures regarding EPA's Pollution Claims.

EPA's IQA Guidelines describe the mechanism for "*affected persons* to seek and obtain . . . correction of *information disseminated* by EPA that does not comply with EPA or OMB [IQA] Guidelines." *See* EPA IQA Guidelines at 30 (emphasis added). Here, Walter Coke is clearly an affected person, and the Pollution Claims consist of "information disseminated" by EPA within the meaning of the IQA Guidelines.

EPA's IQA Guidelines define "information" broadly to generally include "any communication or representation of knowledge such as facts or data, in any medium or form." *See id.* at 15. The Pollution Claims communicate purported facts and data and, therefore, fall within this broad notion of information. Furthermore, the Pollution Claims are distributed by EPA, not others, and the Pollution Claims are presented as facts and EPA's views; thus, the Claims do not fall within any enumerated exception to the meaning of information. *See id.* at 16.

Also, EPA has "disseminated" the Pollution Claims because it prepared and distributed them—and continues to do so—to "support or represent [the Agency's] viewpoint" or "position" regarding the 2012 AOC's effect, as well as its significance in the context of EPA's nationwide enforcement efforts. *See id.* at 15. And no exception to dissemination is pertinent. *See id.* at 16-18. For example, the Pollution Claims are not "information of an ephemeral nature;" rather, the Pollution Claims are what "ephemeral information" such as a press release might announce. *See id.* at 16-17. Thus, EPA has disseminated and continues to disseminate the Pollution Claims.

And Walter Coke is affected by the Pollution Claims because, therein, EPA negatively characterizes the condition of Walter Coke's facility. The suggestions that the conditions on Walter Coke's facility warrant actively addressing over 1.4 billion pounds and over 38 million cubic yards of media, and that Walter Coke is one of the two "largest polluters" in the U.S., are prejudicial to Walter Coke in what EPA fully knows is a highly-charged atmosphere in

the community. In fact, the Conlin Mezrano firm has already seized on the Pollution Claims to prop up its misguided effort to enlist plaintiffs to sue Walter Coke. *See, e.g.*, Ex. E, Conlin Mezrano Blog at <http://conlinmezrano.com/blog/> (Feb. 14, 2013) (last visited Mar. 7, 2013).

Thus, EPA furthers false and misleading impressions that frighten the company's neighbors, contribute to meritless legal actions, and demoralize employees. And, in addition to tarnishing Walter Coke's image without cause, EPA misstatements are likely to continue fueling sensationalized media coverage of North Birmingham environmental concerns. *See, e.g.*, Deadly Deception, CBS 42, <http://www.cbs42.com/content/special/pollution/deadly/default.aspx> (last visited Mar. 7, 2013).

Due to these and other considerations—such as the fact that Walter Coke is one of literally dozens of current and historic industrial facilities located in one of the most industrialized areas of the southeastern United States—Walter Coke has repeatedly asked EPA to take greater care in the accuracy and reliability of information it disseminates. Instead, EPA continues to routinely inflame the public, raising false fears. EPA has consistently failed to publicly address the broader reality of the long history of other heavy industry in the area, nor has it been willing to acknowledge well-documented, non-industrial apparent sources of pollutants in the area, all of which has led to inappropriately singling out Walter Coke. The Pollution Claims contribute further to both problems. Because information disseminated by EPA affects Walter Coke so acutely, there is no question that the Pollution Claims affect Walter Coke within the meaning of EPA's IQA Guidelines.

III. The Pollution Claims fail to satisfy basic data quality standards.

EPA's IQA Guidelines indicate that information disseminated by EPA must satisfy certain criteria, including “objectivity” and “utility.”⁷ *See* EPA IQA Guidelines at 3. Information is “objective” if presented in “an accurate, clear, complete, and unbiased manner, and as a matter of substance, [if] accurate, reliable, and unbiased.” *Id.* at 15. “Utility” refers to the usefulness of the information to the intended users. *Id.*

Applying these criteria, it is clear that the Pollution Claims fail the objectivity and utility prongs. Common sense and EPA's Pollution Reduction Guidance show that EPA's claimed “pollution reductions” for the 2012 AOC are overstated and fraught with uncertainty; thus, the Pollution Claims are inaccurate, unclear, and incomplete. Also, because EPA did not follow its own Pollution Reduction Guidance and is now unwilling to document how it generated the Pollution Claims, the Claims are unreliable and biased. Due

⁷ “Integrity” is a third prong of quality. *See* EPA IQA Guidelines at 15. “‘Integrity’ refers to security, such as the protection of information from unauthorized access or revisions” *Id.* Walter Coke is not currently aware of any reason to question the “integrity” of the Pollution Reports, but reserves its rights to raise such issues in the future as it may discover those issues or as any such issues may develop.

to these objectivity flaws, the Pollution Claims are of no use to intended users and, therefore, also fail the utility prong.

As an initial matter, EPA's complete failure to follow its Pollution Reduction Guidance—as discussed below—is a critical failure from a data quality perspective. EPA's IQA Guidelines indicate that EPA will ensure data quality, in large measure, by relying on and improving the Agency's otherwise existing data quality measures. *See id.* at 10, 19. The expansive and detailed Pollution Reduction Guidance is such a measure; it states explicitly that it is intended to “standardize the methodology” for calculating pollution reductions specifically to “ensure a national consistency.” *See* Pollution Reduction Guidance at vii. In fact, EPA believes that the Pollution Reduction Guidance is so important that “Regions are required to certify that the estimated environmental benefits[, *i.e.*, pollution reductions,] from their enforcement cases are calculated using current guidance and methodologies” *See id.* at 1-1. Thus, the Pollution Claims' complete noncompliance with EPA's Pollution Reduction Guidance, as discussed below, is a red flag that the Pollution Claims also violate EPA's IQA Guidelines.

a. The Pollution Claims are inaccurate, unclear, incomplete, and unreliable because the remedial action to occur at Walter Coke is not yet known.

Fundamentally, the Pollution Claims are inaccurate and unreliable because EPA simply cannot yet know whether or the extent to which the 2012 AOC may result in any pollution reductions. The AOC does not enumerate specific remedial actions to be implemented. Rather, any remedies will be selected and implemented only after CMSs are complete, including risk assessment work to evaluate whether and the extent to which remedial action is needed to protect human health and the environment. *See* Ex. A, 2012 AOC Section X (incorporating EPA CMS guidance by reference). Thus, the scope of remedial action to occur under the 2012 AOC remains to be determined. Because of this uncertainty, EPA's publicized conclusions in the Pollution Claims—that the 2012 AOC was the Agency's biggest pollution reduction accomplishment in 2012, reduced pollution by at least 1.4 billion pounds, and accounted for 63 percent of the nation's pollution reduction in 2012—defy common sense, are likely inaccurate by orders of magnitude, and are inherently unreliable.

Furthermore, applying EPA's Pollution Reduction Guidance to the 2012 AOC quickly confirms that the Pollution Claims are inaccurate and unreliable. The Pollution Reduction Guidance divides enforcement actions into four categories and describes whether and how EPA is to calculate pollution reductions for each. *See* Pollution Reduction Guidance at 1-11. For three—remediation and restoration, reduction of on-going releases, and prevention of future releases—EPA is to calculate pollution reductions. *Id.* at 1-11–1-12. For the fourth—work practices—EPA will not calculate pollution reductions because the “benefits . . . are not readily quantifiable.” *Id.* And two cornerstone principles underlying the Pollution Reduction Guidance are being conservative and, in the event of doubt, ***underestimating***. *Id.* at 1-4–1-5 (emphasis added).

The remediation and restoration category applies to past releases; so, of the three types of enforcement cases resulting in pollution reductions, it is the only category potentially relevant to the 2012 AOC. *Id.* at 2-1. For this category, pollution reduction equals the volume of media, *e.g.*, soil or groundwater, to be addressed as the result of the enforcement. *Id.* at 2-3. Importantly, though, only in-situ treatment, ex-situ treatment, removals, and wetland creation and restoration are complying actions that should be considered to “address” pollution. *See id.* at Table 2-1. And for certain media such as soil, EPA emphasizes that only the “subset” of that media subject to these remedial actions should be counted. *See id.* at 2-5.

Thus, CMSs do not “address” media within the meaning of the Pollution Reduction Guidance; so, the extent to which media will be addressed under the 2012 AOC cannot be known until after the CMSs when it is determined what remedial actions are needed on what subset of media.⁸ Consequently, the Pollution Claims are inaccurate and unreliable, and EPA has impermissibly repudiated its cornerstone principles of conservative, underestimated pollution reduction calculations.

In fact, the Pollution Reduction Guidance shows that EPA’s purported calculation of pollution reductions for the 2012 AOC was inappropriate. According to the most applicable RCRA-based example in the Guidance, pollution reductions should be calculated *after* the CMS is completed. *See id.* at 2-12–2-13. Indeed, a RCRA CMS is akin to a CERCLA Feasibility Study (“FS”). EPA does not calculate pollution reductions for enforcements resulting in FSs because FSs are a “work practice” remedy that secures only investigative work. *Id.* at 1-15. Thus, CMSs, by analogy, should also be considered a work practice for which EPA does not report pollution reductions because they are not readily quantifiable.

Therefore, because CMSs do not quantifiably reduce pollution and because it is not certain what scope of remedial actions will be required under the 2012 AOC, the Pollution Reduction Guidance shows that EPA’s Pollution Claims are inaccurate and unreliable. This result is consistent with longstanding EPA policy. No later than 2003, EPA indicated that the volume of media addressed should not be “calculated for enforcement cases securing investigation work” such as CMSs but should be only be calculated “in association with settlements that secure physical response action or corrective action work.” *See Measure & Calculations for Volume of Contaminated Media Addressed at 7* (EPA, November 2003).

⁸ Walter Coke notes that EPA purports to have incorporated its April 16, 2012 approval of Walter Coke’s interim remedial measure for certain groundwater into the 2012 AOC. *See Ex. A, 2012 AOC Cover Letter from Jeffrey Pallas, EPA Region 4 RCRA Division Acting Deputy Director, to Carol Farrell, Walter Coke President* (Sept. 17, 2012). However, as indicated by the April 16, 2012 approval date, EPA approved the groundwater interim measure under the 1989 Order. Therefore, EPA cannot claim the groundwater interim measure as a pollution reduction measure under the 2012 AOC. *See Pollution Reduction Guidance at 1-9* (stating that, when one enforcement action includes a particular remedy, a second enforcement action for the same or a similar remedy does not result in reportable pollution reduction).

Furthermore, because the Pollution Claims are so divorced from the Pollution Reduction Guidance, the Pollution Claims are incomplete and unclear. ECHO uses the term-of-art “pollution reduction,” which the Pollution Reduction Guidance fleshes out, but the pollution reduction EPA reports in ECHO does not comply with the Guidance. Likewise, the Annual Results Presentation uses the language “reduce, treat, or eliminate pollution,” but CMSs do not reduce, treat, or eliminate anything. That is, EPA’s terminology glosses over its noncompliance with the Pollution Reduction Guidance and that CMSs involve only study. These maneuvers thus mislead the Pollution Claims’ readers to believe that more than 1.4 billion pounds of media at the Walter Coke facility require active remediation. Therefore, the Pollution Claims are unclear and incomplete in that they appear designed to mislead.

Finally, a simple review of the Pollution Claims in the context of EPA’s overall pollution reduction accomplishments in 2012 suggests how significantly awry those claims have gone. Overwhelmingly due to its Pollution Claims for the 2012 AOC, Region 4 reported *more than ten times more pollution reductions than any of the nation’s other nine regions*. And Region 4’s claims resulted in more than 100 times more pollution reduction than fully half of the nation’s regions (Regions 1, 3, 6, 8, and 9). *See* Ex. F, 2012 Enforcement Annual Results Webpage, Region by Region Tab, available at <http://www.epa.gov/enforcement/data/eoy2012/regions.html> (last visited Mar. 7, 2013). Region 4’s reported pollution reductions thus represent an extreme outlier, which itself indicates likely misapplication of the Pollution Reduction Guidance; consequently, EPA undermines its own stated policy that pollution reduction calculations be done consistently nationwide.

b. EPA secrecy and incentives render the Pollution Claims unreliable and biased.

EPA’s Pollution Reduction Guidance calls for the Agency to calculate pollution reductions using a CCDS. *See id.* at 1-1. According to EPA, CCDS data is “important” and “the quality and consistency of that data is critical . . . to assessing impact on, and benefit to, human health and the environment.” *Id.* In fact, “to ensure good data quality, several regions do not sign off on a final administrative order unless the CCDS is attached and has been reviewed.” *Id.* at 9.

But, remarkably, there is no CCDS for the 2012 AOC. *See* Ex. G, email from Joan Redleaf-Durbin, EPA Region 4 Associate Regional Counsel, to Max Zygmunt, Mowrey Meezan Coddington Cloud LLP (Feb. 1, 2013). Rather, as the result of a Freedom of Information Act (“FOIA”) request for the documents underlying EPA’s pollution reduction claims for the 2012 AOC (“Walter Coke’s FOIA Request”) (Exhibit H), Walter Coke understands that EPA reached the astronomical figures in the Pollution Claims through a series of email correspondence. *Id.* Given the significance EPA unambiguously attaches to CCDS use and data, EPA Region 4’s failure to prepare a CCDS and its apparently casual substitute process render the Pollution Claims unreliable in the extreme.

In addition to unreliability, this break from protocol indicates potential EPA bias given that EPA refuses to back up its Pollution Claims. Walter Coke understands from conversations with EPA Region 4 Associate Regional Counsel and an EPA FOIA Specialist that the Agency intends to withhold the above-referenced email correspondence under purported cover of one or more FOIA exemptions. But these FOIA exemptions do not prohibit EPA from disclosing information, and EPA IQA Guidelines recite that EPA is committed to enhancing, rather than restricting, access to environmental information. *See* EPA IQA Guidelines at 5. Thus, the Agency’s *choice* to withhold the substantive information underlying the Pollution Claims itself raises concerns about the veracity of, basis for, and motivation for the pollution reductions EPA claims for the RCRA AOC.

The incentives associated with the EPA’s pollution reduction accomplishments increase the likelihood that the Pollution Claims reflect EPA bias. Pollution reduction calculations “provide the necessary information for reporting on [the Office of Enforcement and Compliance Assurance’s (OECA’s)] annual accomplishments to the public, Congress, and the OMB.” *See* Pollution Reduction Guidance at 1-1. The direct tie between reported pollution reduction and public relation and perception concerns, budget considerations, and potential Congressional and White House oversight directly or indirectly incentivizes EPA and its employees to score significant pollution reduction “wins.”

And without the pollution reduction EPA attributes to the 2012 AOC, EPA would have reported only 800 million pounds of pollution reduction in 2012, the least effective year since 2009 and 56 percent less effective than 2011. *See* Ex. C, Annual Results Presentation at 3. Further, EPA Region 4 would have reported only approximately 300 million pounds of pollution reduced, treated, or eliminated in 2012—an 82 percent drop from what its ultimate, contrived, report. *See* Ex. F, Enforcement Annual Results for Fiscal Year 2012, Region by Region Tab. Thus, both nationally and regionally, EPA had a real interest in inflating pollution reduction figures for the 2012 AOC.

Moreover, Region 4’s motives appear questionable given, as described above, the literal chasm between its claimed pollution reductions and those claimed by the other nine regions. Walter Coke is not privy to the relationship of these claimed accomplishments to specific compensation and other related decisions within the Agency, but respectfully suggests that the existence of this obvious outlier claim is reason alone to question it. Given that Region 4 did not even generate the basic document—the CCDS—that is supposed to support such a claim, it is particularly surprising that the claim was not further vetted before being included—and disseminated—in EPA’s national compilation of its supposed achievements.

c. The Pollution Claims fail the utility prong because they are of no use to their intended users.

According to EPA, the intended users for pollution reduction reports include “the public, Congress, and the OMB”—all of which have direct or indirect oversight of EPA. *See* Pollution Reduction Guidance at 1-1. The Pollution Claims indicate to these constituencies

that the Walter Coke facility needs extensive remedial action and that EPA has received the final, quantifiable commitments needed to address that need. But the Pollution Claims are misleading on both points because the extent to which remedial action should occur at the facility is the very subject of the CMSs required under the 2012 AOC, as well as because of the “objectivity” flaws discussed above. Thus, any action or conclusion on the basis of the Pollution Claims—to either commend or condemn EPA’s enforcement efforts, for example—would be misguided. Thus, the Pollution Claims are of no use to their intended users, and therefore, the Pollution Claims also fail the utility prong of quality.

IV. The Pollution Claims are influential information but fail to satisfy the applicable heightened data quality requirements for such information.

EPA’s IQA Guidelines recognize “influential scientific, financial, or statistical information” as a subset of information that “should be subject to a higher degree of quality.” EPA IQA Guidelines at 19, 20. Influential information is that which has a “clear and substantial impact on important public policies or private sector decisions.” *Id.* at 19. For such information, EPA generally intends to assure influential information’s reproducibility by increasing the transparency of data sources, assumptions, methods, procedure, and rigor. *Id.* at 20-21.

The Pollution Claims qualify as “influential information.” As the Pollution Reduction Guidance recites, pollution reduction calculations (such as those in the Pollution Claims) “provide the necessary information for reporting on OECA’s annual accomplishments to the public, Congress, and the OMB.” Pollution Reduction Guidance at 1-1. As discussed above, if EPA complied with its Pollution Reduction Guidance and therefore did not report pollution reductions for the 2012 AOC, the Annual Results Presentation would have reflected that EPA pollution reductions dropped off significantly in 2012. Such a result would invite oversight and criticism of EPA’s enforcement programs. Thus, the Pollution Claims are designed to and do have a “clear and substantial impact on important public policies or private sector decisions.”

Further, the Pollution Claims are “influential” to private sector decisions, but not in a positive way. Given that the claims arose from an order that Walter Coke entered to accommodate EPA, the dissemination of those claims in a manner so prejudicial to Walter Coke will necessarily give the company—and others like it—pause over the merits of proactive cooperation with EPA in the future. Further, the Pollution Claims have already been used by at least one private law firm in its efforts to attract clients for baseless claims against Walter Coke, plainly a private sector decision of significance.

But, as shown above, the Pollution Claims fail to meet basic data quality standards let alone the higher degree of quality applicable to “influential information.” In fact, EPA’s stated intentions in response to Walter Coke’s FOIA Request demonstrate that the Agency is committed to ensuring that the data sources, assumptions, methods, procedure, and rigor, if any, underlying the Pollution Claims are opaque rather than transparent. Likewise, EPA is ensuring that the conclusions in the Pollution Claims cannot be reproduced. Thus, in

addition to failing to meet the objectivity and utility requirements applicable to all disseminated information, the Pollution Claims fail to meet the also-applicable, higher data quality standards for influential information.

V. Requested relief

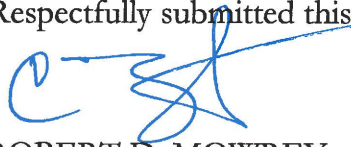
The Pollution Claims should be removed from public access immediately, including removal from EPA's website. Immediate removal from public access is appropriate because, for the reasons described above, it is "clear . . . that the [Pollution Claims are] grossly incorrect and misleading and [that they] cannot be adequately clarified through a notice or other explanation." *See* EPA IQA Guidelines at 38. And the current online availability of the Pollution Claims intensifies the need for immediate removal. As OMB's IQA Guidelines describe, the internet "increases the potential harm that can result from the dissemination of information that does not meet basic information quality guidelines." *See* 67 Fed. Reg. at 8452.

In addition, EPA should publicize its retraction of the Pollution Claims to remedy, as much as possible, the prejudice the Pollution Claims have caused Walter Coke. The retraction should indicate that it was inappropriate for EPA to issue the Pollution Claims because the need, if any, for remedial action at Walter Coke under the 2012 AOC will not be known until the CMSs are complete and remedies are selected.

In the future, EPA should make pollution reduction claims for Walter Coke only to the extent supported by and calculated in accordance with the Pollution Reduction Guidance and the IQA Guidelines. Walter Coke realizes that the Pollution Reduction Guidance calls for EPA to report pollution reductions attributable to an AOC in the year in which the AOC is finalized and that, in this case, any pollution reductions from the 2012 AOC could not have been well-understood in calendar year 2012. However, if EPA intends to ignore aspects of its Pollution Reduction Guidance in order to take credit for claimed accomplishments, it should ignore the arbitrary aspects of that Guidance—*e.g.*, pollution reduction reporting timeframes—rather than the substantive aspects of that Guidance that it improperly ignored to develop the Pollution Claims.

[Signature block on following page.]

Respectfully submitted this 12th day of March, 2013.

A handwritten signature in blue ink, appearing to be 'C. Max Zygmunt', written over the printed name below.

ROBERT D. MOWREY
C. MAX ZYGMONT

MOWREY MEEZAN CODDINGTON CLOUD LLP
1100 Peachtree Street, Suite 650
Atlanta, Georgia 30309
Phone: (404) 969-0740
Fax: (404) 335-7220

ATTORNEYS FOR WALTER COKE, INC.

Exhibit A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 17 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Carol W. Farrell, President
Walter Coke, Inc.
3500 35th Avenue North
Birmingham, AL 35207-2918

Dear Ms. Farrell:

Enclosed please find the executed RCRA Section 3008(h) Administrative Order on Consent (AOC), IN THE MATTER OF: Walter Coke, Inc., Docket No. RCRA-04-2012-4255, dated September 17, 2012. The signed and executed AOC has also been emailed to you today providing you notice that EPA has signed the AOC. Therefore, pursuant to Paragraph 109 of the AOC, the effective date of the AOC is Monday, September 24, 2012.

In addition, please note that pursuant to Section IX, INTERIM MEASURES of the enclosed AOC, Docket No. RCRA-04-2012-4255, the approved "final interim measures work plan (IWMP)" for the Former Chemical Plant, as referenced in the EPA letter to you dated April 16, 2012 (enclosed), is incorporated by reference into this AOC.

If you have any questions, feel free to contact me at (404) 562-8569. Legal inquiries should be directed to Joan Redleaf Durbin at (404) 562-9544.

Sincerely

A handwritten signature in black ink, appearing to read "Jeffrey Pallas".

Jeffrey Pallas
Acting Deputy Director
RCRA Division

Enclosures: 1) AOC dated September 17, 2012
2) April 16, 2012, EPA letter
To Walter Coke

cc: Dan Grucza, Walter Coke
Jarry Taylor, Esq
Phil Davis, ADEM

RECEIVED
EPA REGION IV

2012 SEP 17 AM 11:19

HEARING CLERK

RCRA SECTION 3008(h)

ORDER ON CONSENT

ISSUED TO

Walter Coke Inc.

Docket No. RCRA-04-2012-4255

TABLE OF CONTENTS

Section		Page
I.	JURISDICTION	4
II.	PARTIES BOUND	5
III.	DEFINITIONS.....	6
IV.	STATEMENT OF PURPOSE	6
V.	EPA FINDINGS OF FACT	6
VI.	EPA DETERMINATION AND CONCLUSIONS OF LAW	7
VII.	WORK TO BE PERFORMED.....	7
VIII.	NEW AREAS OF CONCERN AND NEW SWMUS.....	8
IX.	INTERIM MEASURES.....	9
X.	CORRECTIVE MEASURES STUDY.....	9
XI.	REMEDY SELECTION	10
XII.	FINANCIAL ASSURANCE.....	10
XIII.	CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN.....	10
XIV.	PUBLIC PARTICIPATION/COMMUNITY ENGAGEMENT.....	11
XV.	INSTITUTIONAL CONTROLS.....	11
XVI.	COMPLETION OF RCRA CORRECTIVE ACTION.....	11
XVII.	SCHEDULES OF COMPLIANCE.....	12
XVIII.	PROJECT COORDINATOR.....	12
XIX.	AGENCY APPROVAL/DISAPPROVAL OF SUBMISSION.....	12
XX.	DISPUTE RESOLUTION.....	14

XXI.	PROPOSED CONTRACTOR/CONSULTANT.....	15
XXII.	ADDITIONAL WORK.....	15
XXIII.	QUALITY ASSURANCE.....	16
XXIV.	DATA AND DOCUMENT AVAILABILITY.....	17
XXV.	ACCESS	17
XXVI.	RECORD PRESERVATION	18
XXVII.	NOTIFICATION AND DOCUMENT CERTIFICATION.....	19
XXVIII.	DELAY IN PERFORMANCE/STIPULATED PENALTIES.....	21
XXIX.	FORCE MAJEURE AND EXCUSABLE DELAY	24
XXX.	RESERVATION OF RIGHTS	25
XXXI.	OTHER CLAIMS	26
XXXII.	OTHER APPLICABLE LAWS.....	27
XXXIII.	INDEMNIFICATION OF THE UNITED STATES GOVERNMENT ...	27
XXXIV.	MODIFICATION	27
XXXV.	SEVERABILITY.....	27
XXXVI.	TERMINATION AND SATISFACTION.....	27
XXXVII.	SURVIVABILITY/PERMIT INTEGRATION.....	28
XXXVIII.	EFFECTIVE DATE.....	28

ATTACHMENTS

A:	DEFINITIONS & TERMS.....	29
B:	MAPS.....	32
C:	FINANCIAL ASSURANCE.....	33
D:	SWMU MANAGEMENT AREAS (SMAS)	39
E:	45 SWMUS AND 6 AOCS.....	40

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4**

IN THE MATTER OF:	)	Docket Number: RCRA-04-2012-4255
)	
Walter Coke, Inc.	)	Proceeding under Section 3008(h)
	)	of the Resource Conservation and
	)	Recovery Act, 42 U.S.C. § 6928(h)
)	
EPA ID No.: ALD 000 828 848)	
)	
Respondent)	
_____)	

ADMINISTRATIVE ORDER ON CONSENT

I. JURISDICTION

1. This Administrative Order on Consent (“Order”) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (“EPA”) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (“RCRA”), as amended by the Hazardous and Solid Waste Amendments (“HSWA”) of 1984, 42 U.S.C. § 6928(h). The authority vested in the Administrator to issue orders under Section 3008(h) of RCRA has been delegated to the Regional Administrators by EPA Delegation Nos. 8 - 31 and 8 - 32 dated April 16, 1985, and has been further delegated by the Regional Administrator for Region 4 to the Deputy Director, RCRA Division on August 18, 2010. Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), authorizes the Administrator of EPA or her delegatee to issue an order requiring corrective action or such other response which she deems necessary to protect human health or the environment, if, on the basis of any information, she determines that there is or has been a release of hazardous waste or hazardous constituents into the environment from a Facility that is, was, or should have been authorized to operate under Section 3005(e) of RCRA, 42 U.S.C. § 6925(e).
2. This Order is issued to Walter Coke, Inc., (“Respondent”), Birmingham, Alabama.
3. Respondent consents to and agrees not to contest EPA’s jurisdiction to issue this Order or to enforce its terms. Accordingly, Respondent will not contest EPA’s jurisdiction to: 1. compel compliance with this Order in any subsequent enforcement proceeding, either administrative or judicial; 2. require Respondent’s full or interim compliance with the terms of this Order; and 3. impose sanctions for violations of this Order. In addition, Respondent agrees not to seek pre-enforcement review of this Order.

4. On September 29, 1989, EPA issued Respondent an Administrative Order pursuant to Section 3008(h) of RCRA. Following negotiations between EPA and Respondent, a modified Administrative Order was issued (hereinafter referred to as "the 1989 Order"). The 1989 Order required Respondent to perform a RCRA Facility Investigation (RFI) to evaluate whether any hazardous waste or hazardous constituents had escaped the identified solid waste management units in which they were, or suspected to be, located and, if so, the nature and extent of any release. The 1989 Order also required Respondent to develop, upon completion of the RFI, a Corrective Measures Study (CMS), if necessary, to identify remediation alternatives and to recommend any corrective measures to be taken at the Facility. By entry of this Order between EPA and the Respondent, EPA declares, and the Parties agree, that Respondent has completed all of the approved investigation tasks of the RFI Work Plans required by the 1989 Order. The Parties also agree that the CMS work and the selection and implementation of any remedy are best conducted and completed pursuant to this Order and that as a result, the 1989 Order is terminated and is no longer in force and effect.

II. PARTIES BOUND

5. This Order shall apply to and be binding upon EPA, Respondent and its officers, directors, employees, agents, successors and assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of the Respondent.
6. No change in ownership or corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order. Any conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall not affect Respondent's obligations under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of the Respondent by the terms and conditions of the Order, regardless of the Respondent's use of employees, agents, contractors, or consultants to perform any such tasks.
7. Respondent shall provide a copy of this Order to all contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) days of the issuance of this Order or the retention of such person(s), whichever occurs later, and shall condition all such contracts on compliance with the terms of this Order.
8. Respondent shall provide written notice of this Order within ten (10) days to any successor-in-interest prior to transfer of ownership or operation of the Facility or a portion thereof. In addition, the Respondent shall provide written notification of said transfer of ownership and/or operation to the EPA within ten (10) days prior to such transfer.
9. Respondent agrees to undertake all actions required by the terms and conditions of this Order, including any portions of this Order incorporated by reference. Respondent waives its right to request a hearing on this matter pursuant to Section 3008(b) of RCRA and 40 C.F.R. Part 24, and consents to the issuance of this Order without a hearing pursuant to

Section 3008(b) of RCRA as a Consent Order issued pursuant to Section 3008(h) of RCRA. Any noncompliance with this Order, other than noncompliance authorized by EPA, constitutes a violation of the Order.

III. DEFINITIONS

10. Unless otherwise expressly provided in Attachment A: Definitions & Terms herein, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the meaning assigned to them under RCRA or in such regulations.

IV. STATEMENT OF PURPOSE

11. In entering into this Order, the mutual objectives of EPA and Respondent are: (1) to perform pursuant to this Order in lieu of the 1989 Order one or more CMSs to identify and evaluate alternatives for any corrective measures (i.e., remedies) necessary to prevent, mitigate, and/or remediate any releases of hazardous wastes or hazardous constituents at or from any Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and SWMU Management Areas (SMAs) listed in Attachments D and E or identified as “new” pursuant to Section VIII; (2) to implement the remedies approved by EPA for such SWMUs, AOCs and SMAs listed in Attachments D and E or identified as “new” pursuant to Section VIII; (3) to perform any other activities necessary consistent with this Order, including additional work and interim measures (IMs), to the extent necessary to address impacted environmental media to ensure it meets protective criteria or to evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste or hazardous constituents at or from SWMUs, AOCs and/or SMAs; 4) to implement and maintain, as appropriate, institutional controls required by Section XV. of this Order approved by EPA; and (5) to perform any activities required pursuant to Section VIII of this Order, and to the extent otherwise consistent with this Order. A list of all SMAs is provided in Attachment D, and a list of all SWMUs and AOCs is provided in Attachment E.
12. It is the mutual objective of EPA and Respondent to streamline the process for completing the work required by this Order, and to avoid potentially unnecessary delays caused by inadequate communication, particularly in advance of formal submissions required by Respondent under this Order. To accomplish this objective, the parties will frequently and in good faith communicate orally, in writing, and face-to-face to discuss progress of the Work and upcoming tasks scheduled by Respondent, to address any concern of EPA or the Respondent, to assure EPA is kept current on the Work, and to ensure the successful and timely completion of the requirements of this Order.

V. EPA FINDINGS OF FACT

13. Respondent is a company doing business in the State of Alabama and is a person as defined in Section 1004(15) of RCRA, U.S.C. § 6903(15).
14. References to “Respondent” in the description of the Facility in this Order are to Walter Coke, Inc., as well as to any predecessors which owned or operated the Facility, including

Sloss Industries Corporation. References to “Respondent” in this Order insofar as the obligations to perform the work required by this Order are to Walter Coke, Inc. The Facility is shown in the maps that are attached as Attachment B: Site Map and SMAs 1-5; Figures 1-6 dated 7/24/12 and 8/16/12.

15. On November 19, 1980, the applicable date which rendered facilities subject to interim status requirements or the requirement to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924 and 6925, the Facility achieved interim status as Respondent owned and operated the Facility and certain of its operations thereon qualified as hazardous waste treatment, storage, or disposal within the meaning of RCRA. In its original Part A Hazardous Waste Permit Application, dated November 17, 1980, Respondent identified itself as operating a coke plant, a chemical plant, a blast furnace and a mineral wool plant.

VI. EPA DETERMINATIONS AND CONCLUSIONS OF LAW

16. Based on the foregoing findings of fact and after consideration of the Administrative Record, the Deputy Director of the RCRA Division of EPA Region 4 has made the following conclusions of law and determinations:
 - a. Respondent is a “person” within the meaning of Section 1004(15) of RCRA, 42 U.S.C. § 6903(15), and is a “person” as defined in 40 C.F.R. § 260.10.
 - b. Respondent is the “owner” and “operator” of an interim status Facility that is operating subject to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e).
 - c. Respondent engaged in the storage of hazardous wastes at the Facility subject to interim status requirements of 40 C.F.R. Part 265.
 - d. The Facility was subject to interim status requirements or the requirement to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924 and 6925.
 - e. Certain wastes and constituents thereof found at the Facility are hazardous waste and/or hazardous constituents thereof as defined by Section 1004(5) of RCRA, 42 U.S.C. § 6903(5). These are also hazardous wastes or hazardous constituents within the meaning of Section 3001 of RCRA, 42 U.S.C. § 6921 and 40 C.F.R. Part 261.
 - f. There is or has been a release of hazardous wastes or hazardous constituents into the environment from the Facility.
 - g. The actions required by this Order are necessary to protect human health and/or the environment.

VII. WORK TO BE PERFORMED

17. Pursuant to Section 3008(h) of RCRA, the Respondent agrees and is hereby ordered to perform the acts required by this Order. All work undertaken pursuant to this Order shall

be performed in a manner consistent with, at a minimum, RCRA and other applicable federal and state laws, and their implementing regulations, and consistent with all relevant EPA guidance documents as appropriate to the Facility and the work to be performed by Respondent under this Order.

18. To the extent necessary to meet any of the requirements of this Order, all work previously performed and reports previously submitted by Respondent to EPA pursuant to the 1989 Order may be relied upon or referred to by Respondent in submissions to EPA by Respondent. Respondent need not re-submit such completed work or reports.
19. Unless otherwise specified, two (2) complete paper copies and two (2) complete electronic copies in portable document format, of all documents submitted pursuant to this Order, or revisions thereof, shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail to the Project Coordinator or to other addresses he/she designates. Electronic copies can be emailed if possible.

VIII. NEW AREAS OF CONCERN AND NEW SWMUS

20. Any SWMUs and/or AOCs that are not identified in Attachment D and/or E, and that otherwise are designated by EPA and discovered after the Effective Date, are “New AOCs” or “New SWMUs”. New AOCs or New SWMUs designated by EPA or discovered during the course of environmental sampling, monitoring, field investigations, environmental audits, or other means, shall become part of this Order. As used in this Order, the terms “discover,” “discovery,” or “discovered,” refer to the date on which the Respondent or EPA either: (1) visually observes evidence of a new SWMU or AOC; (2) visually observes evidence of a previously unidentified release of hazardous waste or hazardous constituents to the environment; or (3) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment.
23. Respondent shall notify EPA in writing, within fifteen (15) days of discovery, of any suspected New AOC or New SWMU as discovered under this Section VIII. The notification shall include, at a minimum, the location of the New AOC or New SWMU and all available information pertaining to the nature of the release (e.g., media affected, hazardous waste or constituents released, magnitude of the release, etc.). The notification shall also include whether the New SWMU or New AOC is contained within one of the defined SMAs which previous investigations, the CMS, or the CMI may already address. To the extent necessary to satisfy the Statement of Purpose, the following steps may be undertaken: The EPA may conduct, or require the Respondent to conduct, further assessment (i.e., Confirmatory Sampling) in order to determine the status of the suspected New AOC and/or New SWMU. EPA may also require that Respondent submit an AOC or SWMU Assessment Report (ASAR) for each New AOC and/or New SWMU. Based on the results of the ASAR, the EPA shall determine the need for further investigations of the New AOCs and/or New SWMUs covered in the ASAR.

IX. INTERIM MEASURES

24. The Respondent shall evaluate data as it becomes available and assess the need for interim measures.
25. The Respondent shall report any Imminent and/or Existing Hazard (IEH) from a release of hazardous waste or hazardous constituents that may endanger human health or the environment onsite or beyond the Facility property boundary. Any such information shall be reported orally to the EPA within 24 hours from the time the Respondent becomes aware of the circumstances. This IEH Report shall include, but is not limited to:
 - a. Information concerning the release of any hazardous waste or hazardous constituents that may endanger public drinking water supplies; and,
 - b. Information concerning the release or discharge of any hazardous waste or hazardous constituents, which could threaten the environment or human health outside the Facility.
26. Pursuant to Paragraph 12. of this Order, the parties may agree that Respondent can implement an Interim Measure (IM) for any IEH, SWMU, AOC, and/or SMA, as appropriate, to eliminate, prevent, or mitigate exposure to human health or the environment at or from the Facility, without the necessity of Respondent preparing and submitting to EPA for approval a Work Plan. If the parties do not agree, and/or EPA determines an IM Work Plan submission and approval process is necessary, the Respondent shall prepare an IM Work Plan and submit it to EPA, for approval, within the time frame specified by EPA. The IM Work Plan is subject to approval by EPA and shall be developed in a manner consistent with the IM Scope of Work at:

http://www.epa.gov/reg3wcmd/ca/pdf/RCRA_InterimMeasuresTTA.pdf

27. The Respondent shall implement the IM in accordance with the agreement of the Parties or with any EPA required IM Work Plan.
28. The Respondent shall seek approval from the EPA for any planned changes, reductions or additions to the IM and or IM Work Plan prior to implementation (unless to prevent or mitigate an IEH).

X. CORRECTIVE MEASURES STUDY

29. Respondent shall perform and complete a CMS and submit the CMS Report for the SMAs listed in Attachment D according to the schedule contained therein, or as required pursuant to Section VIII or XXII. Respondent shall follow and comply with all of EPA's guidelines and requirements for the performance of a CMS, and be consistent with:

<http://www.epa.gov/reg3wcmd/pdf/chev6.pdf>

30. EPA will review the CMS Report and notify Respondent in writing of EPA's approval/disapproval, or modification in accordance with Section XIX: APPROVAL/DISAPPROVAL OF SUBMISSION.

XI. REMEDY SELECTION

31. EPA may select a Remedy Decision from the remedial alternatives evaluated during the CMS and presented in the CMS Report. EPA's selection will be based at a minimum on protection of human health and/or the environment, considering specific site conditions, and existing regulations and EPA guidance. The selected remedy may include any IM implemented to date. EPA shall select the remedy and prepare a Statement of Basis to present the proposed Remedy to the public.
32. EPA will provide the public with an opportunity to review and comment on its selection of the proposed final corrective measure(s), including the detailed written description and justification for its selection in the Statement of Basis. Following the public comment period, EPA will select the final corrective measure(s), and will notify the public and Respondent of the decision and rationale in a written Final Decision and Response to Comments (RTC). The RTC will include EPA's detailed reasons for selecting the corrective measure(s) and for rejecting the other proposed corrective measure(s).
33. Should EPA determine that none of the remedial alternatives evaluated during the CMS and presented in the CMS Report is appropriate as a remedy, EPA shall notify Respondent in writing of such decision, including the reasons. Respondent and EPA shall have thirty (30) days from Respondent's receipt of EPA's written notification to reach an agreement. Subject to Section XX, if Respondent and EPA are unable to reach an agreement, Respondent must revise the CMS Report and/or perform additional corrective measures studies in accordance with EPA's request.

XII. FINANCIAL ASSURANCE

34. Following RTC issuance for each Remedy, the Respondent shall provide cost estimates, and demonstrate financial assurance for completing the approved remedy in accordance with Attachment C. Thereafter, the Respondent shall review the remedy cost estimates, adjust the financial assurance instrument, and submit the revised estimate and instrument to the EPA annually for each remedy.

XIII. CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN

35. Within one hundred twenty (120) days of Respondent's receipt of notification of EPA's selection of the corrective measure(s), Respondent shall submit to the EPA a Corrective Measures Implementation Work Plan (s) ("CMI Work Plan"). Each CMI Work Plan shall include a QA/QC plan as well as a schedule and date for remedy construction completion.
36. Each CMI Work Plan submission is subject to approval by EPA in accordance with Section XIX: APPROVAL/DISAPPROVAL OF SUBMISSION and shall be developed

in a manner consistent with the requirements of RCRA and its directives and implementing regulations as well as the following guidance:

http://www.epa.gov/reg3wcmd/ca/pdf/RCRA_CorrectiveMeasureImplici_sow.pdf

XIV. PUBLIC PARTICIPATION/COMMUNITY ENGAGEMENT

37. Within thirty (30) days of the Effective Date of this Order, Respondent shall submit for approval to EPA a Public Participation/Community Engagement Plan consistent with applicable guidance in the following links:

<http://www.epa.gov/oswer/engagementinitiative/related.htm>

<http://www.epa.gov/wastes/hazard/tsd/permit/pubpart/manual.htm>

38. The administrative record supporting this Order and the administrative record in support of any remedy selected pursuant to this Order will be available for public review and maintained by the Respondent at the Facility or at a designated location (i.e., closest library to facility) near the facility, and at the U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, S.W., Atlanta, Georgia 30303.

XV. INSTITUTIONAL CONTROLS

39. Respondent must consider institutional controls and/or land use restrictions for protection of human health and the environment from contamination left in place at any SMAs, SWMUs or AOCs. Institutional controls and/or land use restrictions may also be used to protect the corrective measures if the order is terminated at the completion of corrective action.
40. A detailed listing of EPA's Institutional Controls may be found at the following EPA website:

<http://www.epa.gov/epawaste/hazard/correctiveaction/resources/guidance/ics/matrxxv3.pdf>

XVI. COMPLETION OF RCRA CORRECTIVE ACTION

41. The determination of completion of RCRA correction action at the Respondent's Facility shall be made pursuant to EPA's February 13, 2003, Guidance on Completion of Corrective Action Activities at RCRA Facilities, 68 FR 8757-8764.
42. When, upon receipt of the certification, and in consideration of public comments and any other relevant information, the EPA determines that the corrective measures have been completed in accordance with the terms and conditions of this Order and the requirements for completion, the EPA shall terminate this Order. Upon termination of the Order or modification of the Order for completion of corrective action at the entire Facility, EPA shall release the Respondent from the financial assurance requirements of this Order.

XVII. SCHEDULES OF COMPLIANCE

43. Respondent is required to adhere to each of the deadlines and schedules set out in this Order. Respondent may request an extension to any deadline in this Order. Any extension request must be submitted to the EPA project manager for approval within a minimum of fourteen (14) days prior to the deadline. Failure to adhere to any deadline may be considered a violation of this Order.

XVIII. PROJECT COORDINATOR

44. EPA and Respondent have each designated a Project Coordinator as set out below. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in his/her absence. The EPA Project Coordinator will be EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.
45. The parties may change their Project Coordinators, but agree to provide at least ten (10) days written notice prior to changing a Project Coordinator.

- a. The EPA Project Coordinator is:

Meredith Anderson, Environmental Engineer
RCRA Corrective Action Section
RCRA and Underground Storage Tank Branch, RCRA Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

- b. The Facility Project Coordinator is:

Don Wiggins
Manager of Technical Services
Walter Coke, Inc.
3500 35th Avenue North
Birmingham, Alabama 35207

46. The absence of a designated EPA Project Coordinator for overseeing the implementation of this Order shall not be cause for the stoppage of work.

XIX. AGENCY APPROVAL/DISAPPROVAL OF SUBMISSION.

A. EPA APPROVALS

47. EPA will provide Respondent with its written approval, approval with conditions and/or modifications, or disapproval for any submission (or resubmission) requiring such

approval required by this Order. Any disapproval or any approval with conditions and/or modifications shall be consistent with this Order and the Statement of Purpose.

48. In connection with an EPA action under paragraph 47 other than approval of a submission, Respondent shall revise any submission required by this Order in accordance with EPA's written comments within thirty (30) calendar days of Respondent's receipt of EPA's written comments, unless EPA has specified an alternative due date. Revised submittals are also subject to EPA approval, approval with conditions and/or modifications, or disapproval. Any revised submittal that is disapproved or is not approved with conditions and/or modifications is considered noncompliant with the terms of this Order. For purposes of Respondent's submissions, dispute resolution shall apply only to submissions disapproved and revised by the EPA, or that have been disapproved by the EPA, then revised and re-submitted by the Respondent, and again disapproved by the EPA.
49. Subject to Section XX, upon receipt of EPA's written approval, Respondent shall commence work and implement any approved Work Plan in accordance with the schedule and provisions contained therein. If no schedule is contained in an approved Work Plan, then Respondent shall commence work and implementation of the Work Plan within fifteen (15) calendar days of receipt of EPA's written approval of the Work Plan.
50. Subject to Section XX, any EPA-approved or EPA-approved with conditions and/or modifications to any submission required by this order shall be incorporated by reference into this Order as set forth fully herein. Prior to EPA's written approval, no submission required by this Order shall be construed as approved and final. Oral advice, suggestions, or comments given by EPA representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered binding.
51. Subject to Section XX, noncompliance with any requirement of this Order shall be considered a violation of this Order and shall subject Respondent to the statutory penalty provisions and enforcement actions pursuant to Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h), and any other applicable sanctions, including the stipulated penalties provisions agreed to in Section XXVIII Delay in Performance/Stipulated Penalties of this Order.
52. Any changes or modifications proposed by Respondent to the EPA-approved Documents and schedules submitted pursuant to and required by this Order must be approved by EPA prior to implementation.

B. PROGRESS REPORTS

53. Unless otherwise specified in an EPA approved document pursuant to this Order, beginning with the first full month following the effective date of this Order, and through the period that this Order is effective, Respondent shall provide EPA with quarterly progress reports. Progress reports are due by the fifteenth (15) day of the month following the end of the previous quarter. The progress reports for specific deliverables shall conform to requirements in any relevant EPA guidance referenced in this Order.

XX. DISPUTE RESOLUTION

54. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. The parties agree that the procedures contained in this Section are the sole procedures for resolving disputes arising under this Order.
55. Notwithstanding any other provision in this Order, in the event the Respondent disagrees in whole or in part with any written decision by EPA, or revision of a submission or disapproval of any revised submission required by the Order, the following may, at the Respondent's discretion apply:

Any dispute concerning EPA written decisions, or revisions or disapprovals of deliverables required under this Order (including required revisions for, disapprovals of, or approvals with conditions and/or modifications of any deliverable required under this Order), excluding any EPA final agency action, shall be raised to EPA within 15 days after receiving the written decision or comments on the deliverables. Disputes will be resolved as follows: EPA and Respondent shall expeditiously and informally attempt to resolve any disagreements. The Project Coordinators shall first confer in an effort to resolve the dispute. If the Project Coordinators are unable to informally resolve the dispute within 14 days, Respondent shall notify EPA's Chief, Restoration and Underground Storage Tank Branch, RCRA Division, in writing of its objections. The Respondent's written objections shall define the dispute and state the basis of Respondent's objections. EPA and Respondent then have an additional 14 days to reach agreement. If an agreement is not reached within 14 days, Respondent may request a determination by EPA Region 4's RCRA Division Director. The RCRA Division Director's determination is EPA's final decision, and shall be incorporated into and become an enforceable part of this Order to the extent it is otherwise consistent with this Order. If Respondent does not agree to perform or does not actually perform the Work in accordance with EPA's final decision, EPA reserves the right in its sole discretion to conduct the work itself, to seek reimbursement from Respondent, to seek enforcement of this Order on the issue subject to EPA's decision, to seek stipulated penalties, and/or to seek any other appropriate relief. Notwithstanding any other provision of this Order, Respondent retains the right to contest the validity of or assert any defenses it may have with respect to any EPA written decision it claims was taken or made pursuant to this Order, including with respect to any EPA written decision that was subject to the dispute resolution procedure set forth in this Paragraph.

56. If EPA and Respondent reach agreement on a dispute at any stage, the agreement shall be set forth in writing, and shall upon signature of EPA and Respondent, be incorporated into and become an enforceable part of this Order.
57. The existence of a dispute and EPA's consideration of matters placed in dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to the Order during the pendency of the dispute resolution process except as provided in

Section XXVIII, Delay in Performance/Stipulated Penalties or agreed to by EPA in writing. With the exception of those conditions under dispute, the Respondent shall proceed to take any action required by those portions of the submission and of the Order that the EPA determines are not affected by the dispute. The invocation of dispute resolution does not stay accrual of stipulated penalties under this Order, unless the delay is a result of EPA's failure to timely issue a written resolution of the dispute

XXI. PROPOSED CONTRACTOR/CONSULTANT

58. All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer, hydrologist, geologist, or environmental scientist, with expertise in hazardous waste cleanup. Respondent's contractor or consultant shall have the technical expertise sufficient to adequately perform all aspects of the work for which it is responsible. Within forty-five (45) days of the effective date of this Order, Respondent shall notify the EPA Project Coordinator in writing of the name, title, and qualifications of the engineer, hydrologist, geologist, or environmental scientist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Order. EPA reserves the right to disapprove Respondent's contractor and/or consultant. If EPA disapproves a contractor or consultant, then Respondent must, within forty-five (45) days of receipt from EPA of written notice of disapproval, notify EPA, in writing, of the name, title, and qualifications of any replacement.
59. Respondent shall provide at least ten (10) days written notice prior to changing professional engineer/geologist/hydrologist/environmental scientist or contractor/subcontractor.

XXII. ADDITIONAL WORK

60. EPA may determine or Respondent may propose that certain tasks, including investigatory work, engineering evaluation and design work plan, remediation, procedure/methodology modifications, or community engagement documents are necessary in addition to or in lieu of the tasks included in any EPA approved Work Plan, when such additional work is otherwise consistent with this Order and necessary to meet the purposes set forth in Section IV. Statement of Purpose. If EPA determines that Respondent shall perform additional work, EPA will notify Respondent in writing and specify the basis for its determination that the additional work is necessary. Consistent with Paragraph 12 of this Order, Respondent may confer with EPA to discuss the additional work. If required by EPA, subject to Section XX, Respondent shall submit for EPA approval a Work Plan for the additional work. EPA will specify the contents of such Work Plan. Such Work Plan shall be submitted within sixty (60) days of receipt of EPA's determination that additional work is necessary, or at a later date according to an alternative schedule established by EPA. Upon approval of a Work Plan by EPA, Respondent shall implement it in accordance with the schedule and provisions contained therein.

XXIII. QUALITY ASSURANCE

61. Respondent shall follow EPA guidance for sampling and analysis. Work Plans shall contain quality assurance/quality control (“QA/QC”) and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the QA/QC and chain of custody procedures in approved Work Plans must be approved by EPA prior to implementation; must be documented, including reasons for the deviations; and must be reported in the applicable report (e.g., CMS).
62. The name(s), addresses, and telephone numbers of the analytical laboratories Respondent propose to use must be specified in the applicable Work Plan(s).
63. Respondent shall monitor to ensure that high quality data is obtained by its consultant or contract laboratories. All investigation activities shall be done in accordance with the USEPA, Region 4, Science and Ecosystem Support Division’s (SESD’s) “Field Branches Quality System and Technical Procedures” which is available on the SESD website. The direct link to the website is:

<http://www.epa.gov/region4/sesd/fbqstp/>

Any RCRA Work Plan submitted pursuant to this Order (e.g., IM, RFI, CMS, CMI) shall include data quality objectives and guidance which can be found in the February 2006 “U.S. EPA Guidance for the Data Quality Objectives Process” available at:

<http://www.epa.gov/quality1/qs-docs/g4-final.pdf>

and the March 2001 “U.S. EPA Requirements for Quality Assurance Project Plan” (EPA QA/R-5) for achieving the Data Quality Objectives available at:

<http://www.epa.gov/QUALITY/qs-docs/r5-final.pdf>

Samples are to be collected and analyzed in accordance with EPA publication SW# 846 “Test Methods for Evaluating Solid Waste,” 3rd Edition. A National Environmental Laboratory Accreditation Program (NELAP) certified laboratory is to be used to analyze the samples. If methods other than EPA methods are to be used, Respondent shall specify all such protocols in the applicable Work Plan (e.g., CMS). EPA may reject any data that does not meet the requirements of the approved Work Plan or EPA analytical methods and may require re-sampling and additional analysis.

64. Respondent shall ensure that laboratories they use for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. EPA may conduct a performance and quality assurance/quality control audit of the laboratories chosen by Respondent before, during, or after sample analyses. Upon request by EPA, Respondent shall have any such laboratory perform analyses of samples provided by EPA to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control, re-sampling and additional analysis may be required.

XXIV. DATA AND DOCUMENT AVAILABILITY

65. Respondent shall submit (i.e., in hardcopy and in an electronic copy in appropriate standard business format) to EPA upon request the results of all sampling and/or tests or other data generated by divisions, agents, consultants, or contractors pursuant to this Order.
66. Notwithstanding any other provisions of this Order, the United States retains all of its information gathering and inspection authorities and rights, including the right to bring enforcement actions related thereto, under RCRA, CERCLA, and any other applicable statutes or regulations.
67. Respondent shall notify EPA in writing at least ten (10) days before engaging in any field activities and/or corrective measures, such as well sampling, installation of equipment, and/or sampling. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from the EPA Project Coordinator or, if the EPA Project Coordinator is unavailable, his/her management, to commence such activities immediately. At the request of EPA, Respondent shall provide or allow EPA or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, EPA shall allow Respondent or its authorized representative(s) to take split or duplicate samples of all samples collected by EPA under this Order.
68. Respondent may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Order. Any assertion of confidentiality must be accompanied by information that satisfies the items listed in 40 C.F.R. § 2.20(e)(4) or such claim shall be deemed waived. Information determined by EPA to be confidential shall be disclosed only to the extent permitted by 40 C.F.R. Part 2. If no such confidentiality claim accompanies the information when it is submitted to EPA, the information may be made available to the public by EPA without further notice to Respondent. Respondent agrees not to assert any confidentiality claim with regard to any physical or analytical data.

XXV. ACCESS

69. EPA, its contractors, employees, and/or any duly designated EPA representatives are authorized to enter and freely move about the Facility accompanied by Respondent's representative pursuant to this Order for the purposes of, inter alia: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of Respondent in carrying out the terms of this Order; conducting such tests, sampling, or monitoring as EPA deems necessary for purposes of this Order; using a camera, sound recording, or other documentary type equipment for purposes of this Order, and verifying the reports and data submitted to EPA by Respondent. EPA agrees to provide Respondent with copies of any such tests, sampling, or monitoring, including photographs, sound recordings or other documentary type equipment. Furthermore, upon Respondent's request, EPA shall provide Respondent the

opportunity to receive a split of any sample taken by EPA for purposes of this Order. Respondent agrees to provide EPA and its representatives access at all reasonable times to the Facility and subject to the next Paragraph below, to any other property to which access is required for implementation of this Order. Subject to Paragraph 68, Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or their contractors or consultants, excluding any attorney-client privileged or attorney work product privileged documents.

70. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of approval of any Work Plan for which access is required. Best efforts, as used in this Paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives to access such property, and as necessary and appropriate the payment of reasonable compensation in consideration of granting access. Any such access agreement shall provide for access by EPA and its representatives. Respondent shall insure that EPA's Project Coordinator has a copy of any access agreement(s). In the event that agreements for access are not obtained within thirty (30) days of approval of any Work Plan for which access is required, or of the date that the need for access became known to Respondent, Respondent shall notify EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements. EPA may, at its discretion, assist Respondent in obtaining access. In the event EPA obtains access, Respondent shall undertake EPA- approved work on such property.
71. The Respondent agrees to indemnify the United States to the extent provided in Section XXXIII. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT, for any and all claims arising from activities on such property.
72. Nothing in this section limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.
73. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation, if any, to perform corrective action including corrective action beyond the Facility boundary. In case of transfer or lease of any portion of the Facility, Respondent shall retain a right of access to the extent required to fully implement the terms of this Order.

XXVI. RECORD PRESERVATION

74. Respondent shall retain, during the pendency of this Order and for a minimum of six (6) years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order. Respondent shall notify EPA in writing ninety (90) days prior to the destruction of any

such records, and shall provide EPA with the opportunity to take possession of any such records, including those over which a CBI claim has been made pursuant to Paragraph 68, but excluding any attorney-client privileged or attorney work product privileged documents. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

EPA Project Coordinator
RCRA Corrective Action Section
Restoration and Underground Storage Tank Branch
RCRA Division
United States Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

75. Respondent agrees that within thirty (30) days of retaining or employing any agent, consultant, or contractor for the purpose of carrying out the terms of this Order, Respondent will enter into an agreement with any such agents, consultants, and/or contractors whereby such agents, consultants, and/or contractors will be required to provide the Respondent a copy of all documents produced pursuant to this Order.
76. All documents required under this Order shall be stored by the Respondent in a centralized location to afford ease of access by EPA or its representatives.

XXVII. NOTIFICATION AND DOCUMENT CERTIFICATION

77. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submittals relating to or required under this Order shall be in writing and shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail as follows:

- a. Two hardcopies and one electronic copy on a disk and by email in an appropriate standard business format, of all documents to be submitted to the EPA shall be sent to the:

Project Coordinator
RCRA Corrective Action Section
Restoration and Underground Storage Tank Branch
RCRA Division
United States Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

- b. One electronic copy on a disk and email in an appropriate standard business format to:

Chief,
RCRA Corrective Action Section

Restoration and Underground Storage Tank Branch
RCRA Division
United States Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303.

- c. One hardcopy and one electronic copy on a disk and email in an appropriate standard business format, of all documents to be submitted to ADEM shall be sent to:

Chief, Engineering Services Section
Industrial Hazardous Waste Branch
Land Division
Alabama Dept. of Environmental Mgmt.
1400 Coliseum Blvd.
Montgomery, AL 36110

- d. Documents to be submitted to Respondent shall be sent to:

President & COO *cut 1/2*
Walter Coke
3500 35th Avenue North
P.O. Box 5327
Birmingham, Alabama 35207

and

Dan Gruzca
Vice President & Sr. Counsel – Environmental
Walter Energy, Inc.
3000 Riverchase Galleria
Suite 1700
Birmingham, Alabama 35244

78. Any report or other document submitted by a Respondent pursuant to this Order which makes any representation concerning the Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of the Respondent or a duly authorized representative. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
79. The certification required by Paragraph 78 above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that to the best of my knowledge and belief the information

contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Signature:

Name:

Title:

Date:

XXVIII. DELAY IN PERFORMANCE/STIPULATED PENALTIES

80. Unless there has been a written modification by EPA of a compliance date, a written modification by EPA of an approved Work Plan condition, or excusable delay as defined in Section XXIX: Force Majeure and Excusable Delay, if Respondent fails to comply with any term or condition set forth in this Order in the time or manner specified herein, EPA may, by written demand, direct Respondent to pay stipulated penalties as set forth below.
- a. For failure to commence, perform, and/or complete field work in a manner acceptable to EPA or at the time required pursuant to this Order: \$1,500.00 per day for the first ten business days of such violation, \$2,000.00 per day for the eleventh through twenty-first business day of such violation, and \$2,500.00 per day for each business day of such violation thereafter
 - b. For failure to complete and submit, other written submittals not included in Paragraph 80 (a) of this section in a manner acceptable to EPA or at the time required pursuant to this Order: \$1,000.00 per day for the first ten business days of such violation, \$1,500.00 per day for the eleventh through twenty-first business day of such-violation, and \$2,000.00 per day for each business day of such violation thereafter;
 - c. For failure to comply with any other provisions of this Order in a manner acceptable to EPA: \$1,000.00 per day for the first ten business days of such violation, \$1,500.00 per day for the eleventh through twenty-first business day of such violation, and \$2,000.00 per day for each business day of such violation thereafter.
81. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the day of correction of the

violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue to accrue regardless of whether EPA has notified the Respondent of a violation.

82. All penalties owed to the United States under this Section shall be due and payable within thirty (30) days of the Respondent's receipt from EPA of a written demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XX: Dispute Resolution. Such a written demand will describe the violation and will indicate the amount of penalties due.
83. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first day after Respondent's receipt of EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. § 3717, an additional penalty of 1% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) or more days.
84. All penalties shall be made by cashier's check or certified check payable to: "**Treasurer, United States of America**" or by one of the other payment options set out below: The Facility name and the docket number for this matter shall be referenced on the face of the check or noted if possible on the other payment options. The payment options are:

- a. Check Payment By U.S. Postal Service:

US Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
P.O. Box 979077
St. Louis, Missouri 63197

- b. Check Payment By Overnight Commercial Delivery Service:

U.S. Bank
Government Lockbox 979077
US EPA Fines & Penalties
1005 Convention Plaza
SL-MO-C2-GL
St. Louis, Missouri 63101
(314) 418-1028

- c. Wire Transfer:

Federal Reserve Bank of New York
ABA: 021030004
Account Number: 68010727
SWIFT address: FRNYUS33
33 Liberty Street

New York, New York 10045

Field Tag 4200 of the Fedwire message should read:

"D 68010727 Environmental Protection Agency

- d. Automated Clearinghouse (ACH) for receiving US currency (also known as REX or remittance express):

PNC Bank

US Treasury REX / Cashlink ACH Receiver

ABA: 051036706

Account Number: 310006, Environmental Protection Agency

CTX Format Transaction Code 22 -- checking

Environmental Protection Agency

808 17th Street, N.W.

Washington, DC 20074

Contact: Jesse White, (301) 887-6548

- e. On line payment:

There is now an On Line Payment Option, available through the Dept. of Treasury. This payment option can be accessed from the information below:

www.pay.gov

Enter sfo 1.1 in the search field

Open form and complete required fields.

- 85. Respondent shall submit a copy of the payment or a copy of the confirmation of the payment to the following addresses:

Regional Hearing Clerk

U.S. EPA - Region 4

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

and to:

Chief, South Section

Enforcement and Compliance Branch

RCRA Division

U.S. Environmental Protection Agency, Region 4

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

- 86. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to the EPA Project Coordinator.

87. Respondent may dispute EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XX: DISPUTE RESOLUTION. The stipulated penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or agreement. Respondent shall submit such payment to EPA within ten (10) business days of receipt of such resolution in accordance with Paragraph 84 of this Section.

Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way the Respondent's obligation to comply with the terms and conditions of this Order. The stipulated penalties set forth in this section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order. EPA may waive any portion of the stipulated penalties that have accrued pursuant to this Order.

88. No payments under this section shall be tax deductible for federal tax purposes.

XXIX. FORCE MAJEURE AND EXCUSABLE DELAY

89. Force majeure, for purposes of this Order, is defined as any event arising from causes not foreseen and beyond the control of Respondent or any person or entity controlled by Respondent, including but not limited to Respondent's contractors that delays or prevents the timely performance of any obligation under this Order despite Respondent's best efforts to fulfill such obligation. The requirement that Respondent exercise "best efforts to fulfill such obligation" shall include, but not be limited to, best efforts to anticipate any potential force majeure event and address it before, during, and after its occurrence, such that any delay or prevention of performance is minimized to the greatest extent possible. Force majeure does not include increased costs of the work to be performed under this Order, or financial inability to complete the work.
90. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a force majeure event, Respondent shall contact by telephone and communicate orally with EPA's Project Coordinator or, in his or her absence, his or her supervisor or second level manager or, in the event both of EPA's designated representatives are unavailable, the Deputy Director of the RCRA Division, EPA Region 4, within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause a delay. Within five (5) days thereafter, Respondent shall provide to EPA in writing the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; all other obligations affected by the force majeure event, and what measures, if any, taken or to be taken to minimize the effect of the event on those obligations; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a force majeure event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Respondent shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Failure to comply

with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.

91. If EPA determines that the delay or anticipated delay is attributable to a force majeure event, the time for performance of such obligation under this Order that is affected by the force majeure event will be extended by EPA for such time as EPA determines is necessary to complete such obligation. An extension of the time for performance of such obligation affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation, unless Respondent can demonstrate that more than one obligation was affected by the force majeure event. If EPA determines that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of such obligations affected by the force majeure event.
92. If EPA disagrees with Respondent's assertion of a force majeure event, EPA will notify the Respondent in writing and the Respondent may elect to invoke the dispute resolution provision, and shall follow the time-frames set forth in Section XX. Dispute Resolution. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of this Section. If Respondent satisfies this burden, the time for performance of such obligation will be extended by EPA for such time as is necessary to complete such obligation.

XXX. RESERVATION OF RIGHTS

93. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
94. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order to the extent that such work does not satisfy the requirements of the Order and, in such event, to order that Respondent perform additional tasks consistent with this Order.
95. EPA reserves any right it may have to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the environment. EPA may exercise its authority under CERCLA to undertake response actions at any time. In any event, EPA reserves its right to seek reimbursement from Respondent for costs incurred by the United States. Notwithstanding compliance with the terms of this Order, Respondent is not

released from liability, if any, for the costs of any response actions taken or authorized by EPA.

96. If EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, EPA may order the Respondent to stop further implementation of this Order for such period of time as EPA determines may be needed to abate any such release or threat and/or to undertake any action which EPA determines is necessary to abate such release or threat.
97. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that EPA's approval of any final Work Plan does not constitute a warranty or representation that the Work Plan will achieve the required cleanup or performance standards. Compliance by the Respondent with the terms of this Order shall not relieve the Respondent of its obligation to comply with RCRA or any other applicable local, State, or Federal laws and regulations.
98. The Respondent does not admit any of the factual or legal determinations made by the EPA and reserves all rights and defenses it may have regarding liability or responsibility for conditions at or from the Facility, with the exception of its right to contest EPA's jurisdiction to issue or enforce this Order and its right to contest the terms of this Order. The Respondent has entered into this Order in good faith without trial or adjudication of any issue of fact or law.
99. Notwithstanding any other provision of this Order, no action or decision by EPA pursuant to this Order, including without limitation, decisions of the EPA, the Director or Deputy Director of the RCRA Division, or any authorized representative of EPA, shall constitute final agency action giving rise to any right of judicial review prior to EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.
100. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter.

XXXI. OTHER CLAIMS

101. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.

XXXII. OTHER APPLICABLE LAWS

102. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations. Respondent shall obtain or cause their representatives to obtain all permits and approvals necessary under such laws and regulations.

XXXIII. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

103. Respondent agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising [solely] from or on account of acts or omissions of Respondent or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts. Respondent shall not be responsible for indemnifying the EPA for claims or causes of action solely from or on account of acts or omissions of EPA.

XXXIV. MODIFICATION

104. This Order may only be modified by mutual agreement of EPA and Respondent. Any agreed modifications shall be in writing, be signed by both parties, shall have as their effective date the date on which they are signed by EPA, and shall be incorporated into this Order.
105. Any requests for a compliance date modification or revision of an approved Work Plan requirement must be made in writing. Such requests must be timely and provide justification for any proposed compliance date modification or Work Plan revision. EPA has no obligation to approve such requests, but if it does so, such approval must be in writing. Any approved compliance date or Work Plan modification shall be incorporated by reference into the Order.

XXXV. SEVERABILITY

106. If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

XXXVI. TERMINATION AND SATISFACTION

107. The provisions of this Order shall be deemed satisfied upon Respondent's and EPA's execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" ("Acknowledgment"). EPA will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has

demonstrated to the satisfaction of EPA that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, have been satisfactorily completed. Respondent's execution of the Acknowledgement will affirm Respondent's continuing obligation (1) to preserve all records as required under the Order and (2) to recognize EPA's reservation of rights in accordance with these respective sections of the Order after the rest of the Order is satisfactorily completed.

XXXVII. SURVIVABILITY/PERMIT INTEGRATION

108. Except as otherwise expressly provided in this section, this Order shall survive the issuance or denial of a RCRA permit for the Facility, and this Order shall continue in full force and effect after either the issuance or denial of such permit. Accordingly, the Respondent shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit. If the Facility is issued a RCRA permit and that permit expressly incorporates all or a part of the requirements of this Order, or expressly states that its requirements are intended to replace some or all of the requirements of this Order, Respondent may request a modification of this Order and shall, with EPA approval, be relieved of liability under this Order for those specific obligations.

XXXVIII. EFFECTIVE DATE

109. The effective date of this Order shall be five (5) days after Respondent has received notice from EPA that EPA has signed the Order.

AGREED AND CONSENTED TO:

Walter Coke, Inc.

By: Carol W. Farrell
Name: Carol W. Farrell
Title: President

Dated: September 12, 2012
(Typed or Printed)
(Typed or Printed)

U.S. Environmental Protection Agency

By: Jeffrey T. Pallas
Jeffrey T. Pallas
Acting Deputy Director
RCRA Division
US EPA, Region 4
61 Forsyth Street S.W.
Atlanta, Georgia 30303-3104

Dated: September 17, 2012

Attachment A: DEFINITIONS & TERMS

Unless otherwise expressly provided herein or listed below, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the meaning assigned to them under RCRA or in such regulations.

- a) “Administrative Record” shall mean the record compiled and maintained by EPA relative to this Order. For information on the contents of the Administrative Record see “Guidance on Administrative Records for RCRA 3008(h) Actions,” OSWER Directive 9940.4, July 6, 1989.
- b) An “Area of Concern” (AOC) includes any discrete contiguous area that is not a SWMU and has a probable release of hazardous waste or hazardous constituents that is determined by the EPA to pose a current or potential threat to human health or the environment.
- c) “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.
- d) The terms “Comply” or “Compliance” may be used interchangeably and shall mean performance of work required by this Order of a quality approvable by EPA, and in the manner and the time specified in this Order or any modification thereof or its attachments or any modification thereof. Respondent must meet both the quality and timeliness components of a particular requirement to be considered in compliance with the terms and conditions of this Order.
- e) “Contractor” shall include any subcontractor, consultant or laboratory retained to conduct or monitor any portion of the work performed pursuant to this Order.
- f) “Confirmatory Sampling” shall mean environmental sampling and analysis to confirm that hazardous waste or hazardous constituents have been released into the environment from SWMUs or AOCs at the Facility. Confirmatory Sampling may result in a determination of no further action.
- g) “Day” shall mean a calendar day unless expressly stated to be a business day.
- h) “Business Day” shall mean a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the end of the next business day.
- i) “EPA” or “U.S. EPA” shall mean the United States Environmental Protection Agency, and any successor departments or agencies of the United States.
- j) “Extent of Contamination” is defined as the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being

investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the EPA.

- k) “Facility” shall mean the Walter Coke, Inc. facility located at 3500 35th Avenue North, Birmingham, Alabama 33618.
- l) “Hazardous Constituents” shall include mean those constituents contained within hazardous and nonhazardous solid waste that are listed in Appendix VIII of 40 C.F.R. Part 261 or in Appendix IX of 40 C.F.R. Part 264.
- m) “Interim Measures” for the purpose of this Order interim measures are actions necessary to minimize or prevent the further migration of contaminants subject to regulation under RCRA and limit actual or potential human and environmental exposure to contaminants subject to regulation under RCRA while long-term corrective action remedies are evaluated and, if necessary, implemented.
- n) “Institutional Controls and/or Land Use Restrictions” for the purpose of this Order are legal instruments that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.
- o) “RCRA” shall mean the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. §§ 6921 *et. seq.*
- p) “Receptors” shall mean those humans, animals, or plants and their habitats affected by releases subject to regulation under RCRA from the Facility.
- q) “Release” for purposes of this Order shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents that is subject to regulation under RCRA.
- r) A “Remedy” for the purposes of this Order, is selected actions or measures to be implemented to prevent, mitigate, and/or remediate any release of hazardous waste or hazardous constituents at or from the Facility regardless of whether the action or measure must be undertaken on the Respondent’s property or on adjacent properties impacted by hazardous wastes or hazardous constituents from the Facility.
- s) “Scope of Work” shall mean the outline of work that the Respondent must use to develop all Work Plans and reports required by this Order. All Scopes of Work and modifications or amendments thereto are incorporated by reference and are an enforceable part of this Order.
- t) “Site” shall mean the facility, as defined herein
- v) “SWMU Management Area” (SMA) means areas of SWMUs or AOCs with similar exposures, chemical drivers, and proposed remedial actions.

- w) “Solid Waste Management Unit” (SWMU) for the purpose of this Order means any unit which has been used for the treatment, storage or disposal of a solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid wastes. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding, for example, one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).
- x) “State” shall mean the State of Alabama.
- y) “Submittal” shall mean any written document that Respondent is required by this Order to send to EPA.
- z) “United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.
- aa) “Waste Material” shall mean (a) any hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any hazardous waste under Alabama Code Section 22-30-3(5).
- bb) “Work” or “Obligation” shall mean any activity Respondent must perform to comply with the requirements of this Order and its attachments.

Attachment B:

(For electronic version, Maps in PDF format are separately attached but incorporated as Attachment B into the Order)

**MAPs prepared by Terracon for the
Walter Coke Facility
Birmingham, Alabama
Project No. E1127096
Figures 1-6
Entitled in the Legend:**

Figure 1: Proposed Solid Waste Management Areas (SMAs) dated 7/24/2012

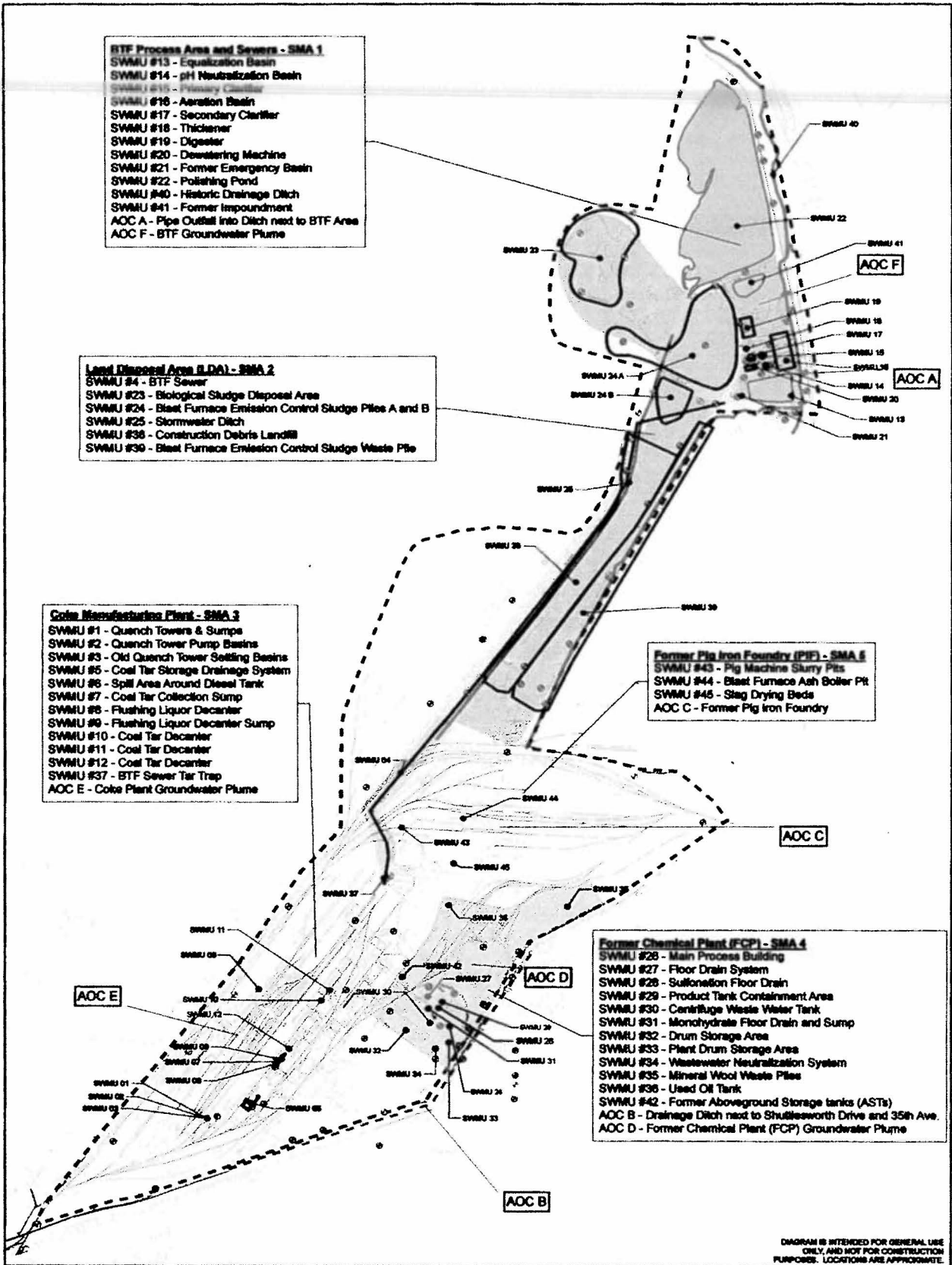
Figure 2: BTF Process Area and Sewers - SMA 1 dated 8/16/2012

Figure 3: Land Disposal Area - SMA 2 dated 8/16/2012

Figure 4: Coke Manufacturing Plant - SMA 3 dated 8/16/2012

Figure 5: Former Chemical Plant - SMA 4 dated 8/16/2012

Figure 6: Former Pig Iron Foundry - SMA 5 dated 8/16/2012



BTF Process Area and Sewers - SMA 1
 SWMU #13 - Equalization Basin
 SWMU #14 - pH Neutralization Basin
 SWMU #16 - Primary Clarifier
 SWMU #17 - Aeration Basin
 SWMU #17 - Secondary Clarifier
 SWMU #18 - Thickener
 SWMU #19 - Digester
 SWMU #20 - Dewatering Machine
 SWMU #21 - Former Emergency Basin
 SWMU #22 - Polishing Pond
 SWMU #40 - Historic Drainage Ditch
 SWMU #41 - Former Impoundment
 AOC A - Pipe Outfall into Ditch next to BTF Area
 AOC F - BTF Groundwater Plume

Land Disposal Area (LDA) - SMA 2
 SWMU #4 - BTF Sewer
 SWMU #23 - Biological Sludge Disposal Area
 SWMU #24 - Blast Furnace Emission Control Sludge Piles A and B
 SWMU #25 - Stormwater Ditch
 SWMU #36 - Construction Debris Landfill
 SWMU #39 - Blast Furnace Emission Control Sludge Waste Pile

Coke Manufacturing Plant - SMA 3
 SWMU #1 - Quench Towers & Sumps
 SWMU #2 - Quench Tower Pump Basins
 SWMU #3 - Old Quench Tower Settling Basins
 SWMU #5 - Coal Tar Storage Drainage System
 SWMU #6 - Spill Area Around Diesel Tank
 SWMU #7 - Coal Tar Collection Sump
 SWMU #8 - Flushing Liquor Decanter
 SWMU #9 - Flushing Liquor Decanter Sump
 SWMU #10 - Coal Tar Decanter
 SWMU #11 - Coal Tar Decanter
 SWMU #12 - Coal Tar Decanter
 SWMU #37 - BTF Sewer Tar Trap
 AOC E - Coke Plant Groundwater Plume

Former Pig Iron Foundry (PIF) - SMA 5
 SWMU #43 - Pig Machine Slurry Pits
 SWMU #44 - Blast Furnace Ash Boiler Pit
 SWMU #45 - Slag Drying Beds
 AOC C - Former Pig Iron Foundry

Former Chemical Plant (FCP) - SMA 4
 SWMU #28 - Main Process Building
 SWMU #27 - Floor Drain System
 SWMU #28 - Sulfonation Floor Drain
 SWMU #29 - Product Tank Containment Area
 SWMU #30 - Centrifuge Waste Water Tank
 SWMU #31 - Monohydrate Floor Drain and Sump
 SWMU #32 - Drum Storage Area
 SWMU #33 - Plant Drum Storage Area
 SWMU #34 - Wastewater Neutralization System
 SWMU #35 - Mineral Wool Waste Piles
 SWMU #36 - Used Oil Tank
 SWMU #42 - Former Aboveground Storage tanks (ASTs)
 AOC B - Drainage Ditch next to Shuttleworth Drive and 35th Ave.
 AOC D - Former Chemical Plant (FCP) Groundwater Plume

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Legend

- Proposed Solid Waste Management Areas (SMA's)**
- BTF Process Area and Sewer - SMA 1
 - Land Disposal Area - SMA 2
 - Coke Manufacturing Plant - SMA 3
 - Former Chemical Plant - SMA 4
 - Former Pig Iron Foundry - SMA 5

- Notes:**
- 1) SWMU - Solid Waste Management Unit
 - 2) Management Area boundaries are used for approximation.
 - 3) AOC - Area of Concern



Project Mgr:	TWR	Drawn:	GPA
Checked By:	TWR	Scale:	SHOWN
Approved By:	TWR	Date:	7/24/2012
		Project No.:	E1127088
		File Name:	Figure 1

Terracon
 Consulting Engineers & Scientists
 108 13th St. North
 Birmingham, Alabama 35203
 Phone: (205) 942-2200 Fax: (205) 443-2022

SITE MAP	
CLIENT: Walter Coke	
3800 36th Avenue North Birmingham, AL 35207	

FIGURE 1

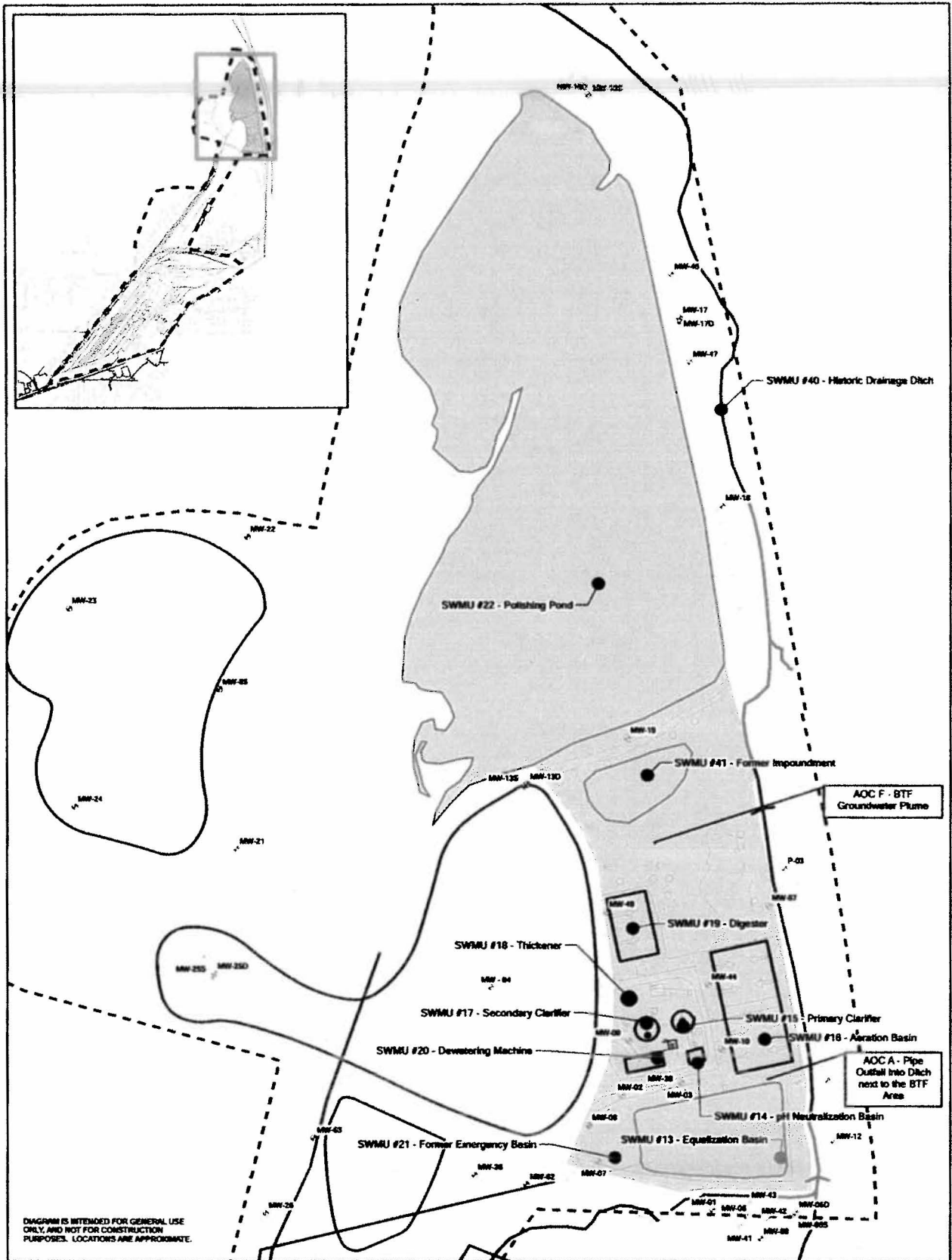
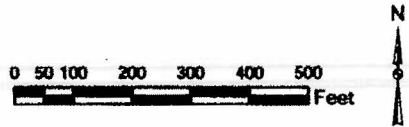


DIAGRAM IS INTENDED FOR GENERAL USE ONLY AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Legend

- BTF Process Area and Sewers - SMA 1
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residual or Mixed Monitoring Well
- Non-Conspicuous Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
 - 2) Management Area boundaries are used for approximation.
 - 3) AOC - Area of Concern



Project Mgr: TWR Checked By: TWR Approved By: TWR Drawn By: GFA	Scale: SHOWN Date: 8/16/2012 Project No: E1127086 File Name: Figure 2	<p>Terracon Consulting Engineers & Scientists 170 12th St. Ste. 2000 Birmingham, Alabama 35203 Phone: (205) 943-1200 Fax: (205) 943-4300</p>	BTF PROCESS AREA AND SEWERS - SMA 1 CLIENT: Water Coke 3500 35th Avenue North Birmingham, AL 35207	FIGURE 2
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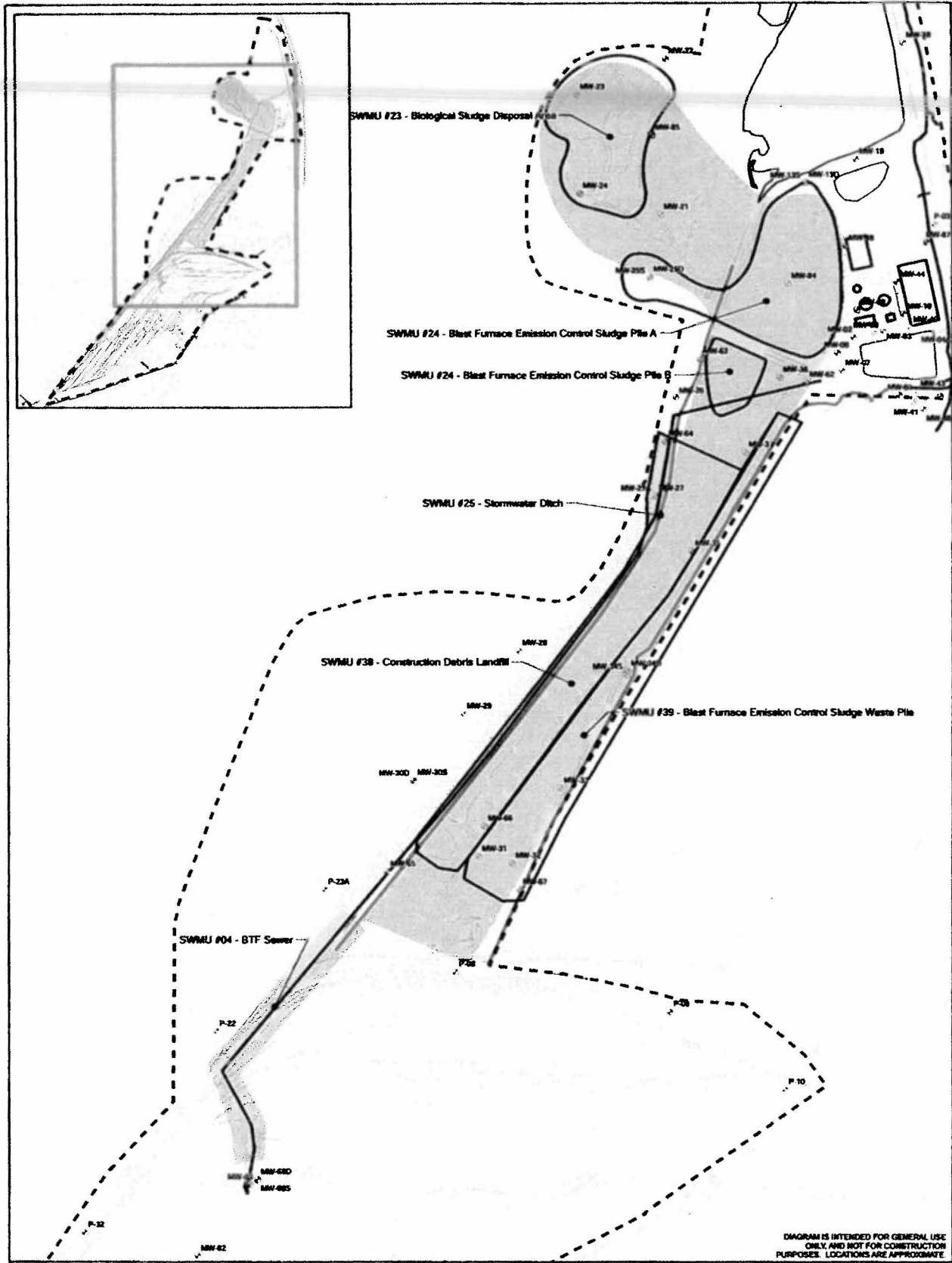
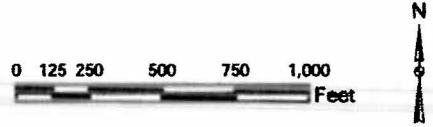


DIAGRAM IS INTENDED FOR GENERAL USE ONLY AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

- Legend**
- Land Disposal Area - SMA 2
 - Shallow Bedrock Monitoring Well
 - Deep Bedrock Monitoring Well
 - Residual or Mixed Monitoring Well
 - Non-Consewage Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
 - 2) Management Area boundaries are used for approximation.
 - 3) ADC - Area of Concern



Project Mgr: TWR	Scale: SHOWN	<p>Terracon Consulting Engineers & Scientists 100 28th St. South, Birmingham, Alabama 35208 Phone: (205) 940-1200 Fax: (205) 943-5200</p>	LAND DISPOSAL AREA (LDA) - SMA 2	FIGURE
Checked By: TWR	Date: 8/16/2012		CLIENT: Walter Coke 3500 35th Avenue North Birmingham, AL 35207	3
Approved By: TWR	Prepared By: ET127088			
Drawn By: GFA	File Name: Figure 3			

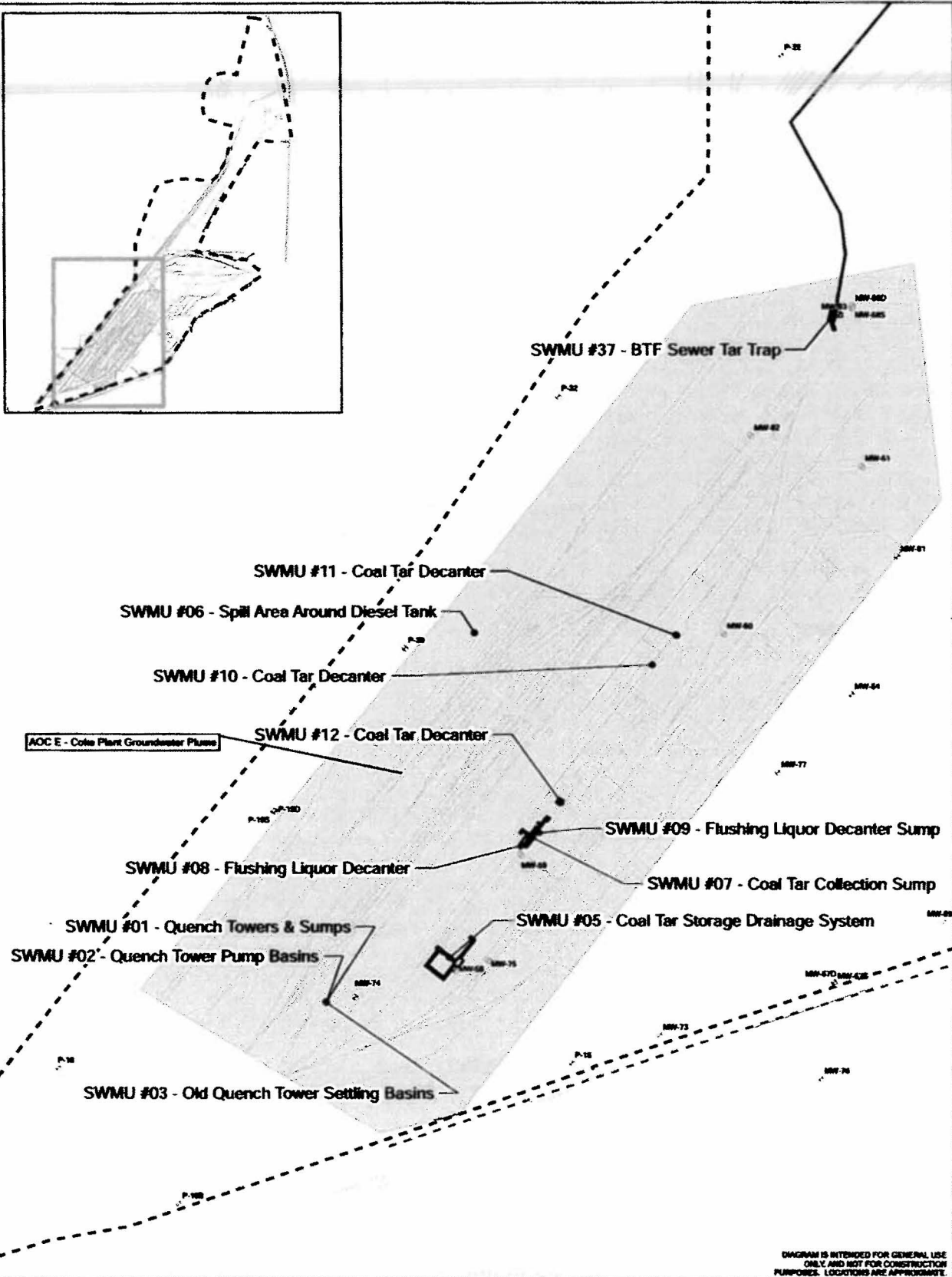
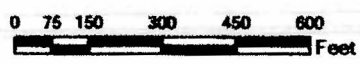


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Legend

- ☐ Coke Manufacturing Plant - SMA 3
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residual or Mixed Monitoring Well
- Non-Consumable Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
 - 2) Management Area boundaries are used for approximation.
 - 3) AOC - Area of Concern



Project Mgr:	TWR
Checked By:	TWR
Approved By:	TWR
Drawn By:	GFA

Terracon
 Consulting Engineers & Scientists
 110 2nd St. East
 Hoover, Alabama 35226
 Phone: (205) 946-1200 Fax: (205) 942-2200

COKE MANUFACTURING PLANT - SMA 3
CLIENT: Walter Coke 3500 35th Avenue North Birmingham, AL 35207

FIGURE
4

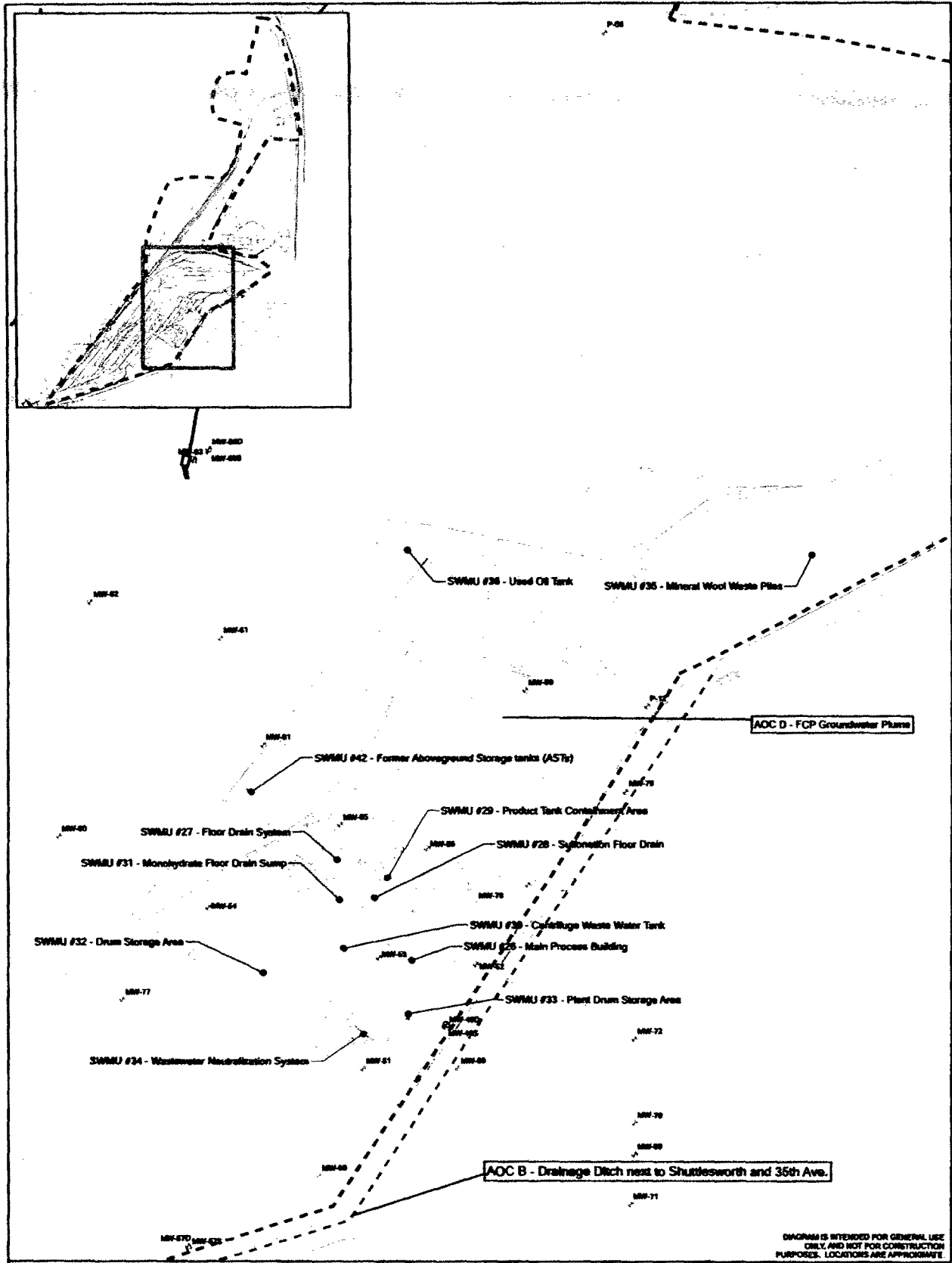
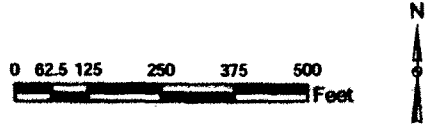


DIAGRAM IS INTENDED FOR GENERAL USE ONLY AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

- Legend**
- Former Chemical Plant - SMA 4
 - Shallow Bedrock Monitoring Well
 - Deep Bedrock Monitoring Well
 - Residual or Mixed Monitoring Well
 - Non-Consensus Limestone Monitoring Well

Notes:
 1) SWMU - Solid Waste Management Unit
 2) Management Area boundaries are used for approximation.
 3) AOC - Area of Concern



Project Mgr: TWR Checked By: TWR Approved By: TWR Drawn By: GFA	Date: 8/16/2012 Project No: E1122088 File Name: Figure 5	 Consulting Engineers & Scientists 170 18th Ave, Suite 200 Denver, CO 80202	FORMER CHEMICAL PLANT (FCP) - SMA 4 CLIENT: Walter Coke 3090 35th Avenue North Birmingham, AL 35207	FIGURE 5
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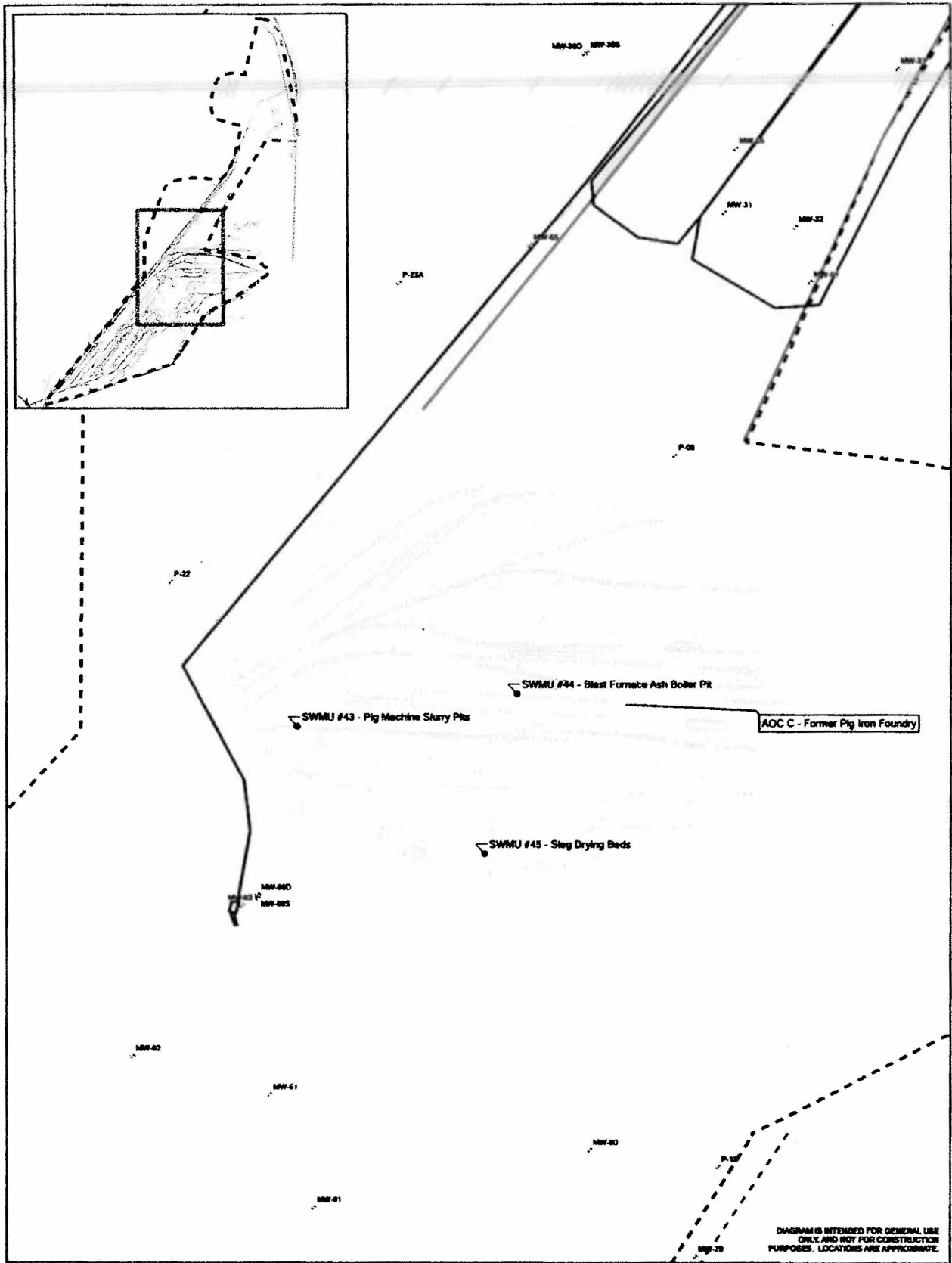
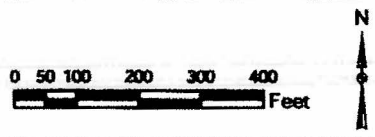


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Legend

- Former Pig Iron Foundry - SMA 5
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residual or Mixed Monitoring Well
- Non-Conspicuous Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
 - 2) Management Area boundaries are used for approximation.
 - 3) AOC - Area of Concern



Project Manager:	TWR	Scale:	SHOWN
Checked By:	TWR	Date:	8/16/2012
Approved By:	TWR	Project No.:	E1177088
Drawn By:	GFA	File Name:	Figure 6

Terracon
 Consulting Engineers & Scientists
 110 15th St. North
 Birmingham, Alabama 35203
 Phone: (205) 414-1000 Fax: (205) 414-2200

CLIENT:	Walter Coke 3900 39th Avenue North Birmingham, AL 35207
---------	---

FIGURE	6
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Attachment C: Financial Assurance

1. Following RTC issuance for each Remedy, the Respondent shall provide cost estimates, and demonstrate financial assurance for completing the approved Remedy. Thereafter, the Respondent shall review the Remedy cost estimates, adjust the financial assurance instrument, and submit the revised estimate and instrument to the EPA annually for each Remedy.
 - a. Within 120 calendar days of RTC issuance for each remedy, Respondent shall submit to EPA for review and approval an Estimated Cost of the Corrective Measures Work to Be Performed that includes the total third party cost of implementing the CMS remedy, including any necessary long-term CMS costs. Third-party costs are described in 40 C.F.R. § 264.142(a)(2) and shall include all direct costs and also all indirect costs (including contingencies) as described in EPA Directive No. 9476.00-6 (November, 1986), Volume III, Chapter 10. The cost estimate shall contain sufficient details to allow it to be evaluated by EPA.
 - b. Until the CMS remedy required by this Order is completed, Respondent shall annually adjust the Estimated Cost of the Corrective Measures Work for inflation within thirty (30) days after the close of Respondent's fiscal year for the Financial Test and Corporate Guarantee, or within sixty (60) days prior to the anniversary date of the establishment of all other financial assurance. In addition, the Respondent shall adjust the Estimated Cost of the Corrective Measures Work if EPA determines that any additional Work is required, pursuant to Section XXII Additional Work, or if any other condition increases the cost of the work to be performed under this Order.
 - c. The EPA shall either approve or disapprove, in writing, the Estimated Cost of the Corrective Measures Work. If the EPA disapproves the Estimated Cost of the Corrective Measures Work, the EPA shall either: (1) notify the Respondent in writing of the Estimated Cost of the Corrective Measures Work's deficiencies and specify a due date for submission of a revised Estimated Cost of the Corrective Measures Work, or (2) conditionally approve the CMS and notify the Respondent of the conditions.
 - d. The mechanism for financial assurance shall be one that is described and allowable under 40 C.F.R. §§ 264.140 through 264.151 Subpart H unless otherwise agreed to by the EPA.
 - e. Within 60 calendar days of EPA's written approval of the Estimated Cost of the Corrective Measures Work for each remedy, in order to secure the full and final completion of work in accordance with this Order, Respondent shall establish and maintain financial assurance for the benefit of EPA for the amount stated in the approved Estimated Cost of the Corrective Measures Work. Respondent may use one or more of the financial assurance instruments generally described in 40 C.F.R. § 264.151. Respondent may combine more than one instrument to demonstrate financial assurance in accordance with this Order, except that instruments guaranteeing performance (i.e. surety bond for performance, the financial test, or the

corporate guarantee) rather than payment may not be combined with other instruments.

- f. Any and all financial assurance instruments provided under this Order shall be satisfactory in form and substance as determined by EPA.
2. If the Respondent seeks to establish financial assurance by using the financial test specified in 40 C.F.R. § 264.151, Respondent shall submit to EPA within 60 days of EPA's approval of the Estimated Cost of the Corrective Measures Work all documentation required by that regulation, including the Chief Financial Officer's letter, the Respondent's most recent audited financial statements, and the special auditor's letter. Respondent's financial assurance shall be considered effective immediately upon EPA's determination that the submitted financial information appears to satisfy the financial test criteria.
3. If Respondent seeks to establish financial assurance by using a surety bond or a letter of credit, Respondent shall at the same time establish, and thereafter maintain, a standby trust fund, which meets the requirements specified in 40 C.F.R. § 264.151, into which funds from the other financial assurance instrument can be deposited, if the financial assurance provider is directed to do so by EPA.
4. (a) Respondent shall submit proposed (draft) financial assurance instruments and related required documents for review to EPA as follows:

EPA Project Coordinator
RCRA Corrective Action Section
Restoration and Underground Storage Tank Branch
RCRA Division
United States Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

(b) Following EPA's approval of Respondent's proposed (draft) financial assurance instruments for each and every Remedy, Respondent shall execute or otherwise finalize all instruments or other required documents, and shall submit them as follows:

Regional Administrator
Attn: RCRA & CERCLA Records Program Manager
Atlanta Federal Center – 11th Floor
United States Environmental Protection Agency
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

5. Also, copies of all final financial assurance instruments and related required documents shall be sent by certified mail to the State of Alabama.

6. If at any time during the effective period of this Order, the Respondent provides financial assurance by means of a corporate guarantee or financial test pursuant to 40 C.F.R. § 264.151, Respondent shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods, unless otherwise provided in this Order, including but not limited to, (1) initial submission of required financial reports and statements from the guarantors' chief financial officer and independent certified public accountant; (2) annual re-submission of such reports and statements within ninety (90) days after the close of each of the guarantors' fiscal years; and (3) notification of EPA within ninety (90) days after the close of any of the guarantors' fiscal years in which any such guarantor no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1). Respondent further agrees that if the Respondent provides financial assurance by means of a corporate guarantee or financial test, EPA may request additional information (including financial statements and accountant's reports) from the Respondent or corporate guarantor at any time.
7. For purposes of evaluating the viability of a corporate guarantee or satisfaction of the financial test described in 40 C.F.R. § 264.151, references in 40 C.F.R. § 264.143(f) or 40 C.F.R. § 264.145(f) to "the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates" shall mean "the sum of all environmental remediation obligations" (including obligations under CERCLA, RCRA, Underground Injection Control (UIC), TSCA and any other state or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the cost of the work to be performed in accordance with this Order.
8. If at any time EPA determines that a financial assurance instrument provided pursuant to this Section is inadequate, or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, EPA shall so notify the Respondent in writing. If at any time the Respondent becomes aware of information indicating that any financial assurance instrument provided pursuant to this Section is inadequate or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the Corrective Measures or for any other reason, then Respondent shall notify EPA in writing of such information within ten days. Within thirty (30) days of receipt of notice of EPA's determination, or within thirty (30) days of Respondent becoming aware of such information, as the case may be, Respondent shall obtain and present to EPA for approval, a proposal for a revised or alternative form of financial assurance listed in 40 C.F.R. § 264.151 that satisfies all requirements set forth or incorporated by reference in this Section.
9. Respondent's inability or failure to establish or maintain financial assurance for completion of the work shall in no way excuse performance of any other requirements of this Order, including, without limitation, the obligation of Respondent to complete the work in strict accordance with the terms of this Order.

10. If Respondent elects to establish financial assurance by using a letter of credit, a surety bond, or an insurance policy, any and all automatic renewal requirements and/or cancellation notification terms related to those instruments shall be in accordance with the regulations at 40 C.F.R. §§ 264.143, .145 and .151.
11. In the event that EPA determines that the Respondent (1) has ceased implementation of any portion of the work, (2) is significantly or repeatedly deficient or late in its performance of the work, or (3) is implementing the work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice (“Performance Failure Notice”) to both the Respondent and the financial assurance provider of Respondent’s failure to perform. The notice issued by EPA will specify the grounds upon which such a notice was issued, and will provide the Respondent with a period of ten days within which to remedy the circumstances giving rise to the issuance of such notice.
12. Failure by the Respondent to remedy the relevant Performance Failure to EPA’s satisfaction before the expiration of the ten-day notice period shall trigger EPA’s right to have immediate access to and benefit of the financial assurance. EPA may at any time thereafter direct the financial assurance provider to immediately (1) deposit into the standby trust fund, or a newly created trust fund approved by EPA, the remaining funds obligated under the financial assurance instrument (2) or arrange for performance of the work in accordance with this Order.
13. If EPA has determined that any of the circumstances of performance failure described above have occurred, and if EPA is nevertheless unable after reasonable efforts to secure the payment of funds or performance of the work in accordance with this Order from the financial assurance provider pursuant to this Order, then, upon receiving written notice from EPA, Respondent shall within ten days thereafter deposit into the standby trust fund, or a newly created trust fund approved by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount equal to the estimated cost of the remaining Work to be performed in accordance with this Order as of such date, as determined by EPA.
14. Respondent may invoke the procedures set forth in Section XX. DISPUTE RESOLUTION, to dispute EPA’s determination that any of the circumstances of performance failure described above have occurred. Invoking the dispute resolution provisions shall not excuse, toll or suspend the obligation of the financial assurance provider to fund the trust fund or perform the work. Furthermore, notwithstanding Respondent’s invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion direct the trustee of such trust fund to make payments from the trust fund to any person that has performed the work in accordance with this Order until the earlier of (1) the date that Respondent remedies, to EPA’s satisfaction, the circumstances giving rise to EPA’s issuance of the relevant Performance Failure Notice or (2) the date that a final decision is rendered in accordance with Section XX. DISPUTE RESOLUTION, that Respondent has not failed to perform the work in accordance with this Order.

15. Reduction of Amount of Financial Assurance. If the Respondent believes that the estimated cost to complete the remaining Corrective Measures has diminished below the amount covered by the existing financial assurance provided under this Order, Respondent may, at the same time that Respondent submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to reduce the amount of the financial assurance provided under this Section so that the amount of the financial assurance is equal to the estimated cost of the remaining work to be performed. The written proposal shall specify, at a minimum, the cost of the remaining work to be performed and the basis upon which such cost was calculated. EPA shall notify Respondent of its decision in writing. After receiving EPA's written decision, Respondent may reduce the amount of the financial assurance only in accordance with and to the extent permitted by such written decision. In the event of a dispute, Respondent may reduce the amount of the financial assurance required hereunder only in accordance with the final EPA dispute decision resolving such dispute. No change to the form or terms of any financial assurance provided under this Section, other than a reduction in amount, is authorized except as provided below.
16. Change of Form of Financial Assurance. (1) If the Respondent desires to change the form or terms of financial assurance, Respondent may, at the same time that the Respondent submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to change the form of financial assurance. The submission of such proposed revised or alternative form of financial assurance shall be as provided in paragraph (2) below. The decision whether to approve a proposal shall be made in EPA's sole and unreviewable discretion and such decision shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Order or in any other forum. (2) A written proposal for a revised or alternative form of financial assurance shall specify, at a minimum, the cost of the remaining work to be performed, the basis upon which such cost was calculated, and the proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding. The proposed revised or alternative form of financial assurance shall satisfy all requirements set forth or incorporated by reference in this Section. EPA shall notify the Respondent in writing of its decision to accept or reject a revised or alternative form of financial assurance submitted pursuant to this Paragraph. Within ten (10) days after receiving a written decision approving the proposed revised or alternative financial assurance, Respondent shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the documents submitted to EPA as part of the proposal, and such financial assurance shall be fully effective. Respondent shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding to the RCRA & CERCLA Records Program Manager within thirty (30) days of receiving a written decision approving the proposed revised or alternative financial assurance, with a copy to the EPA Project Coordinator and the State. EPA shall release, cancel or terminate the prior existing financial assurance instruments only after Respondent has submitted all executed and/or otherwise finalized new financial assurance instruments or other required documents to EPA.

17. Release of Financial Assurance. Respondent may submit a written request to the EPA Project Coordinator that EPA releases the Respondent from the requirement to maintain financial assurance under this Section at such time as EPA and Respondent have both executed an “Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Right” pursuant to Section XXXVI: Termination and Satisfaction, of this Order. EPA shall notify both the Respondent and the provider(s) of the financial assurance that Respondent is released from all financial assurance obligations under this Order. Respondent shall not release, cancel or terminate any financial assurance provided pursuant to this section except as provided in this Order. In the event of a dispute, Respondent may release, cancel, or terminate the financial assurance required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

Attachment D: SWMU Management Areas (SMAs)

SWMU MANAGEMENT AREAS (SMAs) – SWMU List

SMA	SWMUs	Schedule for Completion and Submission of Final Report to EPA
BTF PROCESS AREA & SEWERS – SMA 1	SWMU #13 (Equalization Basin) SWMU #14 (pH Neutralization Basin) SWMU #15 (Primary Clarifier) SWMU #16 (Aeration Basin) SWMU #17 (Secondary Clarifier) SWMU #18 (Thickener) SWMU #19 (Digester) SWMU #20 (Dewatering Machine) SWMU #21 (Former Emergency Basin) SWMU #22 (Polishing Pond) SWMU #40 (Historic Drainage Ditch) SWMU #41 (Former Impoundment) AOC A (Pipe Outfall into Ditch next to BTF Area) AOC F (BTF Groundwater Plume)	180 days
Land Disposal Area (LDA) – SMA 2	SWMU #4 (BTF Sewer) SWMU #23 (Biological Sludge Disposal Area) SWMU #24 (Blast Furnace Emission Control Sludge Piles A and B) SWMU #25 (Stormwater Ditch) SWMU #38 (Construction Debris Landfill) SWMU #39 (Blast Furnace Emission Control Sludge Waste Pile)	270 days
Coke Manufacturing Plant (CMP) – SMA 3	SWMU #1 (Quench Towers and Sumps) SWMU #2 (Quench Tower Pump Basins) SWMU #3 (Old Quench Tower Settling Basins) SWMU #5 (Coal Tar Storage Drainage System) SWMU #6 (Spill Area Around Diesel Tank) SWMU #7 (Coal Tar Collection Sump) SWMU #8 (Flushing Liquor Decanter) SWMU #9 (Flushing Liquor Decanter Sump) SWMU #10 (Coal Tar Decanter) SWMU #11 (Coal Tar Decanter) SWMU #12 (Coal Tar Decanter) SWMU #37 (BTF Sewer Tar Trap) AOC E (Coke Plant Groundwater Plume)	12 months
Former Chemical Plant (FCP) – SMA 4	SWMU #26 (Main Process Building) SWMU #27 (Floor Drain System) SWMU #28 (Sulfonation Floor Drain) SWMU #29 (Product Tank Containment Area) SWMU #30 (Centrifuge Waste Water Tank) SWMU #31 (Monohydrate Floor Drain and Sump) SWMU #32 (Drum Storage Area) SWMU #33 (Plant Drum Storage Area) SWMU #34 (Wastewater Neutralization System) SWMU #35 (Mineral Wool Waste Piles) SWMU #36 (Used Oil Tank) SWMU #42 (Former Aboveground Storage tanks [ASTs]) AOC B (Drainage Ditch next to Shuttlesworth Drive and 35 th Ave) AOC D (Former Chemical Plant [FCP] Groundwater Plume)	18 months
Former Pig Iron Foundry (PIF) – SMA 5	SWMU #43 (Pig Machine Slurry Pits) SWMU #44 (Blast Furnace Ash Boiler Pit) SWMU #45 (Slag Drying Beds) AOC C (Former Pig Iron Foundry)	24 months

Attachment E: 45 SWMUs and 6 AOCs

-
- 1 - Quench Towers & Sumps
 - 2 - Quench Tower Pump Basins
 - 3 - Old Quench Tower Settling Basins
 - 4 - BTF Sewer
 - 5 - Coal Tar Storage Drainage System
 - 6 - Spill Area Around Diesel Tank
 - 7 - Coal Tar Collection Sump
 - 8 - Flushing Liquor Decanter
 - 9 - Flushing Liquor Decanter Sump
 - 10 - Coal Tar Decanter
 - 11 - Coal Tar Decanter
 - 12 - Coal Tar Decanter
 - 13 - Equalization Basin
 - 14 - pH Neutralization Basin
 - 15 - Primary Clarifier
 - 16 - Aeration Basin
 - 17 - Secondary Clarifier
 - 18 - Thickener
 - 19 - Digester
 - 20 - Dewatering Machine
 - 21 - Former Emergency Basin
 - 22 - Polishing Pond
 - 23 - Biological Sludge Disposal Area
 - 24 - Blast Furnace Emission Control Sludge Piles A and B
 - 25 - Storm Water Ditch
 - 26 - Main Process Building
 - 27 - Floor Drain System
 - 28 - Sulfonation Floor Drain
 - 29 - Product Tank Containment Area
 - 30 - Centrifuge Waste Water Tank
 - 31 - Monohydrate Floor Drain & Sump
 - 32 - Drum Storage Area
 - 33 - Plant Drum Storage Area
 - 34 - Wastewater Neutralization System

- 35 - Mineral Wool Waste Piles
- 36 - Used Oil Tank
- 37 - BTF Sewer Tar Trap
- 38 - Construction Debris Landfill
- 39 - Blast Furnace Emission Control Sludge Waste Pile
- 40 - Historic Drainage Ditch
- 41 - Former Impoundment
- 42 - Former Aboveground Storage Tanks (ASTs)
- 43 - Pig Machine Slurry Pits
- 44 - Blast Furnace Ash Boiler Pit
- 45 - Slag Drying Beds

- AOC A - Pipe Outfall into Ditch next to the BTF Area
- AOC B - Drainage Ditch next to Shuttlesworth and 35th Ave.
- AOC C - Former Pig Iron Foundry
- AOC D - Former Chemical Plant (FCP) Groundwater Plume
- AOC E - Coke Plant Groundwater Plume
- AOC F - BTF Groundwater Plume

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true and correct copy of the foregoing RCRA Section 3008(h) Administrative Order on Consent, In The Matter of Walter Coke, Inc., Docket No. RCRA-04-2012-4255, on the parties listed below in the manner indicated:

Joan Redleaf Durbin
Associate Regional Counsel
Office of Environmental Accountability
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303

(Via EPA's internal mail)

Jeffrey T. Pallas
Acting Deputy Director
RCRA Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303

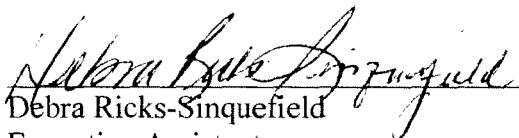
(Via EPA's internal mail)

Carol W. Farrell
President
Walter Coke, Inc.
3500 35th Avenue North
Birmingham, Alabama 35207-2918

(Via Certified Mail)

I also hereby certify that I have this day filed the original and one true and correct copy of foregoing RCRA Section 3008(h) Administrative Order on Consent, Docket No. RCRA-04-2012-4255, with the Regional Hearing Clerk, United States Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, GA 30303.

Dated this 17 day of September, 2012.


Debra Ricks-Sinquefield
Executive Assistant
RCRA Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 16 2012

Carol Farrell, President
Walter Energy, Inc.
P.O. Box 5327
3500 35th Avenue
Birmingham, Alabama 33618

SUBJECT: Approval of February 20, 2002, RCRA Facility Investigation Interim Remedial Measures Work Plan (IRMWP) – Groundwater Interim Measures Work Plan prepared by Arcadis, and the February 11, 2011, Groundwater Interim Measures Work Plan Addendum for the former Chemical Plant (Addendum IMWP) prepared by CH2MHill
Walter Coke, Inc., Birmingham, Alabama
EPA ID No. AL 000 828 848

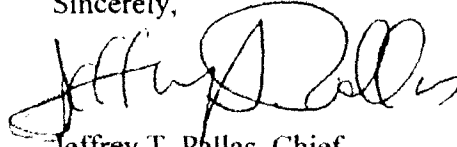
Dear Ms. Farrell:

The U.S. Environmental Protection Agency has reviewed the above subject documents for the groundwater interim measures of the Former Chemical Plant submitted by Walter Coke, Birmingham, Alabama in February 2002 and revised in February 2011. Pursuant to Section VI of the RCRA Section 3008(h) Administrative Order dated September 29, 1989, EPA is hereby approving the groundwater interim measures Work Plan for the off-site migration of contaminated groundwater for the Former Chemical Plant.

This approval for the groundwater interim measures includes approval of Sections 2.0 and 5.0 of the above referenced IRMWP prepared by Arcadis, dated February 20, 2002, the above referenced Addendum IMWP prepared by CH2MHill, dated February 11, 2011, and the modifications to both documents as specified in the Enclosure entitled "EPA Final Comments on the Interim Measures Work Plan for the Off-site Migration of Contaminated Groundwater from the Former Chemical Manufacturing Plant." Together, these constitute the final interim measures work plan (IWMP) and the IWMP is considered effective on the date of this letter. Pursuant to the schedule contained in the Enclosure, Walter Coke is required to resubmit a final IMWP (to have everything in one document) for the Former Chemical Plant incorporating all of the changes to EPA within 30 days of the date of this letter.

If you have any questions regarding this correspondence, please feel free to contact me at (404) 562-8569 or by electronic mail at pallas.jeff@epa.gov, or Karen Knight, Chief of the RCRA Corrective Action Section, at (404) 562-8885 or by electronic mail at knight.karen@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey T. Pallas". The signature is fluid and cursive, with a large initial "J" and "P".

Jeffrey T. Pallas, Chief
Restoration and Underground Storage Tank
Branch
RCRA Division

Enclosure

cc: Metz Duites, ADEM

Enclosure

**EPA Final Comments on the Interim Measures Work Plan
for the Off-site Migration of Contaminated Groundwater from the
Former Chemical Manufacturing Plant
Walter Coke, Inc., Birmingham, Alabama
EPA ID No. AL 000 828 848
Revised April 13, 2012**

Introduction

EPA has completed its review of the Interim Remedial Measures Work Plan (IRMWP) for the Chemical Manufacturing Plant, dated February 20, 2002, and the Groundwater Interim Measures Work Plan Addendum (Addendum IMWP) for the former Chemical Manufacturing Plant dated February 11, 2011. Sections 2.0 and 5.0 of the IRMWP and the Addendum IMWP represent the proposed groundwater interim measures. The facility has proposed an interim measure for addressing off-site migration of contaminated groundwater from the former Chemical Manufacturing Plant. The interim measure is hydraulic containment with the secondary benefit of chemical mass reduction via groundwater recovery.

Comment #1 Objective of the Interim Measures (IM)

Please add to the Scope in the final Interim Measures Work Plan (IMWP) for Groundwater Interim Measures the following objective: As a secondary benefit, the IM will reduce the mass of VOCs and SVOCs in the groundwater under the former Chemical Manufacturing Plant with the understanding that the final remedy goal for meeting the groundwater protection standards is to achieve the MCLs, regional screening levels (RSLs), and/or the Corrective Measures Study (CMS) risk-based standards.

Comment #2 Performance Objectives- Addendum IMWP

The IM stated, “[t]he performance objective of the hydraulic containment IM is to maintain an inward gradient at those locations along the down gradient property boundary where chemical concentrations have been detected above the EPA’s tap water regional screening levels (RSLs). The specific area being targeted is “around” monitoring wells MW-49S, MW-50, and MW-51.”

- Revise the final IMWP to restate the performance objectives as follows: 1) Establish pumping rates in the recovery wells to maintain the inward gradient along the property line of MW-49S and MW 51. 2) Evaluate hydraulic interaction and capture for the interior wells (CW-3, CW-4, CW-5, and CW-6); and
- Revise the final IMWP to specify that Walter Coke will quantify the secondary benefits of chemical mass reduction by: 1) Determining on a quarterly basis, the mass of VOCs and SVOCs removed from the aquifer system-wide; and 2) Describe how Walter Coke will measure and calculate mass removal of VOCs and SVOCs.

Comment #3 - Down Gradient Well from CW-1- Addendum IMWP

As Walter Coke proposes to install CW-1 down gradient of MW-51, Walter Coke needs a new down gradient monitoring well from CW-1 to monitor the effectiveness of CW-1. The down gradient hydraulic radius and chemical concentrations will need to be monitored. EPA recommends installing a down gradient monitoring well approximately 170 feet south of MW-50 and approximately 150 feet from CW-1.

Comment #4 - System Performance Monitoring 2nd Bullet – Addendum IMWP

Once the entire groundwater IM is operational, monthly water levels will be collected manually for six months in the wells listed in Table 1, followed by quarterly monitoring for the remainder of the year.

- Provide a description of how the system data will be evaluated.
- Add quarterly routine sampling and chemical analysis to allow the calculation of mass removal. EPA may allow annual sampling after a minimum of 4 quarterly sampling events if Walter Coke can demonstrate, with EPA approval, system effectiveness.

General Comment #5 Interim Measures System Objective

Report the total mass and volume of the VOCs and SVOCs recovered in pounds and gallons, respectively.

Specify that the facility will routinely calculate the mass of constituents removed from the system for reporting to EPA and ADEM.

Comment #6 Schedule - Addendum IMWP

Amend the schedule in the work plan as follows:

- A. A final IMWP incorporating these comments must be resubmitted to EPA within 30 days of Walter Coke's receipt of these comments.
- B. Planning, design, and acquisition of subcontracts to support the final IMWP must be submitted within 90 days of Walter Coke's receipt of these comments.
- C. An Interim Measures Groundwater Sampling and Analysis Plan (IM GWSAP) and an Indoor Air Vapor Intrusion Work Plan (IAVIWP) must be submitted to EPA within 75 days of Walter Coke's receipt of these comments.
- D. Preconstruction monitoring must begin within 30 days of EPA approval of the IM GW-SAP.
- E. Construction will be completed and system start-up will begin within 120 days of the completion of preconstruction monitoring.
- F. Construction Progress Reports should be submitted bi-monthly until the system is operationally ready.
- G. After the system is operationally ready, quarterly monitoring reports should be submitted to document system performance. Quarterly reports are due 60 days after the end of the

quarter, and should continue to be submitted for two years.

- a. Quarterly monitoring reports should include:
 - i. Report Narrative
 - ii. Groundwater elevation data
 - iii. System Evaluation
 - a. Flow direction and magnitude, containment, potentiometric surface and chemical concentration maps, and data trend plots.
 - b. Well Performance (trend line plotted).
 - iv. Quarterly Groundwater Monitoring Results
 - a. Chemical concentrations from CW system sampling port
 - b. Chemical concentrations from monitoring wells (until EPA approves demonstrated system effectiveness)
 - c. Groundwater elevation tables.
 - v. Mass removal calculations system wide from the single combined system wide sample port.
 - vi. Recommendations for system improvement.
- H. The fourth quarter monitoring report shall include an "annual system effectiveness" report to include the calculated contaminant mass removal; and, if necessary, corrective measures with a schedule for implementation for EPA's concurrence.
- I. EPA may allow annual sampling after a minimum of 4 quarterly sampling events if Walter Coke can demonstrate, with EPA Approval, system effectiveness.

References:

Bair, Scott E. and George S. Roadcap, Comparison of Flow Models Used to Delineate Capture Zones of Wells: 1. Leaky-Confined Fractured-Carbonate Aquifer. *Groundwater*, Vol. 30, No. 2, March-April 1992, p. 199-211.

A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA 600/R-08/003.

Elements for Effective Management of Operating Pump and Treatment System. 542-R-02-009 OSWER 9355.4-27FS-A December 2002.

Insitu Remediation Technology Status Report: Hydraulic and Pneumatic Fracturing. EPA542-K-94-005 April 1995.

Frank U. and N. Barkley, Remediation of Low Permeability Subsurface Formations by Fracturing Enhancement of Soil Vapor Extraction. *Journal of Hazardous Materials*, Vol. 40. 1995, p.191-201.

Exhibit B

FRS Number	Facility Name	Address	City Name	State	Zip	Codes	Codes
110000366657	SLOSS INDUSTRIES CORPORATION	3500 35TH AVENUE NORTH	BIRMINGHAM	AL	35207		

Data Dictionary

Defendants:

Defendant Name	Named in Complaint	Named in Settlement
WALTER COKE, INC.	NA	Y

Data Dictionary

Case Milestones:

Event	Actual Date
Final Order Issued	09/17/2012

Data Dictionary

Pollutants:

Pollutant Name	Chemical Abstract Number
No Data Records Returned	

Data Dictionary

Enforcement Conclusion 1

Enforcement Conclusion Type: Administrative Compliance Orders
 Enforcement Conclusion Name: WALTER COKE, INC.
 Facilities in Settlement (FRS ID): 110000366657
 Settlement Entered Date: 09/17/2012
 Settlement Lodged Date:

Enforcement Conclusion Dollar Amounts:

Federal Penalty Assessed or Agreed To	State/Local Penalty Assessed	SEP Cost	Compliance Action Cost	Cost Recovery
			\$8,405,000	

Pollutant Reductions:

Pollutant	Annual Amount	Units	Media	SEP or Comp
Contaminated soil	8,991	yd3	SIL	C
Contaminated soil	2,650,541	yd3	SIL	C
Contaminated groundwater	35,860,076	yd3	GWT	C
Solids, sludge, tot, dry weight	1,442,812,500	lbs	LAN	C
Contaminated debris	25,900	yd3	SIL	C

Improvements in Reporting:

Pollutant	Average Annual Value	Units	Media
No Data Records Returned			

Complying Actions:

Complying Action Type	Text Description
Record-keeping	NA
Testing/Sampling	NA
Reporting	NA
Environmental Management Review	NA
Monitoring	NA
Planning	NA

Information Letter Response	NA
Notification	NA
Financial Responsibility Requirements	NA
Provide Site Access	NA
Institutional Controls	NA
Ex-Situ Treatment	NA
Waste Containment	NA

Supplemental Environmental Projects:

Categories	Description
No Data Records Returned	

[Click here](#), for a Detailed Facility Information.

This report was generated by the Integrated Data for Enforcement Analysis (IDEA) system, which updates its information from program databases monthly. The data were last updated: ICIS: 02/08/2013

Version 12/03/08

Exhibit C

Fiscal Year 2012 EPA Enforcement & Compliance Annual Results

**Prepared by the Office of Enforcement and Compliance Assurance
US Environmental Protection Agency**

December 17, 2012



FY2012 Enforcement & Compliance Annual Results

Table of Contents

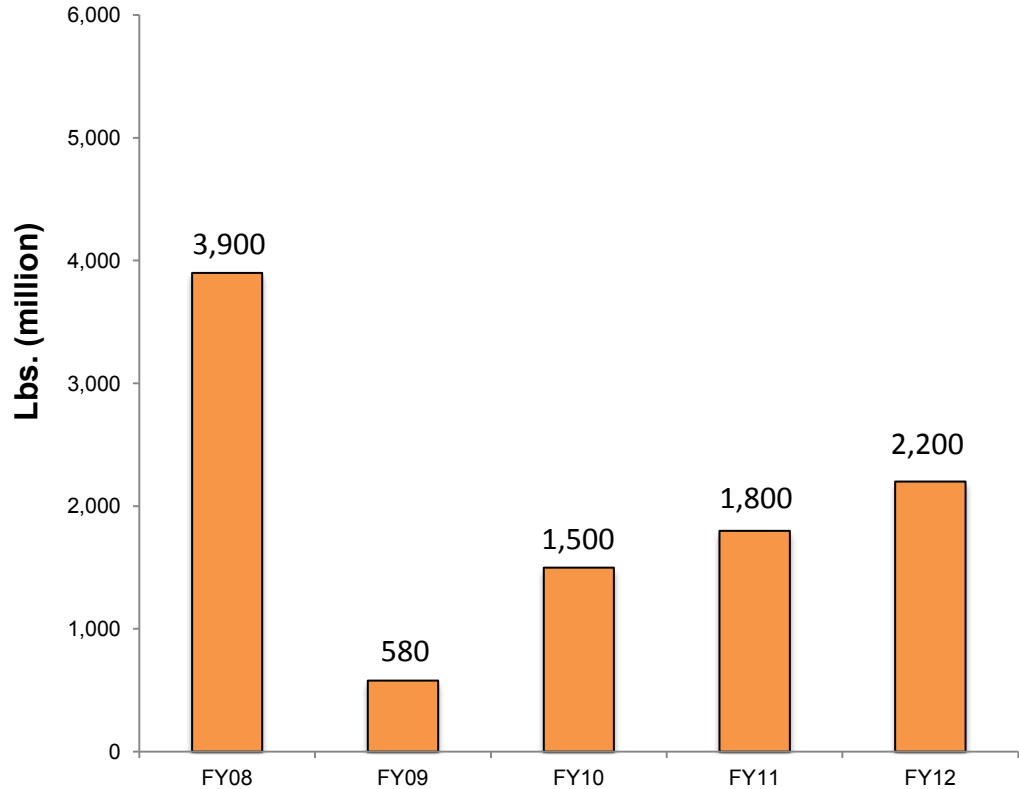
EPA Environmental Results	Page
Estimated Environmental Benefits-Commitments to reduce, treat or eliminate Pollution Investments in Actions & Equipment to Reduce Pollution & Protect the Environment (Injunctive Relief)	3
Civil Penalties and Criminal Fines Assessed	4
Civil Penalties Assessed	5
Supplemental Environmental Projects	6
Estimated Environmental Benefits – Pounds of Hazardous Waste Treated, Minimized, or Properly Disposed Of	7
Estimated Environmental Benefits – Volume of Contaminated Soil & Water to be Cleaned Up	8
EPA Civil Enforcement Case Initiations and Conclusions	9
	10
EPA Civil Enforcement Program	
Inspections/Evaluations	11
Superfund Results	12
EPA Criminal Enforcement Program	
Environmental Crime Cases Opened, Defendant Charged Sentencing Results – Years of Incarceration	13
Value of Fines and Restitution & Value of Court Ordered Environmental Projects	14
Acronyms – Statute and Abbreviations/Section Description	15



FY2012 Enforcement & Compliance Annual Results

Estimated Environmental Benefits

Commitments to Reduce, Treat or Eliminate Pollution



- In FY 2012, EPA enforcement actions required companies to reduce pollution by an estimated 2.2 billion pounds per year - the second highest amount since EPA began measuring pollutant reductions from enforcement cases using current methodologies.

- This result reflects a focus on the largest polluters such as Walter Coke, Inc. (1.4B pounds) and The Ryland Group, Inc. (261M pounds).

- In FY08, the large result was primarily due to one huge NSR/PSD power plant case, AEP(American Electric Power) involving multiple plants.

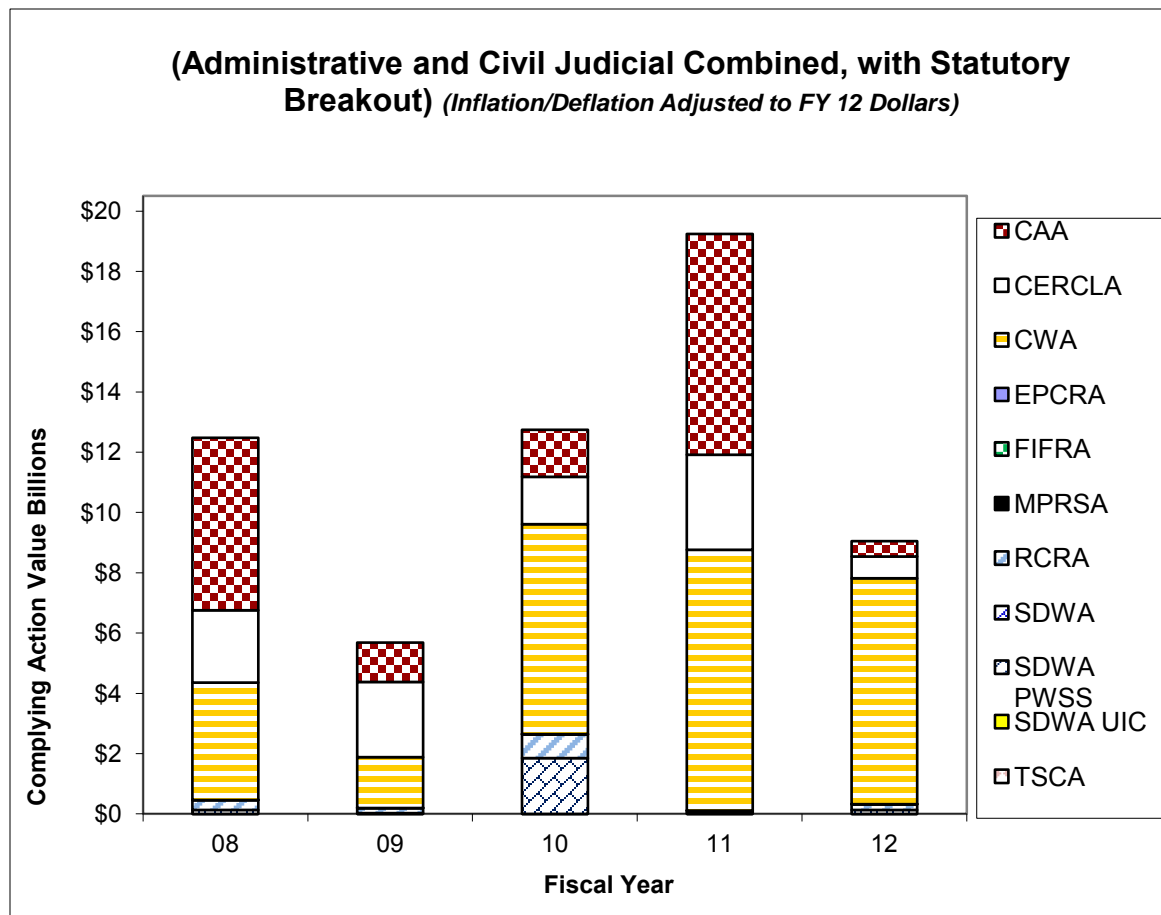
FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS.

¹ Beginning in FY2002, EPA began using the current methodologies.



FY2008-2012 Enforcement & Compliance Annual Results

Estimated Value of Investments in Pollution Controls



- In FY 2012, EPA enforcement actions required companies to invest more than **\$9 billion** in actions & equipment to control pollution (injunctive relief)

- The variability in the value of investments in pollution control is due in large part to the extremely large CAA settlements in 2008 and 2011 (AEP and TVA, respectively) and normal fluctuations in the timing of entry of settlements.

Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.

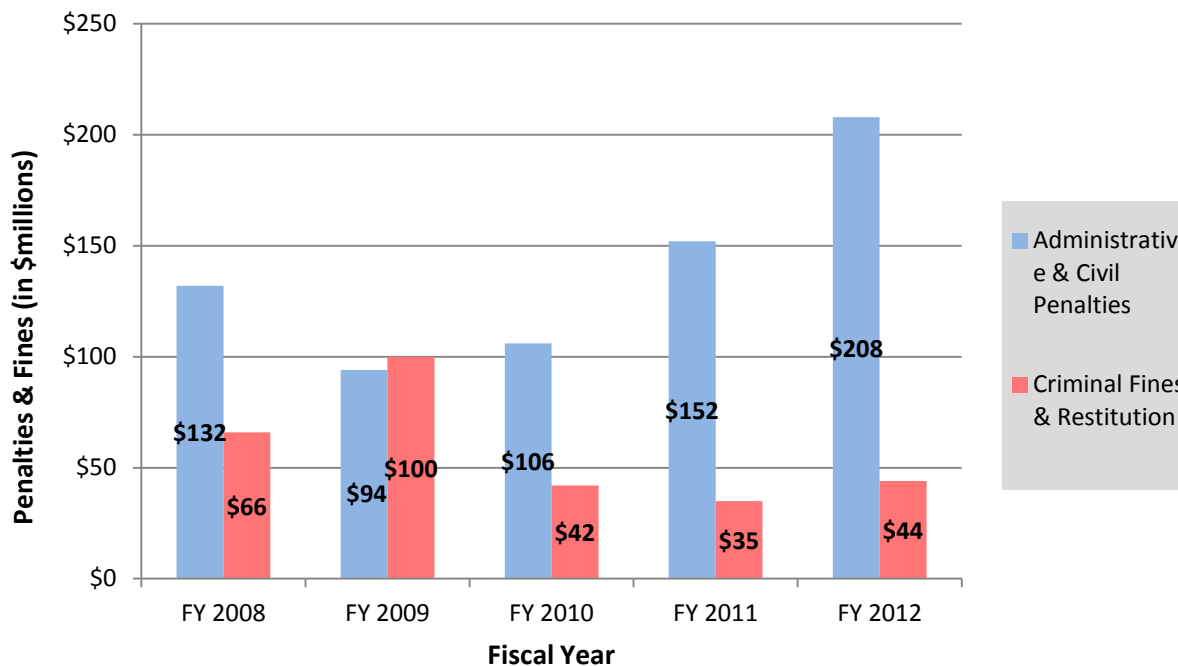
FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS.



FY2008-2012 Enforcement & Compliance Annual Results

Civil Penalties & Criminal Fines Assessed

Administrative/Civil Penalties & Criminal/Restitution Fines



*Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.
FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS

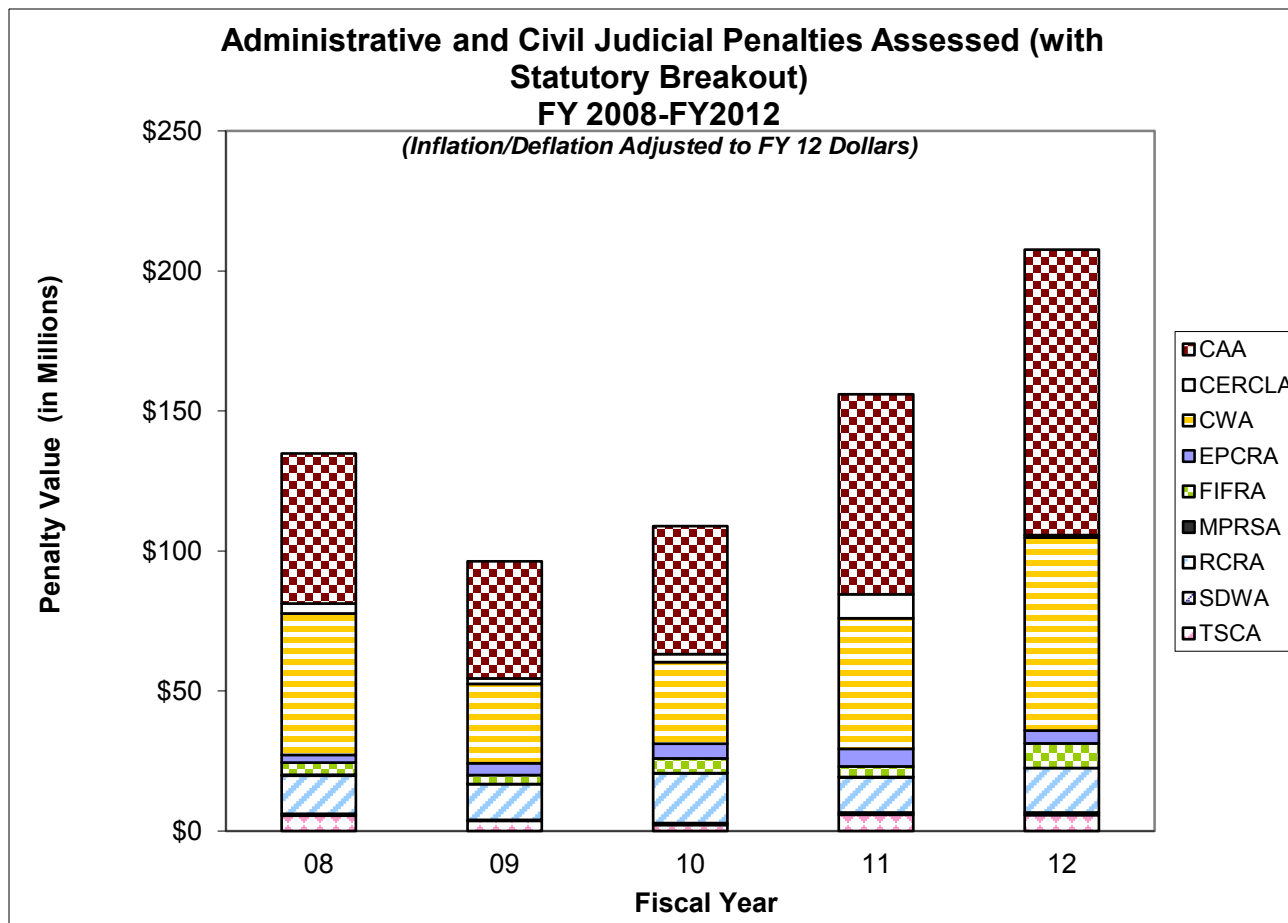
- Penalties – both civil and criminal – play an important role in deterring violations.

- In FY 2012, EPA enforcement actions required companies to pay over **\$200 million** in civil penalties (administrative and judicial) – an all-time record amount.

- In FY 2012, EPA criminal prosecutions resulted in **\$44 million** in criminal fines and restitution.



FY2012 Enforcement & Compliance Annual Results



- In FY 2012, an increased focus on large cases and the deterrent message they send resulted in a record year for penalties including a settlement with *MOEX* (\$90M) in settlement of its liability in the Deepwater Horizon oil spill.

- In FY 2012, EPA enforcement actions required companies to pay over **\$200 million** in civil penalties (administrative and judicial) .

- Penalty results include a CAA mobile source judgement of \$57.3 million against Volvo Truck Corporation for breach of a 1998 judicial Consent Decree.

- Penalty results in FY 2012 also include the largest penalty ever in a FIFRA case, The Scotts Miracle Gro Company (\$6M).

Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.

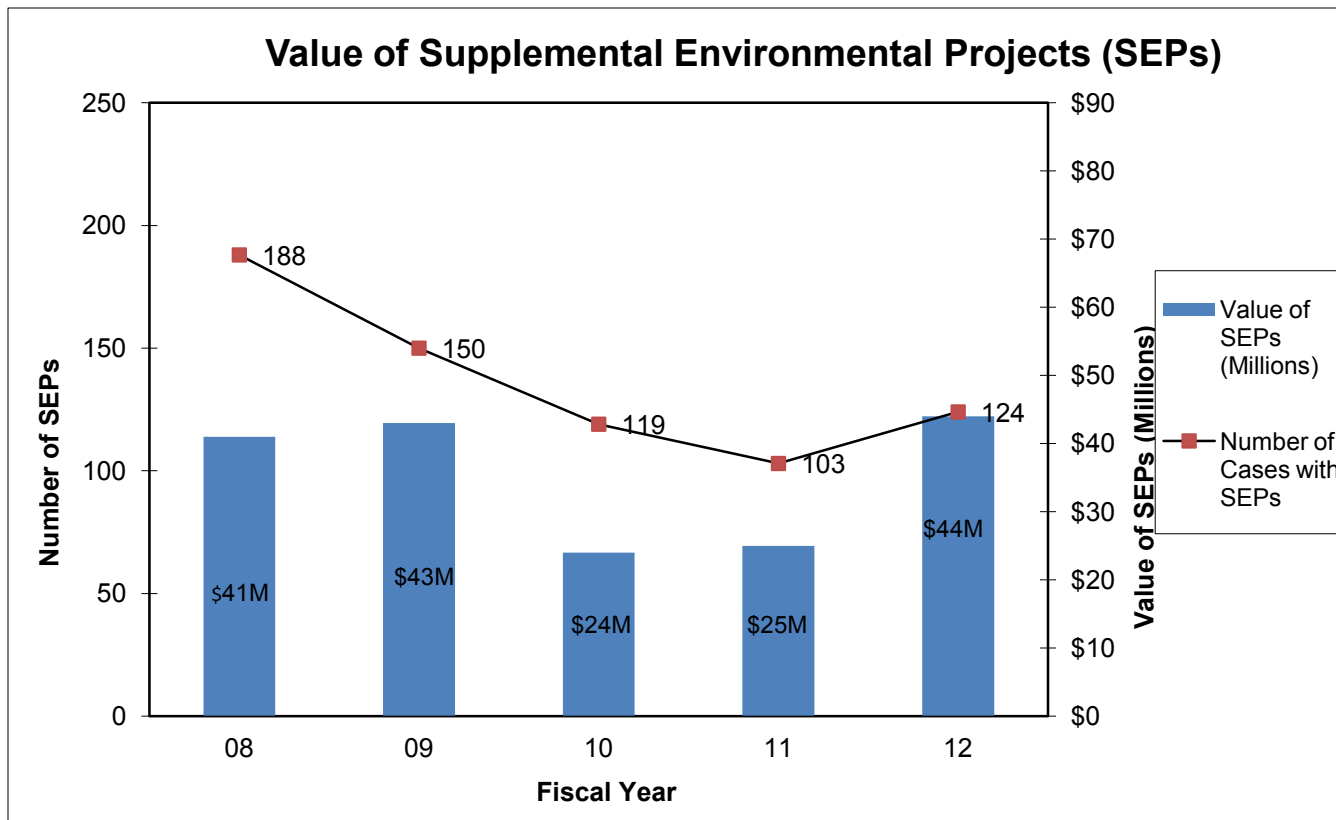
FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS

FY2012 Enforcement & Compliance Annual Results

Supplemental Environmental Projects

FY 2008 – FY 2012

(Inflation/Deflation Adjusted to FY 12 Dollars)



- In FY 2012, EPA enforcement actions resulted in more than **\$44 million** in Supplemental Environmental Projects¹ - a five year high

- In FY 2012, the settlement in MOEX accounted for approximately \$20 million of the total value of SEPs.

¹ Supplemental Environmental projects that a defendant/respondent agrees to undertake in settlement of an enforcement action, but which the defendant/respondent is not otherwise legally required to perform.

Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.

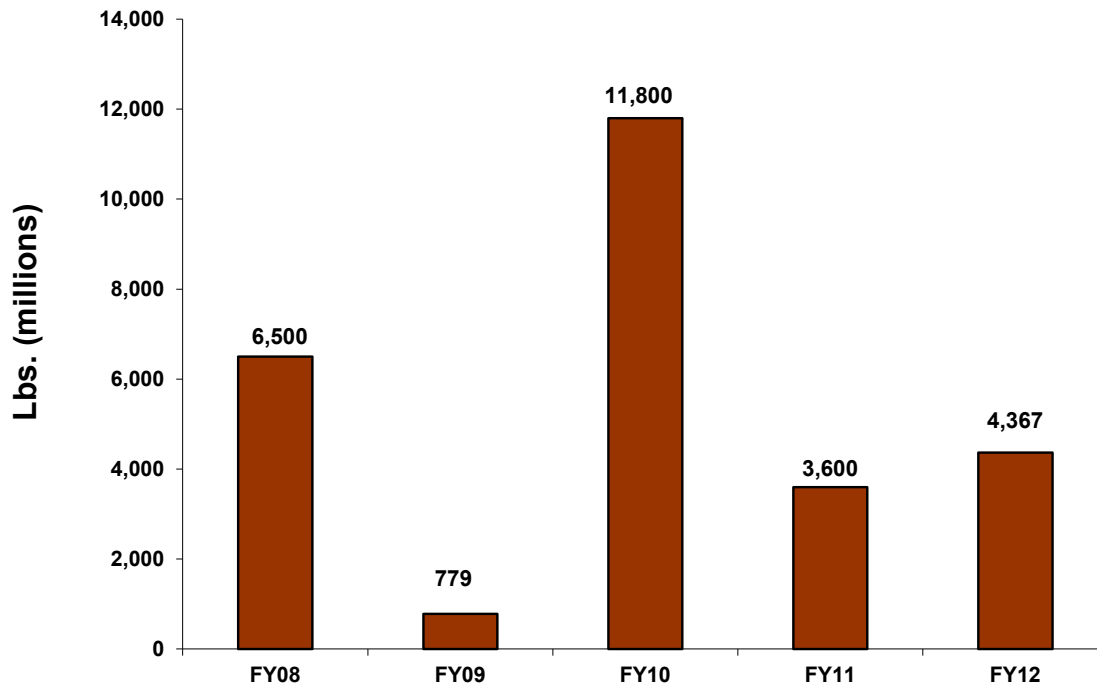
FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS.



FY2012 Enforcement & Compliance Annual Results

Estimated Environmental Benefits

Hazardous Waste Treated, Minimized, or Properly Disposed Of (Pounds)



- In FY 2012, EPA enforcement actions required companies to commit to treat, minimize, or properly dispose of **4.4 billion pounds** of hazardous waste. EPA began collecting this data in FY 2008.

- The hazardous waste metric is generally dominated by results from one or two very big cases. This results in substantial variability in this measure year to year.

FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS.

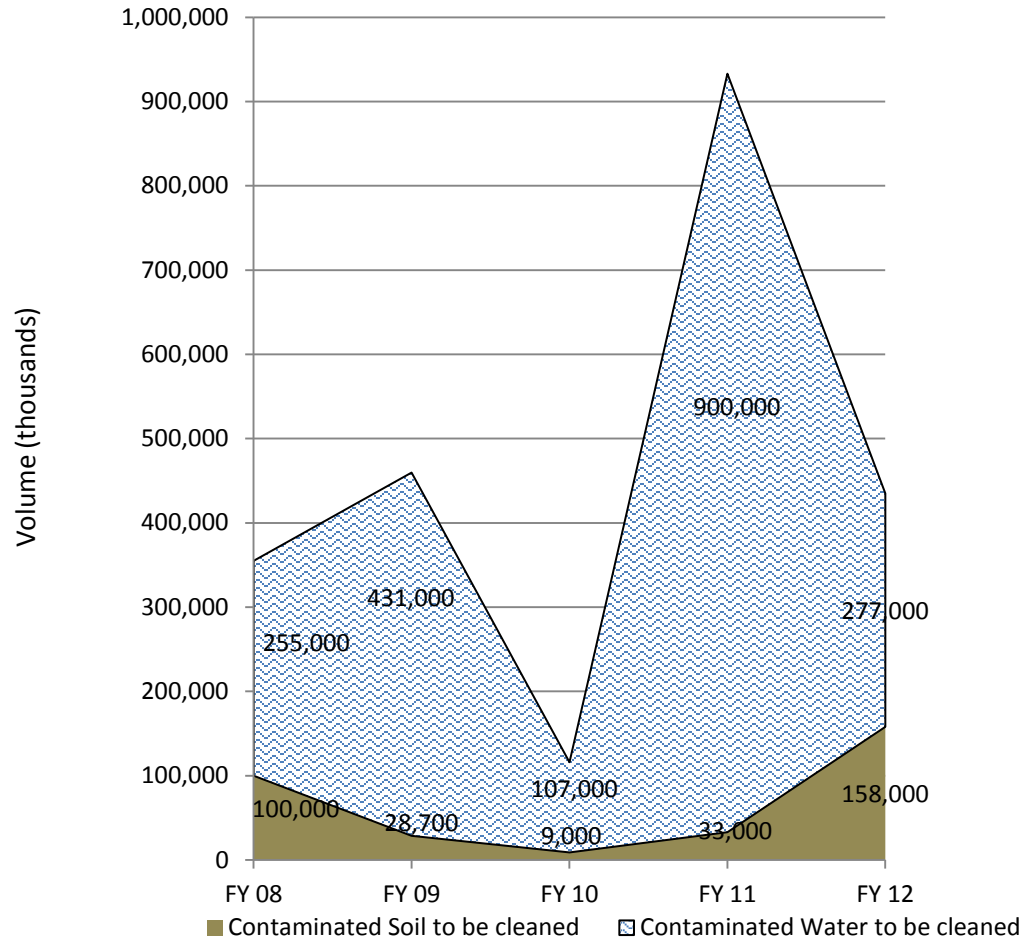
Disclaimer: Minor corrections may have been made to previous years' data.



FY2012 Enforcement & Compliance Annual Results

Estimated Environmental Benefits

Volume of Contaminated Soil & Water to be Cleaned Up



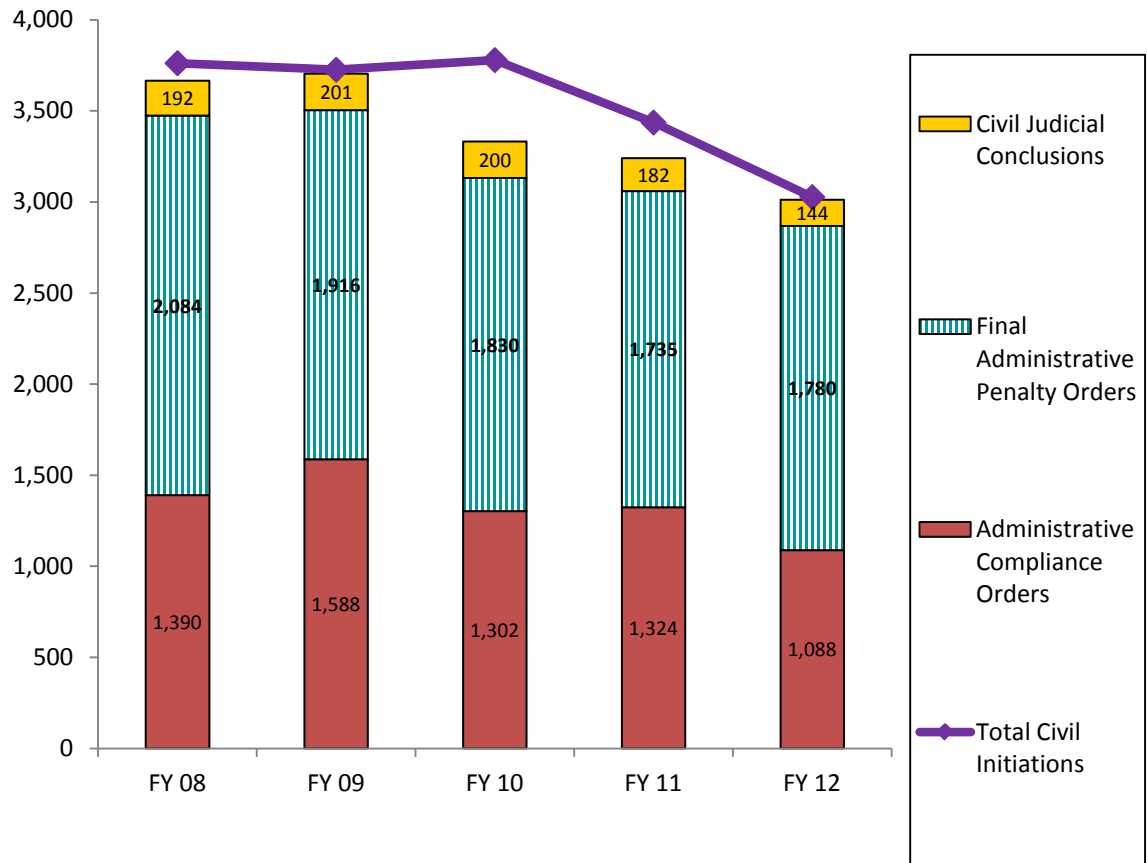
- An estimated **277** million cubic yards of contaminated water/aquifer are to be cleaned up as a result of EPA enforcement cases concluded in FY 2012.
- An estimated **158** million cubic yards of contaminated soil are to be cleaned up as a result of EPA enforcement cases concluded in FY 2012.

FY2012 Data Source: Integrated Compliance Information System (ICIS); data source for previous fiscal years: ICIS.
Disclaimer: Minor corrections may have been made to previous years' data.



FY2012 Enforcement & Compliance Annual Results

EPA Civil Enforcement Case Initiations and Conclusions



- EPA continues to pursue larger more complex, risk-based enforcement cases leading to fewer initiations and conclusions in FY 11 and FY12.
- In FY 2012, EPA concluded **3,012** civil judicial and administrative cases.
- EPA Initiated a total of **3,027** civil enforcement cases (judicial and administrative) in FY 2012.

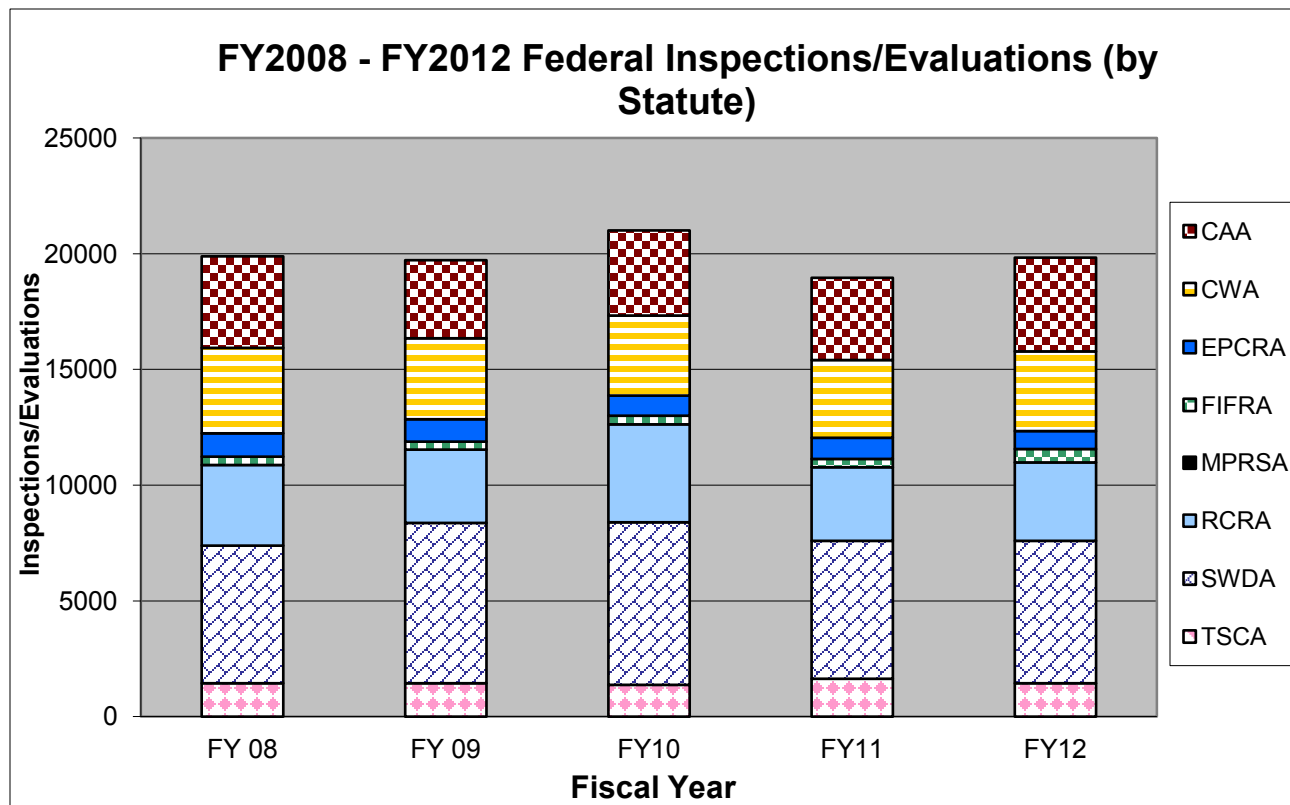
FY2012 Data Source: Integrated Compliance Information System (ICIS); data Source for previous fiscal years: ICIS.



FY2012 Enforcement & Compliance Annual Results

Compliance Monitoring

Number of Inspections - Evaluations Conducted by EPA



•EPA conducted approximately **20,000** inspections/evaluations in FY 2012. EPA inspections fluctuate somewhat from year to year, but have generally been in the 20,000 range over the past five years.

Note: The numbers of EPA Civil Investigations for the last five FYs are: 222 (FY 08), 246 (FY 09), 282 (FY 10), 177 (FY 11) and (237) FY12.

Note: There are other compliance monitoring activities conducted by the EPA that are not reflected in this chart.

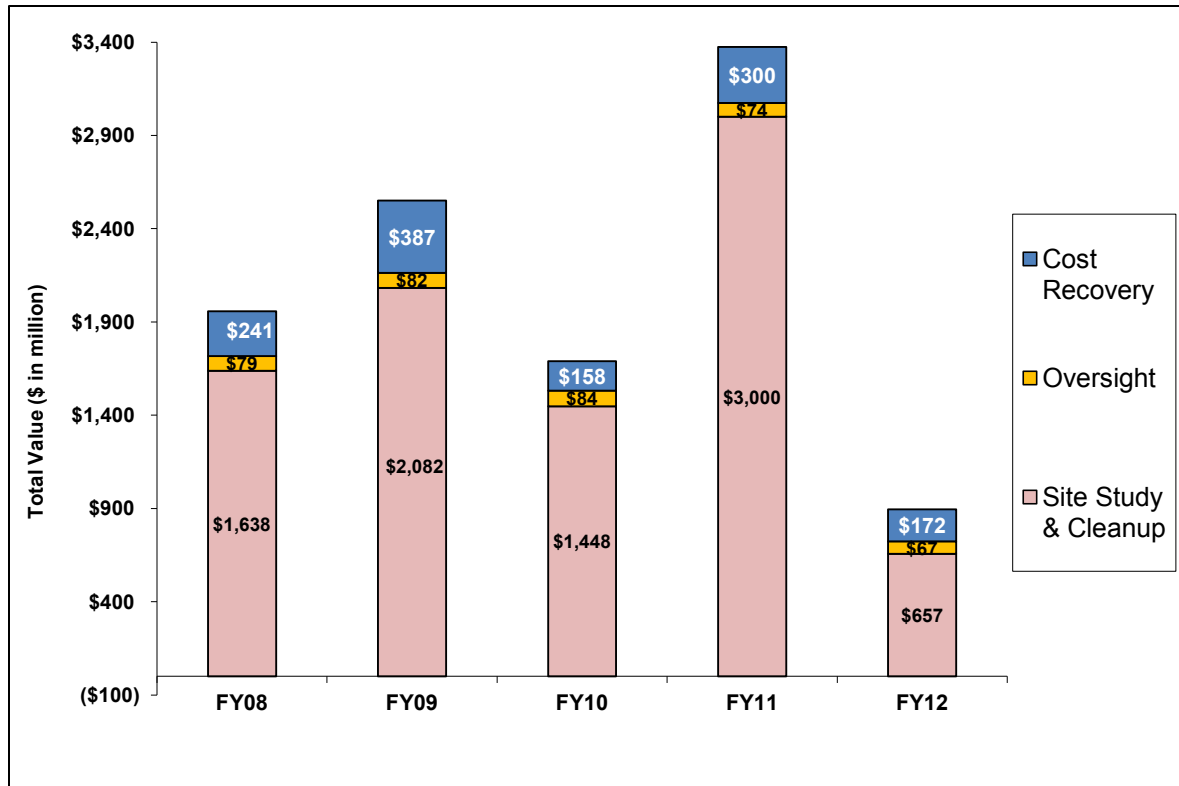
FY2012 Data Source: Integrated Compliance Information System (ICIS), legacy databases, and manual reporting.

Data source for previous fiscal years: ICIS, legacy databases, and manual reporting.



FY2012 Enforcement & Compliance Annual Results Superfund Results

(Inflation/Deflation Adjusted to FY 12 Dollars)



Private party cleanup commitments achieved between Fiscal Years 2008-2011 were unusually high and record breaking. However, private party cleanup commitments were lower in FY 2012. Superfund Enforcement results generally vary from year to year due to the size and number of cases in the case pipeline, and a few large settlements each year.

Unlike FY 2011 when the Hudson River cleanup settlement, valued at \$2.1 billion, accounted for 70% of the total cleanup commitment, there were no similar, large dollar cases in FY 2012.

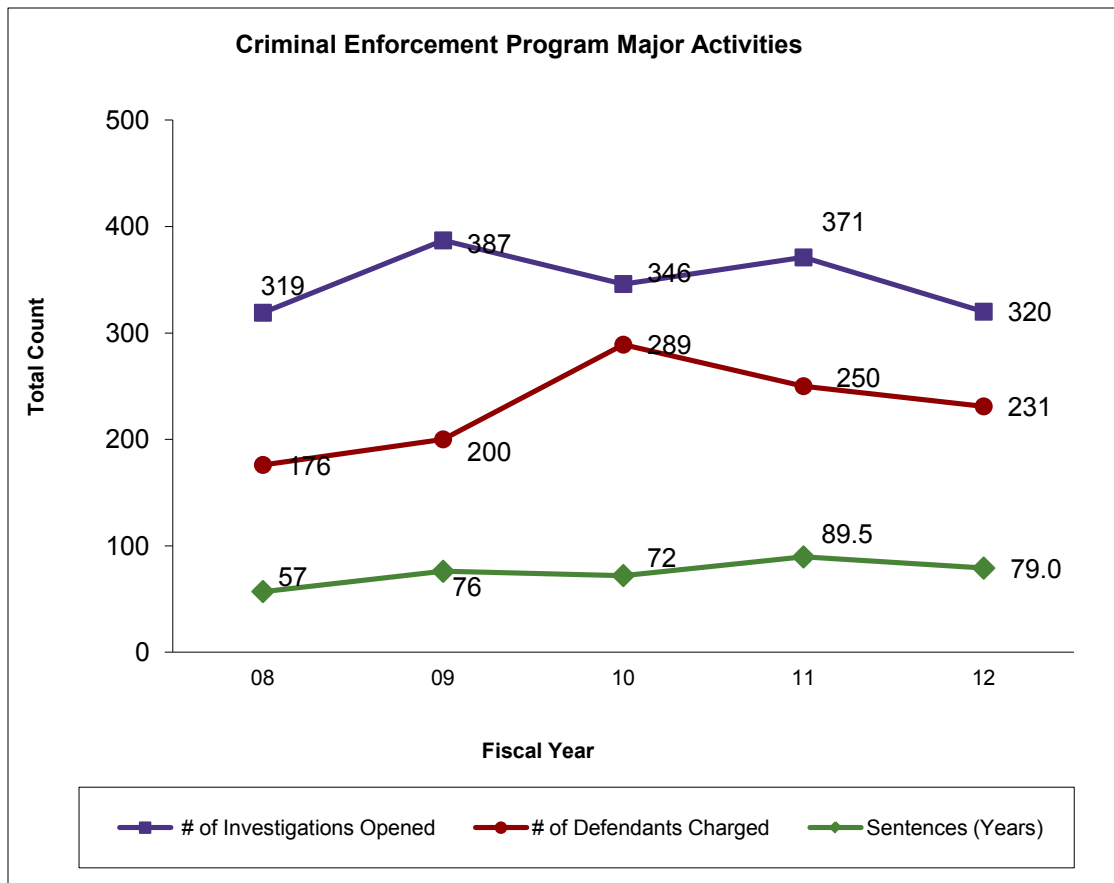
Cleanup negotiations completed with private parties in FY 2012, however, will result in increased cleanup commitments in FY 2013. For example the AVX consent decree, valued at \$366.3 million, for the cleanup of the New Bedford Harbor site was lodged in October 2012 and should be entered in FY 2013.

Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.

FY2012 Data Source for Clean up and Cost Recovery: Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS); FY2012 Data Source for Oversight: Integrated Financial Management System (IFMS); Data source for previous fiscal years: CERCLIS and IFMS.

FY2012 Enforcement & Compliance Annual Results

Criminal Enforcement



In FY 2012, OCEFT had fewer case carrying agents than in FY 2011, which played a role in the decrease in new cases opened and (to a lesser degree) the number of defendants charged.

The increased focus on tier 1 and tier 2 cases, which are generally more complex and more resource intensive, could also have contributed to fewer - but more significant - cases.

70% of the criminal cases charged in FY 2012 had at least one individual defendant.

FY2012 Data Source: Criminal Case Reporting System; Source for previous years: annual Criminal Case Reporting System data.

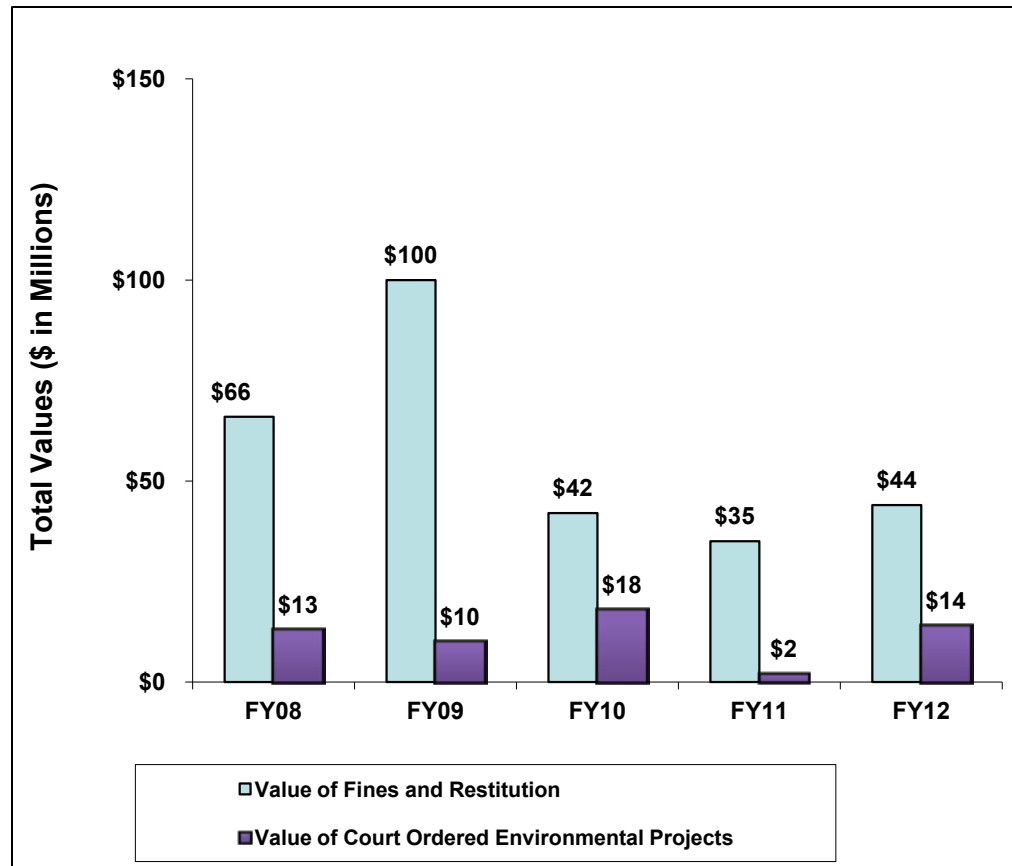
FY2012 Enforcement & Compliance Annual Results

Criminal Enforcement

Value of Fines & Restitution and Court Ordered Environmental Projects



(Inflation/Deflation Adjusted to FY 12 Dollars)



Criminal fines and restitution punish misconduct, deter other violators and help to remedy the harm caused by the criminal conduct.

Note: All prior FY dollar figures in this report are adjusted to reflect the current value in FY 2012 dollars based on the monthly rate of inflation/deflation as determined by the U.S. Department of Labor Consumer Price Index for All Urban Consumers.

FY2012 Data Source: Criminal Case Reporting System; Source for previous years: Annual Criminal Case Reporting System data.

FY2012 Enforcement & Compliance Annual Results

Acronyms – Statute and Abbreviations/Section Description



CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act ("Superfund")
CWA	Clean Water Act
EPCRA	Emergency Planning & Community Right-to-Know Act
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
MPRSA	Marine Protection, Research, and Sanctuaries Act
RCRA	Resource Conservation & Recovery Act
SDWA	Safe Drinking Water Act
TSCA	Toxic Substances Control Act
Title 18	U.S. Criminal Code - Crimes and Criminal Procedure

Exhibit D

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV

IN THE MATTER OF:)

Sloss Industries Corporation)
P.O. Box 5327)
3500 35th Avenue North)
Birmingham, Alabama 35207)

EPA ID No. ALD 000 828 848)

Respondent.)

) Proceeding Under Section
) 3008(h) of the Resource
) Conservation and Recovery
) Act, as amended, 42 U.S.C.
) Section 3008(h)

) U.S. EPA Docket No. 89-39-R

MODIFICATION TO THE ADMINISTRATIVE ORDER
AND SETTLEMENT AGREEMENT

Introduction

On September 9, 1989, an Initial Administrative Order ("Order") and a Notice of Opportunity for a Hearing ("Notice") were issued to Respondent pursuant to Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), as amended, 42 U.S.C. Section 6928(h). The Order required that Respondent perform a RCRA Facility Investigation ("RFI") and Corrective Measures Study ("CMS") based on thirty-nine (39) Solid Waste Management Units ("SWMUs") identified at the facility by the Environmental Protection Agency (the "Agency" or "EPA") during a RCRA Facility Assessment ("RFA"). Pursuant to the Notice, Respondent subsequently sent the Agency a request for a hearing on this matter. Respondent also requested, pursuant to 40 C.F.R. Section 24.07, an informal meeting to discuss the Order and based on these discussions, the parties have agreed to settle this matter. This Modification to the Administrative Order and Settlement Agreement ("Modification and Agreement") sets out the terms for the settlement and modifications to the Order as agreed to by the parties.

Jurisdiction

As noted, the Initial Administrative Order was issued by the Agency to the Respondent pursuant to Section 3008(h) of RCRA. Article XXI of the Order, Subsequent Modification, provides for Amendment of the Order by the Agency. Under Article XXI, the amendments are required to be in writing and are effective on the date on which the amendments are signed by the Agency and are thereby incorporated into the Order. Upon execution of this Modification and Agreement, pursuant to 40 C.F.R. Section 24.02(a), the Administrative Order will be effective as the

Final Administrative Order on Consent in this matter; this Modification and Agreement will thereby be incorporated by reference into and made part of the Order as if fully set forth therein. All other terms of the Initial Administrative Order remain unchanged and in full effect. All tasks required under this Modification and Agreement are subject to all provisions set forth in said Order.

Purpose

The intent and purpose of this Modification and Agreement is to: 1) include provisions for the Agency to review the findings of the RFI prior to implementation of the CMS as required under the Order; and 2) provide for submittal of a detailed outline of the Work Plan for the RFI for review by the Agency and ADEM prior to submittal of the RFI Work Plan.

Respondent will still be required to perform an RFI and CMS at the facility following the provisions set out in the Order and the attachments to the Order. Under this Modification and Agreement, in addition to the work presently required by the Order, as part of the Draft and Final RCRA Facility Investigation Reports, Respondent will also submit: 1) an analysis of their findings relating to the original 39 SWMUs and any additional SWMUs identified during the RFI; and 2) a list of the SWMUs the Respondent has determined will require a CMS. Upon receipt, the Agency will review the final RFI Report, including the analysis of findings, other materials deemed relevant and the proposed list of SWMUs. The Agency reserves the right to conduct a Site investigation to confirm the Respondent's determinations. Upon review, the Agency will then issue a final list of SWMUs based on these findings and the Agency reserves the right to amend the list as prepared by the Respondent. The Respondent will be required to conduct a CMS based on the schedule set out in the Order and Attachments, at the SWMUs identified on the Agency's final list. Any dispute arising from the Agency determination under this agreement will be subject to the Dispute Resolution Provisions set out in the Order.

Within (thirty) 30 days of the effective date of this Modification and Agreement, Respondent will submit a detailed outline of the RFI Work Plan to the Agency and ADEM for review. When the outline is submitted, the Respondent may request a meeting with the Agency to review the outline. The Agency will review and comment on the outline. Within one hundred (100) days of the effective date of this Modification and Agreement, the Respondent will submit to EPA and ADEM the Work Plan for the RFI. The outline and the Work Plan shall include all provisions set out in the Initial Administrative

Order and Appendix A to the Order.

Modification

Article VI, Work to be Performed, is hereby modified as follows:

RCRA Facility Investigation - Paragraph 1 - The first sentence of this paragraph has been superseded as follows:

"Within 45 days of the effective date of this Order, Respondent shall submit to EPA and ADEM a Work Plan for an RFI."

is superseded by:

"Within 30 days of the effective date of this Modification and Settlement, Respondent shall submit to EPA and ADEM a detailed outline of the Work Plan for an RFI. At the time the outline is submitted to the Agency, Respondent can request a meeting to discuss this outline. Within 100 days of the effective date of this Modification and Settlement, Respondent shall submit to EPA and ADEM the Work Plan for an RFI."

The Scope of Work, Attachment A to the Order, is hereby modified as follows:

Task III: RFI Work Plan Requirements - Page 4 of Attachment A to the Order. The introductory paragraph to Task III is modified as follows:

"The Respondent shall prepare an RFI Work Plan. This RFI Work Plan shall include the development of several plans, which shall be prepared concurrently. The Respondent shall first submit a detailed outline of the Work Plan to the Agency for review according to the schedule set out in the Facility Submission Summary Section of this Appendix. The outline shall include all sections required in the Work Plan as detailed below. The Respondent shall then submit the Work Plan according to the schedule set out in the Facility Submission Summary Section. During the RFI, it may be necessary to revise the RFI Work Plan to increase or decrease the detail of information collected to accommodate the Facility specific situation. The RFI Work Plan includes the following:"

Facility Submission Summary - Page 27 of Attachment A to the Order summarizes the information reporting requirements contained in the RFI Scope of Work. Task III, the RFI Work Plan shall be divided into two submittals as follows:

Task IIIA - RFI Work Plan Outline - Due Date: Within 30 days after the effective date of this Modification and Settlement.

Task IIIb - RFI Work Plan - Due Date: Within 100 days of the effective date of this Modification and Settlement.

All other provisions of the Order and Attachment to the Order remain unchanged and in full effect.

Settlement

In furtherance of this Settlement, Respondent hereby withdraws their request for a hearing as presently filed in this matter. Further, Respondent agrees to and accepts the modification of said Order and all provisions of the Order as drafted and attached hereto. Respondent hereby agrees to implement the Order and submit the Work Plan outline within 30 days of the effective date of this Modification and Agreement. Respondent will implement all required provisions of said Order, and Modification and Agreement within the scheduled time set forth in these documents.

Effective Date

The Effective Date of this Modification and Settlement Agreement and the Final Administrative Order is upon signature by the Director of the Waste Management Division, United States Environmental Protection Agency, Region IV.

IT IS SO AGREED:

By: P.C. / Soulditch - President
(Name and Title)

10/22/90
Date

Sloss Industries Corporation
Birmingham, Alabama

IT IS SO AGREED AND ORDERED:

By: Donald Guinyard

10-24-90
Date

Donald Guinyard, Acting Director
Waste Management Division
United States Environmental
Protection Agency, Region IV

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV

IN THE MATTER OF:)	
	)	ADMINISTRATIVE ORDER
)	
Sloss Industries Corporation)	
P.O. Box 5327	)	U.S. EPA Docket No. 89-39-R
3500 35th Avenue North)	
Birmingham, AL. 35207	)	Proceeding under Section
	)	3008(h) of the Resources
EPA ID No. ALD 000 828 848	)	Conservation and Recovery
	)	Act, as amended, 42 U.S.C.
RESPONDENT	)	Section 6928(h)

I. JURISDICTION

This Administrative Order (Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency ("EPA") by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. Section 6928(h). The authority vested in the Administrator has been delegated to the Regional Administrators by EPA Delegation Nos. 8-31 and 8-32 dated April 16, 1985, and has been further delegated to the Director of the Waste Management Division of the EPA, Region IV.

This Order is issued to Sloss Industries Corporation ["Respondent"], Birmingham, Alabama. (This facility was formerly known as Jim Walters Resources, Inc.) This Order is based upon the administrative record compiled by EPA and incorporated herein by reference. The record is available for review by Respondent and the public at EPA's Region IV office located at 345 Courtland Street, N.E., Atlanta, Georgia 30365.

II. PARTIES BOUND

1. This Order shall apply to and be binding upon the Respondent and its officers, directors, employees, agents, successors and assigns, and

upon all persons, independent contractors, contractors, and consultants acting under or for Respondent.

2. No change in ownership, corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order.

3. Respondent shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of work performed pursuant to this Order within one (1) week of the effective date of this Order or date of such retention, and shall condition all such contracts on compliance with the terms of this Order.

4. Respondent shall give notice of this Order to any successor in interest prior to transfer of ownership or operation of the Facility and shall notify EPA within ninety (90) days prior to such transfer.

III. STATEMENT OF PURPOSE

The issuance of this Order requires Respondent to: (1) perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release of hazardous waste and hazardous constituents at or from solid waste management units (SWMUs) at its facility, and (2) perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for the corrective action necessary to prevent or mitigate any migration or releases of hazardous wastes or hazardous constituents at or from the Facility.

IV. FINDINGS OF FACT

1. Respondent is a company doing business in the State of Alabama and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. Section 6903(15) and Section 22-30-3(10) of the Alabama Hazardous Waste Management Act (AHWMA).

2. Respondent is a generator, and an owner/operator of a hazardous waste management facility located at 3500 35th Avenue North, Birmingham, Alabama, and was engaged in the treatment and storage of hazardous waste at the Facility subject to interim status requirements [40 CFR Part 265]. Pursuant to Section 3006 of RCRA, the State of Alabama was granted final authorization for its hazardous waste program on December 23, 1987. The Alabama Department of Environmental Management (ADEM) is authorized to enforce the Hazardous Waste Management Regulations promulgated pursuant to the Environmental Management Act, Section 22-22A-5(1). However, any applicable requirement imposed by the Hazardous and Solid Waste Amendments

of 1984 (HSWA), Public Law 98-616 (November 8, 1984), is effective in all states regardless of their authorization status and will be carried out by EPA until the State is granted final authorization with respect to such requirement. RCRA Section 3306(g), 42 U.S.C. 6926(g)

3. Respondent owned and operated its facility as a hazardous waste management facility on and after November 19, 1980, the applicable date which renders facilities subject to interim status requirements and the requirement to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. Sections 6924 and 6925.

4. Pursuant to Section 3010 of RCRA, 42 U.S.C. Section 6930, Respondent sent EPA its Notification of Hazardous Waste Activity, dated August 15, 1980. Respondent identified itself as a generator of hazardous waste and an owner/operator of a treatment, storage, and disposal facility for hazardous waste. This notification listed four hazardous waste codes: D002, D003, F016 and K087. (F016 subsequently was dropped by the EPA as a listed hazardous waste.)

5. In its original Part A Hazardous Waste Permit Application, dated November 17, 1980, Respondent identified itself as operating a coke plant, a chemical plant, a blast furnace and a mineral wool plant. Respondent described its facility as engaging in the production of foundry and furnace coke, pig iron, specialty organic chemicals for industry, processed mineral fibers, mineral fibers for ceiling tile and insulating products, and by-product chemicals. Its coke by-products include such chemicals as ammonium sulfate, light oil and coal tar, while specialty organic chemicals include sulfonyl bisphenol. Respondent also acknowledged, in its original Part A, handling the following hazardous wastes at its facility:

- K087 - decanter tank tar sludge from coking operations
- U019 - benzene
- U188 - phenol
- U220 - methylbenzene
- U239 - xylene (dimethylbenzene)

On April 7, 1982, the four U waste codes were deleted by the facility from Respondent's Part A as being covered by the facility's NPDES permit. In late 1984, Respondent requested that its Part A be withdrawn, and on November 30, 1984 this request was denied. On October 2, 1985, Respondent submitted a revised Part A Application, and listed the D002 (corrosive) and K087 waste codes.

6. Respondent generates waste streams which contain a wide variety of organic constituents included, but not limited to: methylene chloride; dichloroethene; chloroform; benzene; chlorobenzene; toluene; phenol; nitrophenol; 4 nitrophenol; 2,4 dinitrophenol; 2,4,6 trichlorophenol; pentachlorophenol; and 4-chloro-3-methylphenol.

7. On May 9 and 10, 1989, EPA conducted a Visual Site Inspection (VSI) of Respondent's facility as part of a RCRA Facility Assessment (RFA). Facility representatives present throughout this inspection were Charles Jones (Director, Environmental Affairs) and Kent Roberts (Manager, Technical Services). During the VSI, 39 RCRA SWMUs were identified and are summarized below:

SWMU #1: Quench Towers and Quench Tower Sumps

The Facility operates two quench towers, one located at the north end and the other located at the south end of the coke oven batteries. Hot (2,000 degree F) coke product loaded onto a locomotive-driven rail car is brought into a quench tower to be cooled to approximately 100 degrees F. This rapid quenching is accomplished by spraying the hot coke with water from above. This generates contact cooling water which runs off of the coke and into a sump directly beneath the quench tower. Coke particles entrained in the quenching water settle in this sump. This water then flows into the Quench Tower Pump Basin (SWMU #2). Water loss resulting from evaporation is compensated for by adding plant service water to the system. Baffles have been installed in the top of each quench tower to minimize the carry-over of coke dust entrained in the steam generated by quenching. Wastes accumulated in this unit include: 1) contact cooling water from the quenching operation, 2) rainfall from the coke wharf, and 3) runoff from the surrounding area. Releases into the environment are in the form of steam emissions from the quench tower. These emissions carry particulate matter which can be seen settling in the surrounding area. Pitting of the concrete sides of the sump is visible and may indicate a release into the soil and groundwater.

SWMU #2: Quench Tower Pump Basins

Each quench tower at the Facility is connected to a pump basin immediately adjacent to it. These concrete, partially inground, holding basins contain water which has been used in the quenching process. Quench water from both the Quench Tower Sump (SWMU #1) and the Old Quench Tower Settling Basin (SWMU #3) flow into this unit before it is recirculated and sprayed on the coke. As the volume of water in this basin decreases due to evaporation, plant service water is added from cooling spray ponds located elsewhere. The waste generated by this process is contact cooling water from the quenching operation. Releases into the environment could result from the badly deteriorated concrete containment wall which has cracks and is missing pieces.

SWMU #3: Old Quench Tower Settling Basins

These partially inground, concrete basins were presumably the primary quench tower sumps prior to the construction of the current quench towers (SWMU #1). Presently, they provide increased contact cooling

water capacity for the quench tower sump/pump basin system. Water from this unit flows to the Quench Tower Pump Basin (SWMU #2) for reuse. The waste managed in this unit is contact cooling water from the Quench Tower Sump (SWMU #1). Releases into the environment could result from pitting in the sides of the concrete basins.

SWMU #4: Biological Treatment Facility (BTF) Sewer

The BTF Sewer is a facility-wide network comprising both inground open-to-the-surface troughs, and underground clay piping. Tile troughs are found inside chemical process buildings, and receive any fluids spilled onto the floor. Concrete troughs are found outside in the coke process areas, and receive fluids generated by the coke process. The underground piping is used outside chemical process buildings and has storm drains connecting it to the ground surface at various points. Runoff from the coke process area, and other areas around the Facility, flows into these drains and into the underground piping network. This unit originally emptied directly into the Polishing Pond (SWMU #22). In 1975, this sewer was diverted for chemical and biological treatment to the recently built Biological Treatment Facility (BTF). During the VSI Mr. Roberts said that the only information they had concerning the design and construction of the system was that the sewer is constructed of clay pipe. Wastes managed by this unit are surface runoff from the coke process area of the plant, material collected in various sumps and drains in the coke process area, material discharged to floor drains in the chemical manufacturing plant, the centrifuge wastewater from the production of sulfones, and wastewater from the production of benzenesulfonyl chloride (BSC). Additionally, this unit receives an effluent from the U.S. Pipe and Foundry Company facility located across 35th Avenue from the Respondent. U.S. Pipe and Foundry effluent is composed of wastewater mixed with sand and cement from the cement lining of pipe operations, wastewater mixed with sand from core molds and carbon block from casting operations, wastewater mixed with sand from the core shop, and drainage water from powerhouse compressors. These waste streams pass through a series of settling basins and ponds before being discharged to the Sloss BTF Sewer. Mr. Roberts acknowledged that a break and subsequent leak have occurred in the pipe in the area of the BTF.

SWMU #5: Coal Tar Storage Area Drain System

This unit consists of an inground concrete trough surrounding two above-ground steel tanks containing coal tar. The top of the trough is covered by steel plates, and it discharges to the BTF Sewer (SWMU #4). The wastes managed by this unit are spillage from the coal tar tanks and surface runoff from the immediate area. Releases into the environment could occur if the integrity of the unit is impaired.

SWMU #6: Spill Area Around Diesel Tank

This unit consists of an area adjacent to a 10,000 gallon, steel, above-ground diesel tank. The tank is underlain by concrete and surrounded by a continuous concrete containing wall. Spillage of diesel fuel on the outside of the concrete containing wall, and on the ground immediately outside of this wall, was observed during the VSI. Ron Schoen, Coke Plant Quality Control Engineer, stated that the tank is filled every 7-10 days, and that diesel fuel was probably spilled during the unloading of fuel from the delivery truck into the tank.

SWMU #7: Coal Tar Collection Sump in #1 Pump House

The #1 Pump House contains pumps and valves for the transferring of coal tar. The building has a concrete floor with an inground concrete sump which receives drippage from the pumps and valves. The material collected in the sump is pumped to the Flushing Liquor Decanter (SWMU #8). The wastes handled by this unit are coal tar and flushing liquor drippage. Releases into the environment could not be determined during the VSI because the unit was too heavily covered with coal tar.

SWMU #8: Flushing Liquor Decanter

Flushing liquor is the term for contact cooling water used to cool exhaust gases from coke ovens. As the water comes into contact with the exhaust gases, coke fines and organics are entrained. The flushing liquor is then sent to the decanter where the heavier organic fractions and coke fines settle out. The decanter consists of an above-ground steel tank resting on a concrete base. The material managed by this unit contains many organic and inorganic constituents, including those found in K087 and K060. Some staining of the concrete base and surrounding soil was noted during the VSI.

SWMU #9: Flushing Liquor Decanter Sump

This unit is an inground concrete sump which runs between Coal Tar Tank T-61 and the back of the Flushing Liquor Decanter (SWMU #8). The unit appeared to receive surface runoff and drippage from the coal tar tanks and Flushing Liquor Decanter (SWMU #8). During the VSI this unit was observed to contain some liquid.

SWMU #10: Coal Tar Decanter for Number 3 and 4 Coke Batteries

This unit consists of an above-ground steel tank positioned on a concrete pad. As solid material settles out of the coal tar in the decanter, it is removed via a drag conveyor. This solid material is decanter tank tar sludge and is accumulated on steel catch pans at the

rate of approximately 5 cubic feet per 8-hour shift. It is then placed in coke ovens, which operate at 2700 to 2900 degrees F. [Decanter tank tar sludge (K087) is a listed hazardous waste generated by the coal tar decanting process and contains the hazardous constituents phenol and naphthalene. If not recycled, this material is considered a hazardous waste.] During the VSI, it appeared that the catch pans may have been overtopped. This was evidenced by sludge on the exterior of the pans and staining in the area. None of the facility personnel present during the VSI could state whether or not steel pans had always been used to catch the sludge.

SWMU #11: Coal Tar Decanter for Coke Battery 5

This unit consists of an above-ground steel tank positioned on a concrete pad. As solid material settles out of the coal tar in the decanter, it is removed via a drag conveyor. This solid material is decanter tank tar sludge and is accumulated on steel catch pans at the rate of approximately 5 cubic feet per 8-hour shift. It is then placed in coke ovens, which operate at 2700 to 2900 degrees F. [Decanter tank tar sludge (K087) is a listed hazardous waste generated by the coal tar decanting process and contains the hazardous constituents phenol and naphthalene. If not recycled, this material is considered a hazardous waste.] During the VSI, it appeared that the catch pans may have been overtopped. This was evidenced by sludge on the exterior of the pans and staining in the area. None of the facility personnel present during the VSI could state whether or not steel pans had always been used to catch the sludge.

SWMU #12: Coal Tar Decanter for 1 and 2 Coke Batteries

This unit was taken out of service in 1979. It currently consists of an above-ground steel tank positioned on a concrete pad. As solid material settled out of the coal tar in the decanter, it was removed via a drag conveyor. This solid material was decanter tank tar sludge. [Decanter tank tar sludge (K087) is a listed hazardous waste generated by the coal tar decanting process and contains the hazardous constituents phenol and naphthalene. If not recycled, this material is considered a hazardous waste.] During the VSI, there was no evidence of a catch pan to accumulate the sludge. Steve McCay, Chief Engineer, Coke Plant, stated that a steel pan or board may have been used.

SWMU #13: The Equalization Basin at the Biological Treatment Facility (BTF)

The Equalization Basin is a surface impoundment designed for the collection, physical mixing, and transfer of process wastewaters. This basin was constructed in 1975 of earthen materials, and has a

compacted clay liner of unknown thickness. With a minimum of 2 feet of freeboard, this basin has a maximum storage capacity of approximately 4 million gallons. All of the wastes collected by the BTF Sewer (SWMU #4) are discharged into this impoundment. It is the first in sequence at the BTF to receive process wastewaters from the facility, and it holds these wastewaters prior to pH adjustment and biological treatment. ADEM conducted sampling in this basin on November 28, 1984, and tested its influent at a pH of 0.55 SU and its effluent at a pH of 0.80 SU. In a February 1, 1985 letter, ADEM provided the Respondent with notice that the the Equalization Basin was a regulated unit because it contained the characteristic hazardous waste D002 (corrosivity). According to the "Surface Impoundment Closure Plan" prepared by Robinson and Layton, Inc., and dated April 30, 1987, the wastewater from the production of benzenesulfonyl chloride is the sole source of the low pH. (According to Mr. Roberts, no listed hazardous wastes have been placed in the Equalization Basin.) The basin has held process wastewater with a pH less than 2 SU for more than a decade, rendering the long-term integrity of the compacted clay liner questionable. This is evidenced by samples taken from the six groundwater monitoring wells installed around the basin. Samples from these wells were collected by ADEM on April 17, 1986 as part of a Comprehensive Monitoring Evaluation. Analyses of groundwater samples taken from these wells revealed the following hazardous waste constituents: Well #1: chromium (over primary drinking water standards), phenol, cyanide, copper and arsenic; Well #2: chromium (over primary drinking water standards), arsenic (at a concentration of more than twice of any of the other wells), and copper; Well #3: fluorene, phenanthrene and cyanide; Well #4: phenol, naphthalene, cyanide, acenaphthylene, arsenic, copper, chromium, and 2,4 dimethyl phenol; Well #5: arsenic and cyanide; and Well #6: chromium (over primary drinking water standards), phenol, naphthalene, phenanthrene, cyanide, anthracene, fluoranthene, copper, arsenic, pyrene, benzo anthracene, and chrysene. U.S. EPA Region IV Environmental Services Division (ESD) collected samples from the Equalization Basin on February 11, 1986. A sample of the effluent contained the following: 15 volatile organic compounds (including benzene, toluene and chlorobenzene), 36 extractable organic compounds (including naphthalene, and phenol), total phenol, cyanide, and arsenic. A sludge sample collected and composited from 10 locations around the basin contained the following: benzene, tetrachloroethylene, toluene, chlorobenzene, ethyl benzene, total xylenes, cyanide, arsenic, barium, lead, and 31 extractable organic compounds (EOC's). These EOC's were detected at concentrations ranging from an estimated 300,000 ug/kg to 15,000,000 ug/kg, with 18 of the EOC's exceeding 1,000,000 ug/kg.

SWMU #14: pH Neutralization Basin at the BTF

This unit is next in the process sequence at the BTF. This unit consists of an inground concrete tank in which lime slurry is introduced from a steel, above-ground tank beside the basin. Three mixers mix the lime slurry with the wastewater in order to raise the pH from approximately 2.5 SU to 10 SU. The waste managed in this unit is the effluent from the Equalization Basin (SWMU #13). Since no active treatment takes place in the Equalization Basin (SWMU #13), the wastewater in this unit would be expected to contain the same constituents.

SWMU #15: Primary Clarifier at the BTF

The primary clarifier consists of a circular, inground concrete tank containing a skimmer arm and a sludge scraper to remove floating and settled solids. This unit receives pH-adjusted wastewater from the pH Neutralization Basin (SWMU #14). Effluent goes to the Aeration Basins (SWMU #16).

SWMU #16: Aeration Basins at the BTF

There are two aeration basins at the BTF, and each receives wastewater from the Primary Clarifier (SWMU #15). Both consist of an inground concrete tank with four mechanical aerators. The wastewater is aerated to provide oxygen for the microorganisms used to degrade organic matter.

SWMU #17: Secondary Clarifier at the BTF

The secondary clarifier receives wastewater from the Aeration Basins (SWMU #16). This unit consists of a circular, inground concrete tank with a skimmer arm and sludge scraper to remove floating and settled solids. Effluent from this unit was sampled on February 11, 1986 by ESD and found to contain 10 extractable organic compounds, total phenols, and cyanide. Any effluent produced by this unit goes to the Polishing Pond (SWMU #22).

SWMU #18: BTF Thickener

The thickener consists of a circular, inground concrete tank. It receives sludge from the primary and secondary clarifiers (SWMUs #15 and #17) where the volume is reduced by gravity thickening. The thickened sludge then goes to the Aerobic Digester (SWMU #19).

SWMU #19: Aerobic Digester at the BTF

The digester consists of an inground concrete tank with two mechanical aerators. Sludge enters the digester from the Aeration Basins (SWMU #16), the Thickener (SWMU #18), and the clarifiers (SWMUs #15 and #17). Aeration of this material in the absence of nutrients results in mineralization of the sludge. The sludge goes to the Sludge Dewatering Machine (SWMU #20).

SWMU #20: Sludge Dewatering Machine

This unit is essentially a filter press. Sludge received from the Aerobic Digester (SWMU #19) is compressed on a fine mesh screen and fluid is forced out. The fluid goes to the Polishing Pond (SWMU #22) and the sludge is then screw-fed into the back of a dump truck. (This unit produces approximately 12 tons of sludge per day.) When a sufficient quantity of sludge has accumulated, it is taken to the Biological Sludge Disposal Area (SWMU #23). On February 11, 1986, ESD sampled the sludge produced by this unit and detected the following: cyanide, arsenic, toluene, chlorobenzene, chromium, lead, zinc, mercury, and 13 extractable organic compounds.

SWMU #21: BTF Emergency Basin

The Emergency Basin was located immediately west of the Equalization Basin (SWMU #13) and was connected to it. The Emergency Basin (now backfilled) was a surface impoundment of approximately half the area of the Equalization Basin (SWMU #13). The Emergency Basin was designed to serve as a reservoir into which highly concentrated wastewater would be diverted in the event of a sudden chemical spill in one of the process areas. This would protect the microbes in the BTF from being shocked by a sudden influx of undiluted chemical wastes. This unit has never been reported to have been used for its intended purpose, however it occasionally received overflow wastes from the Equalization Basin (SWMU #13) during periods of heavy rainfall. Since the Emergency Basin received the same wastes as the Equalization Basin (SWMU #13), it would be expected to have the same constituents of concern.

SWMU #22: Polishing Pond

This unit is an unlined, 17-acre surface impoundment built in 1919 and constructed of earthen materials. It currently provides tertiary treatment of wastewaters so that the quality of its effluent will meet NPDES discharge requirements. It receives wastewaters from the Secondary Clarifier (SWMU #17) and effluent from the Storm Water Runoff Sewer (SWMU #25). Additionally, runoff from the Blast Furnace

Emission Control Sludge Waste Pile (SWMU #24) goes into the Polishing Pond. This unit was in operation prior to the start-up of the Biological Treatment Facility and received untreated wastewaters from the process areas. On February 11, 1985, ESD conducted sampling at this unit. Sludge samples collected from three different locations adjacent to the influent structure to this pond contained the following: four volatile organic compounds, 10 extractable organic compounds (including sulfonylbisbenzene detected at a concentration of up to 60,000,000 ug/kg), cyanide, arsenic, barium, lead, zinc and mercury. Barium and 10 extractable organic compounds were found in samples of the final effluent to this pond. Due to the unlined condition of the impoundment and the presence of hazardous constituents in the sediment, this unit has a high probability for releasing to soil and groundwater.

SWMU #23: Biological Sludge Disposal Area

This land disposal site is an unlined, two-acre cleared area surrounded by a soil dike. The sludge disposed of here is generated by the Sludge Dewatering Machine (SWMU #20). Mr. Jones indicated that the sludge is covered with soil monthly. Additionally, sludge had also been poured onto the ground outside of the diked area. On February 11, 1986, ESD sampled this sludge and discovered the following: cyanide, arsenic, chromium, lead, zinc, mercury, volatile organic compounds, and extractable organic compounds. The presence of hazardous constituents and the unlined condition of the unit indicate a high probability of release to soil and groundwater.

SWMU #24: Blast Furnace Emission Control Sludge Waste Pile

This unit is adjacent to the BTF, and is composed of a material which was formerly a listed hazardous waste with EPA hazardous waste code F016. (F016 is dewatered air pollution control scrubber sludges from coke ovens and blast furnaces. Originally it was listed as hazardous due to its cyanide content.) On February 11, 1986, ESD sampled this unit and detected the following: cyanide, chromium, lead, and zinc. Runoff from this pile goes into the 17 acre Polishing Pond (SWMU #22). This unit covers several acres, and consists of a black granular material. It is partially vegetated on one side, with material being removed from its other side. During the VSI, Mr. Roberts stated that the sludge was being sold.

*F016.
reclassified*

SWMU #25: Storm Water Runoff Sewer

This unit consists of concrete pipes and drains, and collects runoff from various areas of the plant, such as the coal storage area and parking lots. The maintenance shop drain system also empties into this sewer. No sampling of the liquids in this system has taken place. These various fluids empty into the Polishing Pond (SWMU #22).

SWMU #26: Chemical Manufacturing Plant Main Process Building Floor Drain

Sulfonic acid is manufactured here in reactors and tanks situated on a raised, tile-covered platform. Tile-lined troughs collect primarily non-contact cooling water, and in the event of a leak or spill, would receive material from the production of sulfonic acid. All fluids collected are discharged to floor drains connected to the BTF Sewer (SWMU #4). Mr. Roberts stated that a tile lining is required because the spilled material is corrosive. During the VSI it was observed that some tiles were chipped and some had been patched.

SWMU #27: TSA 94 Building Floor Drain System

The reactors and tanks in this building are used in the production of toluene sulfonic acid 94% (TSA 94). The floor beneath the process units is lined with tile, as are the collection troughs. This drain system receives primarily non-contact cooling water, however, leaks or spills from the process units would collect in this system. Waste collected in this drain system is discharged to the BTF Sewer (SWMU #4). During the VSI, a separation between the drain and the floor was noted, which resulted in a breach in the drain.

SWMU #28: Sulfonation Building Floor Drain

This unit consists of a stainless steel lined trough in the floor of the Sulfonation Building, and receives contact and non-contact cooling water. Any spills or leaks from the sulfonation process unit would be collected in the trough. This unit discharges to the BTF Sewer (SWMU #4). According to Mr. Roberts, a fire occurred in this area in 1980 or 1981. Water or chemicals generated in fighting the fire would have entered the trough and been discharged to the BTF Sewer (SWMU #4).

SWMU #29: Chemical Product Tank Containment Area

Adjacent to the TSA 94 Building, chemical products are stored in tanks situated on a concrete pad with concrete dikes and a sump. The sump collects rainwater and any spilled material in the containment area, and then discharges these fluids to the BTF Sewer (SWMU #4). Chemical products stored in this area include: TSA 94, sulfuric acid, phenol sulfonic acid 65%, and orthoxylene. During the VSI, the outer linings on the TSA 94 and phenol sulfonic acid 65% tanks were observed to have rusted through. The concrete in the area of the sump is corroded.

SWMU #30: Centrifuge Wastewater Tank

This unit manages centrifuge wastewater from the production of sulfones, and is temporarily stored in a steel, above-ground tank situated in a concrete containment area. This wastewater is gradually released to the BTF Sewer (SWMU #4). During the VSI, a white residue was observed in the containment area.

SWMU #31: Monohydrate Building Floor Drain and Sump

This building houses the centrifuge used in the production of sulfones. This process generates the wastewater stored in the Centrifuge Wastewater Tank (SWMU #30). The floor in this building contains a concrete drain that leads to a concrete sump on the outside of the building. Any spills, or fluids generated by washing the centrifuge, go into the BTF Sewer (SWMU #4).

SWMU #32: Benzenesulfonyl Chloride (BSC) Drum Storage Area

This unit consists of approximately 400 plastic, 55 gallon drums which contain or have contained BSC. The drums were stacked one drum high on wooden pallets on gravel-covered ground. Most drums had their bungs closed during the VSI, but some were left open. No leaks or spills were observed during the VSI.

SWMU #33: Benzenesulfonyl Chloride (BSC) Plant Drum Storage Area

This unit consists of approximately 100 plastic 55 gallon drums of BSC stored both inside and outside of the BSC Plant. Most drums were closed while some were open. Several of the drums showed signs of deterioration such as splitting and bulging.

SWMU #34: Benzenesulfonyl Chloride (BSC) Wastewater Neutralization System

This unit is comprised of a series of above-ground tanks and mixing units where lime is added to the BSC wastewater to raise the pH to approximately 2.5 SU. The effluent enters the BTF Sewer (SWMU #4); a sludge is generated by the addition of lime. The sludge is disposed of at the Biological Sludge Disposal Area (SWMU #23).

SWMU #35: Old Waste Pile at Mineral Wool Plant

This unit consists of a large, unlined, sparsely vegetated waste pile adjacent to the Mineral Wool Plant. The material in this waste pile consists of flue dust and waste material generated from the mineral wool process. The waste generated in the process is chemically identical to the finished product, but does not have the appropriate

texture to be sold as mineral wool. The primary constituents of mineral wool and flue dust (as supplied during the VSI by R. B. Russell, Mineral Fiber Plant Manager) are listed below:

Mineral Wool

SiO₂
CaO
Al₂O₃
MgO
Fe₂O₃
S
MnO
P₂O₅

Flue Dust

SiO₂
CaO
S
K₂O
Al₂O₃
MgO
Fe₂O₃
MnO
Na₂O
TiO₂
P₂O₅

Waste from the plant is placed on the pile daily. During the VSI, Mr. Russell stated that they are currently looking into methods for returning this material to the plant process. Some of the material has been removed for this purpose.

SWMU #36: Maintenance Shop Used Oil Tank

This unit is an above-ground, rectangular steel tank used to manage approximately 300 gallons of waste oil generated by the Maintenance Shop. The tank rests on two railroad cross ties on a gravel base. Waste oil is accumulated here prior to pick up for recycling by a contractor.

SWMU #37: BTF Sewer Tar Trap

This unit is an inground concrete basin functioning as an oil/water separator. The trap is designed to remove and accumulate coal tar generated in the coking process and collected by the BTF Sewer (SWMU #4). According to Mr. Jones, this tar trap is cleaned approximately every six (6) months, and the material is placed in the coke ovens.

SWMU #38: Landfill

This unit is a northeast-southwest trending ridge-shaped plateau, approximately 60 feet high, containing a variety of debris. The different types of debris observed during the VSI included concrete rubble, wood and other construction debris, conveyor belts, empty metal 55 gallon drums, blast furnace flue dust and coal that had been degraded by weathering. A Solid Waste Disposal - Geohydrologic

Evaluation of this landfill conducted in October of 1980 by the Environmental Division of the Geological Survey of Alabama (EDGSA) indicated that flue dust, decanter tank tar, tar trap residue, mineral wool slag waste and construction debris may have been disposed of in this unit. The EDGSA recommended that: 1) disposal of waste material at this site be discontinued, 2) the unit be capped and 3) monitoring wells be installed. The unit is not capped and no containment controls were apparent during the VSI. This unit is still in use.

SWMU #39: Blast Furnace Emission Control Sludge Waste Pile Near Landfill

This waste pile is composed of blast furnace emission control sludge. (At one time this waste was a listed hazardous waste with EPA hazardous waste code F016. It was listed as hazardous because of its cyanide content.) This waste pile is a partially vegetated, elongated ridge parallel to and adjacent to the landfill, and consists of a black granular material. The pile is partially vegetated. No release controls were noted during the VSI.

8. The geographical and geological setting of the Respondent's facility is as follows;

According to a September 26, 1986 ADEM Memorandum, Respondent's facility is located in Jefferson County, Alabama, in the NE 1/4 of the NW 1/4 of Section 7, T17S, R2W of the Birmingham North Quadrangle. The original Part A places the Facility at latitude 33°34'30" and longitude 86°47'30".

The ADEM Memorandum describes Jefferson County as lying in the southernmost extension of the Appalachian Valley and Ridge and the Appalachian Plateaus physiographic provinces. The Alabama Valley and Ridge section of the Appalachian Valley and Ridge Province is comprised of northeast to southwest trending valleys and ridges. This Memorandum states that most of the Respondent's facility lies in the Birmingham Valley District of the Alabama Valley and Ridge section, and is located in the northern flank of the Blount Mountain Syncline on the upper plate of the Opossum Valley thrust fault.

The ADEM Memorandum describes rocks in the Appalachian Valley and Ridge Province as being characterized by intense faulting, folding and fracturing. The Alabama Valley and Ridge section is characterized by northeast trending anticlinal and synclinal structures which are generally cut longitudinally by thrust faults. Normal, reverse and wrench faults are locally abundant. The ADEM Memorandum further states that the Respondent's Equalization Basin (SWMU #13) lies within 2,000 feet of the Opossum Valley thrust fault.

The ADEM Memorandum stated that joints and joint sets occur throughout the rocks of Jefferson County with angles of dip ranging from 70 to 90 degrees, although lower angles (10 to 30 degrees) have been recorded. The linear extent of most joint sets ranges from a few feet to several hundred feet, with greater joint spacing occurring in thicker-bedded rocks. Joints generally are confined to one bed in thin-bedded rocks, but may extend vertically through several beds of thick-bedded rocks, according to the ADEM Memorandum. The number of joint sets increases in areas contiguous to large folds and major faults.

The ADEM Memorandum described the rock and soil beneath the Respondent's facility as follows. The Facility lies atop the Cambrian Conasauga Formation, which is composed of limestone with thin partings of shale and dolomite. The Conasauga typically weathers to a clayey or silty-clay soil that ranges from 5 to 20 feet thick. Such soils usually have an infiltration rate of one inch per 20 to 60 minutes. Sediments penetrated by the installation of Respondent's present RCRA monitoring wells consist of between 13 to 20 feet of sandy clay, (which necessarily would have a faster rate of infiltration). Beneath the soil covering, bedrock surfaces are irregular and pinnacles may project to the surface.

Pinnacles, whether they reach to the ground surface or not, have a decreased thickness of soil cover relative to the surrounding, lower portions of the same bedrock. As such, they would have little or no soil protection to either slow down the movement of contaminants, or dilute its hazardous nature once it was spilled on the ground or left a surface impoundment. Therefore, contaminants would reach the fractured, faulted and/or jointed limestone bedrock more quickly, and in a more concentrated form. Upon reaching these various types of openings or channels in the bedrock, the contaminants or contaminated groundwater could travel through the rock and thence on into the groundwater more rapidly. This situation would be greatly aggravated in the event of a low pH waste (such as the very acidic wastes in the Equalization Basin (SWMU #13)) entering the limestone bedrock since limestone (CaCO_3) is easily dissolved by even dilute acids. In this case, the acidic waste would begin dissolving the limestone upon contact and enlarging the natural channels in the bedrock created by fracturing, faulting or jointing. This enlargement would permit an even greater flow of wastes into the groundwater and offsite.

9. The hydrogeological characteristics in the area of Respondent's facility are described below:

According to an ADEM Memorandum dated September 26, 1986, the most productive formations in the area for groundwater include the Conasauga (upon which Respondent's facility lies), the Ketona Dolomite, the Knox Group, Ordovician limestones, the Chickamauga Limestone, the Fort Payne Chert-Tuscumbia Limestone, the Hartsville Sandstone and the Bangor Limestone. This Memorandum also stated that groundwater in Jefferson County, Alabama is used to a limited degree, and sources for industrial and domestic use are not widely developed.

The ADEM Memorandum noted that the availability of groundwater in Jefferson County is affected by the relationship of topography to geologic and hydrologic conditions such as structure, the nature of the rock units, faults, fractures, joint sets, and solution cavities. Ground Engineering and Testing Service, Inc., a contractor hired by Respondent to conduct groundwater flow studies at Respondent's facility, stated in their August 27, 1986 Report that at Respondent's site, the underlying rock generally contains channels and open voids near the rock/soil interface where groundwater flow is concentrated. This contractor acknowledged that the Conasauga Formation underlying the Facility "often contains fractures and solution channels through which groundwater easily flows."

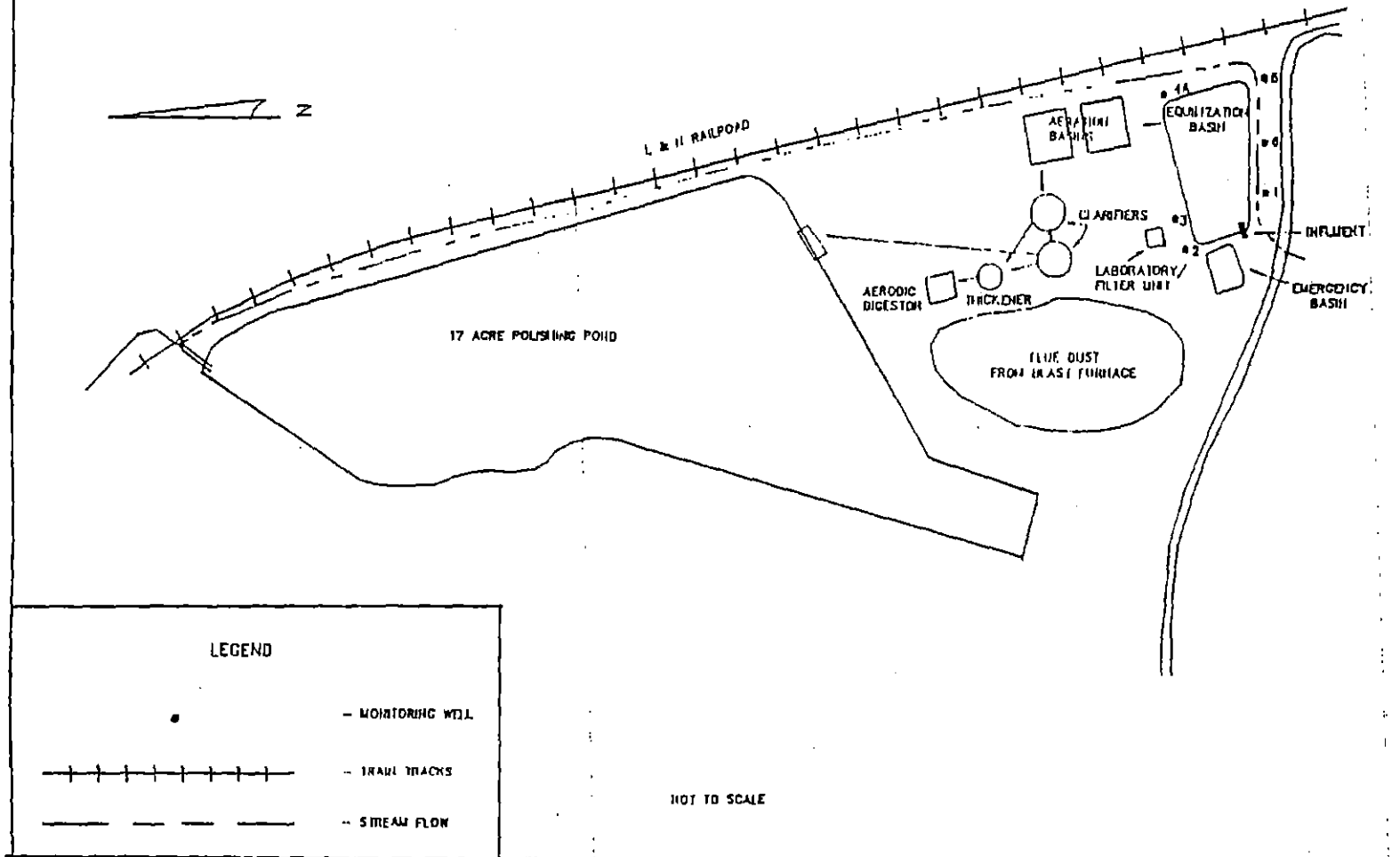
According to the September 26, 1986 ADEM Memorandum, the Facility is bordered on the south and west by a small intermittent stream, and two large, deep limestone quarries which lie within 1,000 feet of the Equalization Basin (SWMU #13). Potentiometric maps compiled by ADEM from groundwater elevation data from the Facility's monitoring wells indicate that groundwater flow is radial toward the intermittent stream. Localized groundwater flow is also toward the two quarries and could be affected by quarrying activities and any large quantities of water removed from the quarries. The ADEM Memorandum quotes Facility representatives as having acknowledged removing large volumes of water from at least one of the quarries.

The ADEM Memorandum describes the water table in areas underlain by the Conasauga Formation as being generally shallow, about 6 to 30 feet below ground surface. The Conasauga Formation, upon which Respondent's Equalization Basin (SWMU #13) is located, is an aquifer. A "Progress/Status Report" issued by Respondent and dated February 6, 1987 stated that Respondent discovered in October 1986 that a spring had been tapped and rerouted through a pipe when the Biological Treatment Facility was initially constructed in 1975. This Report stated that this spring originated near the Control Building and was drained, via a cast iron pipe, along the side of the Equalization Basin (SWMU #13) to an adjacent creek. The presence of groundwater so close to the ground surface increases the risk of rapid groundwater contamination in the event of a release from one of the SWMUs.

10. Respondent's groundwater monitoring well system is described below:

On March 2 - 3, 1987, the Environmental Services Division (ESD) of EPA conducted a Comprehensive Groundwater Monitoring Evaluation (CME) at Respondent's facility. According to the CME Report, Respondent installed six monitoring wells around the Equalization Basin (SWMU #13) in August 1985. (See Figure 1.) These monitoring wells were required here

(figure taken from ESD Comprehensive Groundwater
Monitoring Evaluation Report dated March 23, 1987)



because the industrial wastewater entering the Equalization Basin (SWMU #13) exhibited the characteristic of corrosivity as defined by 40 CFR 261.22. The CME Report stated that because the Equalization Basin (SWMU #13) had a pH of 2.0 SU or less it was a RCRA regulated unit, and therefore a RCRA groundwater monitoring system should have been installed by November 1981. When the groundwater monitoring system was originally installed, groundwater flow was assumed to be to the north. Well #1 was designated the upgradient well and Wells #2, #3, and #4 were designated as downgradient wells. After the initial four wells were installed, it was determined that groundwater flow was toward the intermittent stream (to the southeast) and Wells #5 and #6 were installed as downgradient wells. Well #4 was abandoned as a RCRA monitoring well because Respondent concluded that the contamination found in it was due to a nearby leaky pipe carrying waste. In its place Well #4A was installed in February 1987. Presently, Well #2 is designated as the upgradient well, and Wells #1, #3, #4A, #5, and #6 are designated as downgradient.

The September 26, 1986 ADEM Memorandum stated that Respondent's groundwater monitoring wells are located approximately 70 feet from the toe of the Equalization Basin (SWMU #13). This ADEM Memorandum further stated that liquid hazardous wastes influenced by bedding plane or fracture flow potentially could allow contaminated groundwater to flow into the lower limestone aquifer and under the detection interval of the present monitoring wells. This would preclude the immediate detection of contamination issuing from this basin. The ADEM Memorandum further stated that the wells are partially hydraulically separated from the Equalization Basin (SWMU #13) by an intermittent stream which intercepts near surface groundwater before it reaches the wells. The combination of the above characteristics potentially could allow contaminated groundwater to not be accurately represented in the Respondent's monitoring wells. The March 2 - 3, 1987 CME Report stated that there has not been any site-specific hydrologic data collected to determine if the well screens are properly placed. The CME Report concluded that the wells do not appear adequate to satisfy the requirements of 40 CFR 265.91.

11. Releases of hazardous wastes and constituents at the Respondent's facility have been documented and are discussed below. The U.S. EPA Region IV Environmental Services Division (ESD) conducted sampling at Respondent's facility on February 11, 1986.

ESD collected two sets of samples from the Equalization Basin (SWMU #13). A sample of the influent contained the following: 15 volatile organic compounds (including benzene, toluene and chlorobenzene), 36 extractable organic compounds (including

naphthalene and phenol), total phenol, cyanide, and arsenic. A sludge sample collected and composited from 10 locations around the basin contained the following: benzene, tetrachloroethylene, toluene, chlorobenzene, ethyl benzene, total xylenes, cyanide, arsenic, barium, lead, and 31 extractable organic compounds (EOC's). These EOC's were detected at concentrations ranging from an estimated 300,000 ug/kg to 15,000,000 ug/kg, with 18 of the EOC's exceeding 1,000,000 ug/kg.

On April 17, 1986, ADEM Field Operations conducted sampling of Respondent's six RCRA monitoring wells as part of a Comprehensive Monitoring Evaluation. Analyses of groundwater samples taken from these wells detected the following hazardous waste constituents: Well #1: chromium (over primary drinking water standards), phenol, cyanide, copper and arsenic; Well #2: chromium (over primary drinking water standards), arsenic (at a concentration of more than twice that of any of the other wells), and copper; Well #3: fluorene, phenanthrene and cyanide; Well #4: phenol, naphthalene, cyanide, acenaphthylene, arsenic, copper, chromium, and 2,4 dimethyl phenol; Well #5: arsenic and cyanide; and Well #6: chromium (over primary drinking water standards), phenol, naphthalene, phenanthrene, cyanide, anthracene, fluoranthene, copper, arsenic, pyrene, benzo anthracene, and chrysene. On August 4, 1986, Respondent discovered a statistically significant increase in Total Organic Carbon and in Specific Conductance parameters in monitoring Well #4. Additionally, total phenols, naphthalene, acenaphthylene, cyanide and 2,4 dimethyl phenol were detected. On August 25, 1986, Respondent notified EPA and ADEM of these findings.

Respondent hired Ground Engineering and Testing Service, Inc. of Birmingham, Alabama, a private engineering firm, to investigate the Facility's Equalization Basin (SWMU #13). On August 25, 1986, the engineering firm excavated around the weir leading from this basin and discovered that an 18 inch diameter, vitrified clay pipe connected to the weir was leaking "raw waste" from two joints. Ground Engineering also noted in its letter of August 27, 1986, to Robison and Layton of Birmingham, Alabama, that the soil in the immediate vicinity of the leaking joints was discolored, and that Well #4 is located near this leaking pipe. Ground Engineering concluded that the contamination in Well #4 was due to leaking joints in this pipe. A "Groundwater Assessment Plan for the Equalization Basin" (prepared by Robison and Layton, Inc. of Birmingham, Alabama, and dated September 4, 1986) acknowledged that the leaking vitrified clay pipe "does not explain the waste specific constituents present in Well #6," or their absence in Wells #1 and #5. In the same report, Robison and Layton, Inc. speculated that the waste specific constituents in Well #6 could be due to a condensate trap on an adjacent buried coke oven gas line from a nearby facility. According

to a "Progress/Status Report Groundwater Assessment/Remedial Action Plan" generated by Respondent and dated February 6, 1987, the basin's weir and discharge pipe were removed, relocated and replaced with a "welded joint stainless line." This was completed in late October 1986.

The effluent from the Secondary Clarifier (SWMU #17) was sampled by ESD on February 11, 1986 and found to contain 10 extractable organic compounds, total phenols, and cyanide.

ESD sampled the sludge produced by the Sludge Dewatering Machine (SWMU #20) and detected the following: 13 extractable organic compounds, arsenic, cyanide, chromium, lead, mercury, zinc, chlorobenzene, and toluene.

The Polishing Pond (SWMU #22) was sampled twice by ESD (February 11, 1985). Sludge samples collected from three different locations adjacent to the influent structure to this pond contained the following: 10 extractable organic compounds (including sulfonylbisbenzene detected at a concentration of up to 60,000,000 ug/kg), 4 volatile organic compounds, cyanide, arsenic, barium, lead, zinc and mercury. Samples of the final effluent to this pond contained 10 extractable organic compounds and barium.

The Blast Furnace Emission Control Sludge Waste Pile (SWMU #24) was also sampled by ESD (February 11, 1986). Samples taken from two locations contained cyanide, chromium, lead, and zinc.

The previously referenced RFA identifies the hazardous constituents and hazardous waste release potential for the 39 SWMUs as follows:

Low Potential for Release: SWMUs # 8, 14, 15, 16, 17, 18, 19, 20, 28, 30, 32, 33, 34, 35, and 36;

Moderate Potential for Release: SWMUs # 1, 2, 3, 5, 7, 9, 24, 25, 26, 27, 29, 31, 37, 38, and 39;

High Potential for Release: SWMUs # 4, 6, 10, 11, 12, 13, 21, 22, and 23. SWMU #13 has already experienced a significant release.

12. Hazardous wastes and/or constituents may further migrate from the Facility into the environment in the following pathways:

The September 26, 1986 ADEM Memorandum stated that the Equalization Basin (SWMU #13) and the Emergency Basin (SWMU #21) rest directly on the steeply dipping limestones of the Conasauga Formation. The bedding planes or fractures of this formation potentially could permit liquid contaminants to flow into the lower limestone aquifer. Additionally, the very low pH of the wastewater in the Equalization Basin (SWMU #13) could readily dissolve the underlying limestone (CaCO₃) along

any flowpath taken by the acidic waste and thereby increase the amount of wastewater that could migrate offsite. The presence of limestone pinnacles reaching to the surface increases the opportunity for acidic wastes to migrate rapidly offsite. This would be due to the absence of the mitigating effects of soil cover to retard the acidic wastes both chemically and physically. (See paragraph #8.) No evidence of surface runoff of wastes was observed during the VSI of May 9 and 10, 1989.

Sampling conducted by ADEM Field Operations on April 17, 1986, indicates that all of the downgradient wells are contaminated. The September 26, 1986 ADEM Memorandum stated that apparently seepage from the Equalization Basin (SWMU #13) has proceeded long enough that contaminants have migrated well beyond the point where a proper interim status monitoring system should have been installed. (See paragraph 10.) The ADEM Memorandum further stated that vertical flow produced by a combination of a breach in the clay liner and the relatively high basin hydraulic head might easily have allowed contaminants to pass under the nearby stream and apparent groundwater discharge point.

13. The hazardous wastes and hazardous waste constituents identified in paragraph 11 above may pose a threat to human health and the environment. The hazardous effects of substances identified in Respondent's SWMUs are described below from the Handbook of Toxic and Hazardous Chemicals and Carcinogens by Marshall Sittig (1985) and from Dangerous Properties of Industrial Materials, Seventh Edition, by N. Irving Sax and Richard J. Lewis, Sr. (1989):

Anthracene is a skin irritant and an allergen. It is also an experimental tumorigen and neoplastigen. It has been reported in the EPA TSCA Inventory, and is on the Community Right to Know List (40 CFR Part 300).

Arsenic is listed by EPA as a priority toxic pollutant, and some of its compounds are listed as hazardous substances. It is also listed by EPA as a contaminant (EPA hazardous waste number D004) when it meets the criteria for being EP Toxic (40 CFR 261.24). Arsenic is a carcinogen, having been cited as a cause of skin cancer, although the incidence is low. Skin cancer in humans is causally associated with exposure to inorganic arsenic compounds in drugs, drinking water and the occupational environment. Harmful effects and symptoms are as follows: trivalent arsenic compounds are corrosive to the skin, especially the moist mucous membranes which are most sensitive to its irritant action; conjunctiva, moist and macerated areas of the skin, eyelids, the angles of the ears, nose, mouth, and respiratory mucosa are vulnerable to the irritant effects; arsenic trioxide and pentoxide are capable of producing skin sensitization and contact dermatitis.

Barium is listed by EPA as a contaminant (EPA hazardous waste number D005) when it meets the criteria for being EP Toxic (40 CFR 261.24). When ingested or given orally, the soluble, ionized compounds exert a profound effect on all muscles (especially smooth muscles) markedly increasing their contractility. The heart rate is slowed and may stop in systole. Other effects include increased intestinal peristalsis, vascular constriction, bladder contraction, and increased voluntary muscle tension.

Benzene is listed by EPA as a hazardous waste (U019) when discarded, a priority toxic pollutant and a carcinogen. Acute exposure to benzene results in central nervous system depression; headache, dizziness, nausea, convulsions, coma, and death may result. Death has occurred from large acute exposure or as a result of ventricular fibrillation. Benzene is basically a myelotoxic agent. Recent research has shown increases in the rate of chromosomal aberrations associated with benzene myelotoxicity.

Chlorobenzene is a constituent of the listed hazardous waste F002. It is also listed by EPA as a hazardous substance and as a priority toxic pollutant. Harmful effects and symptoms include: irritation of the eyes and nose, drowsiness, incoherence, skin irritation, and liver damage.

Chromium is listed by EPA as a contaminant (EPA hazardous waste number D007) when it meets the criteria for being EP Toxic (40 CFR 261.24), and as a priority toxic pollutant. Chromium compounds in the +3 state are of low order of toxicity. In the +6 state, chromium compounds are irritants and corrosive, and can enter the body by ingestion, inhalation, and through the skin.

Chrysene is a listed hazardous waste (U050) when discarded. It is an experimental carcinogen, neoplastigen and tumorigen by skin contact.

Cyanides are listed by EPA as hazardous wastes (P030) when discarded, hazardous substances, and priority toxic pollutants. Harmful effects and symptoms include: weakness, headaches, confusion, nausea, vomiting, eye and skin irritation, and slow gasping respiration.

Inorganic Lead is listed by EPA as a contaminant (EPA hazardous waste number D008) when it meets the criteria for being EP Toxic (40 CFR 261.24), a priority toxic pollutant and (various compounds) as hazardous substances. Harmful effects and symptoms include: decreased physical fitness, fatigue, sleep disturbance, headache, aching bones and muscles, digestive symptoms (particularly constipation), abdominal pains and decreased appetite, anemia, pallor, a "lead line" on the gums, and decreased hand-grip strength.

Elemental Mercury is listed by EPA as a contaminant (EPA hazardous waste number D009) when it meets the criteria for being EP Toxic (40 CFR 261.24). Harmful effects and symptoms include: coughing, chest pains, sypnea, bronchitis, pneumonia, tremors, insomnia, irritability, indecision, headaches, fatigue, weakness, stomatitis, salivation, gastrointestinal disturbance, anorexia, weight loss, proteinuria, and irritation of eyes and skin.

Inorganic Mercury is listed by EPA as a contaminant (EPA hazardous waste number D009) when it meets the criteria for being EP Toxic (40 CFR 261.24), and a priority toxic constituents pollutant. Mercury is a primary irritant of skin and mucous membranes. It may occasionally be a skin sensitizer. Harmful effects and symptoms are as follows. Exposure to lower levels over prolonged periods produces symptom complexes that can vary widely from individual to individual. These may include weakness, loss of appetite, loss of weight, insomnia, indigestion, diarrhea, metallic taste in the mouth, increased salivation, soreness of mouth or throat, inflammation of gums, black line on the gums, loosening of teeth, irritability, loss of memory, and tremors of fingers, eyelids, lips, or tongue. More extensive exposures, either daily or one-time exposures, can produce extreme irritability, excitability, anxiety, delirium with hallucinations, melancholia, or manic depressive psychosis. Either acute or chronic exposure may produce permanent changes to affected organs and organ systems.

Naphthalene is listed by EPA as a hazardous waste (U165) when discarded, a hazardous substance, and a priority toxic pollutant. Harmful systemic effects and symptoms are as follows. Inhaling high concentrations of naphthalene vapor or ingesting naphthalene may cause intravascular hemolysis and its consequences. Initial symptoms include eye irritation, headache, confusion, excitement, malaise, profuse sweating, nausea, vomiting, abdominal pain, and irritation of the bladder. There may be progressive jaundice, hematuria, hemoglobinuria, renal tubular blockage, and acute renal shutdown. Locally, naphthalene is a primary irritant and causes erythema and dermatitis upon repeated contact. It is also an allergen and may produce dermatitis in hypersensitive individuals.

Phenanthrene is moderately toxic by ingestion. It is also a human skin photosensitizer, and an experimental neoplastigen and tumorigen by skin contact.

Phenol is listed by EPA as a hazardous waste (U188) when discarded, a constituent in EPA hazardous waste K087, a hazardous substance, and a priority toxic pollutant. Harmful effects and

symptoms are as follows. Systemic effects may occur from any route of exposure. These include paleness, weakness, sweating, headache, ringing of the ears, shock, cyanosis, excitement, frothing of the nose and mouth, dark colored urine, and death. If death does not occur, kidney damage may occur. Locally, phenol has a marked corrosive effect on any tissue. When it comes in contact with the eyes it may cause severe damage and blindness. If the chemical is not removed promptly, it may cause a severe burn or systemic poisoning.

Pyrene is moderately toxic by ingestion and intraperitoneal routes. It is also a skin irritant and an experimental tumorigen.

Tetrachloroethylene is a constituent of the listed hazardous waste F001, a priority toxic pollutant and a carcinogen. Acute exposure to tetrachloroethylene may cause central nervous system depression, hepatic injury, and anesthetic death. Signs and symptoms of overexposure include malaise, dizziness, headache, increased perspiration, fatigue, staggering gait, and slowing of mental ability. Locally, repeated contact may cause a dry, scaly, and fissured dermatitis.

Toluene is a constituent of the listed hazardous waste F005, a hazardous substance, and a priority toxic pollutant. Acute exposure to toluene primarily causes central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, poor coordination with staggering gait, skin paresthesia, collapse and coma. Locally, toluene may cause irritation of the eyes, respiratory tract, and skin.

Xylene is listed by EPA as a hazardous waste (U239) when discarded. It is mildly toxic by ingestion and inhalation, and moderately toxic by intraperitoneal and subcutaneous routes. It is an experimental teratogen.

Zinc has the following harmful effects and symptoms by ingestion: cough, dyspnea and sweating. It is a human skin irritant.

14. Respondent's Biological Treatment Facility (BTF) is located in the northern portion of the City of Birmingham where there is a mixture of residential and industrial usage. The BTF is approximately a quarter mile to the west and northwest of Tarrant City, and approximately a half a mile to the southeast of a residential neighborhood. Target populations therefore include people living in nearby housing and working in the adjacent industries.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set out above, and after consideration of the administrative record, the Director of the Waste Management Division, EPA Region IV, has made the following conclusions of law and determinations:

1. Respondent is a "person" within the meaning of Section 1004(15) of RCRA, 42 U.S.C. Section 6903(15):
2. Respondent is the owner or operator of a facility that has operated subject to Section 3005(e) of RCRA, 42 U.S.C. Section 6925(e).
3. Certain wastes and constituents found at Respondent's facility are hazardous wastes or hazardous constituents thereof as defined by Section 1004(5) of RCRA, 42 U.S.C. Section 6903(5). These are also hazardous wastes or hazardous constituents within the meaning of Section 3001 of RCRA, 42 U.S.C. Section 6921 and 40 CFR Part 261.
4. There is or has been a release of hazardous wastes and/or hazardous constituents into the environment from Respondent's facility.
5. The actions required by this Order are necessary to protect human health and/or the environment.

VI. WORK TO BE PERFORMED

Pursuant to Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h), Respondent is hereby ordered to perform the following tasks in the manner and by the dates specified herein. All work undertaken pursuant to this Order shall be performed in a manner consistent with, at a minimum: the attached Scope(s) of Work; the EPA-approved Interim Measures Workplan, RCRA Facility Investigation (RFI) Workplan, Corrective Measures Implementation Program Plan, and other Workplans; RCRA and its implementing regulations; and applicable EPA guidance documents. Relevant guidance may include, but is not limited to, the "RCRA Facility Investigation (RFI) Guidance" (EPA 530/SW-87-001), "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986), "Test Methods for Evaluating Solid Waste" (SW-846, November 1986), and "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities" (EPA 530/SW-85-031, July 1986.)

RCRA Facility Investigation (RFI)

1. Within 45 days of the effective date of this Order, Respondent shall submit to EPA and ADEM a work plan for an RFI. The RFI Work Plan and activities conducted pursuant to this Order are subject to approval by EPA and shall be performed in a manner consistent with the RFI Scope of Work contained in Attachment A. Attachment A to this Order is incorporated by reference as if fully set forth herein. The RFI Work Plan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations, and EPA guidance documents determined by EPA to be relevant, including but not limited to, the "RCRA Facility Investigation (RFI) Guidance Manual--Draft", (OSWER 9502.00-6c, EPA 530/SW-87-001, July 1987).

2. The RFI Work Plan shall be designed to define the presence magnitude, extent, direction and rate of movement of any hazardous wastes or hazardous constituents, within and beyond the Facility boundary. The RFI Work Plan shall document the procedures Respondent shall use to conduct those investigations necessary to: (1) characterize the source(s) of contamination; (2) determine the nature, extent, and rate of movement of hazardous waste constituents on and off Respondent's property; (3) determine the possible routes of migration of hazardous wastes and hazardous constituents on and off the Facility, including characterization of the geology and hydrology of the Facility which delineates possible routes of migration; (4) determine the extent and potential for migration of hazardous wastes and hazardous constituents through each of the environmental media; (5) identify actual or potential receptors, and (6) develop alternative options from which EPA will select a corrective measure to remediate the observed and potential contamination. The Work Plan shall include a specific schedule for implementation of all activities described in the Work Plan.

3. In accordance with Attachment A herein, the RFI Work Plan shall include: (a) a Project Management Plan, which includes a schedule for implementation of the Work Plan; including preparation and submission of preliminary and final reports to EPA; (b) a Data Collection Quality Assurance Plan; (c) a specific Data Management Plan; (d) a Health and Safety Plan; and (e) a Community Relations Plan.

CORRECTIVE MEASURES STUDY (CMS)

4. Upon completion of the RFI, the Respondent shall conduct a CMS in accordance with CMS Scope of Work in Attachment B. Attachment B to this Order is incorporated by reference as if fully set forth herein.

CORRECTIVE MEASURES IMPLEMENTATION (CMI)

5. If Respondent has complied with the terms of this Order, after public comment and EPA's selection of the corrective measure to be

implemented, EPA shall provide a 90-day period for negotiation of an administrative order on consent [or a judicial consent decree] for implementation of the corrective measure. If agreement is not reached during this period, EPA reserves all rights to implement the corrective measure or other remedial response and to take any other appropriate actions under RCRA, the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), or any other available legal authority, including issuance of a unilateral administrative order directing Respondent to implement the corrective measure.

SUBMISSIONS/AGENCY APPROVAL/ADDITIONAL WORK

6. Within 10 days of approval or modification by EPA of the Work Plans, Respondent shall commence work and implement the tasks required by the Work Plans submitted pursuant to the Scope(s) of Work contained in Attachments A and B in accordance with the standards, specifications and schedule stated in the Work Plans as approved or modified by EPA.

7. Beginning with the month following the effective date of this Order, Respondent shall provide EPA and ADEM with progress reports for each month on the tenth day of the following month. The progress reports shall be developed as specified in the Scopes of Work contained in Attachment A and B hereto. At a minimum, these progress reports shall: (1) describe all activities undertaken in achieving compliance with this Order; (2) describe all plans and activities completed during the past month, as well as the actions which are scheduled for the next month; (3) identify any requirements under this Order that were not completed as provided and any problem areas and anticipated problem areas in complying with this Order; and (4) include the results of sampling and tests and other data generated pursuant to the Work Plan(s).

8. Respondent shall provide draft and final RFI and CMS reports to EPA and ADEM in accordance with the schedules contained in this Order and its attachments.

9. EPA will review all draft and final reports or work plans, and notify Respondent in writing of EPA's approval, disapproval or modification of the reports, work plans, or any part thereof. In the event of any disapproval, EPA shall specify in writing the deficiencies and reasons for such disapproval. With the receipt of EPA's disapproval of any reports or work plans, Respondent shall amend and submit revised reports or work plans which EPA will approve or modify. Reports, as approved or modified, shall be deemed incorporated into and part of this Order.

10. Two (2) copies of all documents, including work plans, preliminary and final reports, progress reports, and other correspondence to be submitted pursuant to this Order shall be hand delivered or sent by

certified mail, return receipt requested, to the Project Coordinator designated pursuant to Section XII of this Order.

11. Consistent with the objectives of this Order, EPA may determine that certain tasks, including investigatory work or engineering evaluations, are necessary in addition to the tasks and deliverables included in the Plans. If EPA determines that such additional work is necessary, EPA will request in writing that Respondent perform the additional work in this situation and shall specify the basis and reasons for EPA's determination that the additional work is necessary. Within fifteen (15) days after the receipt of such request, Respondent shall have the opportunity to meet with EPA to discuss the additional work EPA has requested and to propose alternatives. Within fifteen (15) days of this meeting, or the receipt of EPA's request for additional work, whichever is later, Respondent shall commence with the additional work EPA has requested according to an EPA approved work plan. All additional work performed by Respondent under this paragraph shall be performed in a manner consistent with this Order.

12. All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer licensed in the State of Alabama with expertise in hazardous waste site investigations and remediation. Within ten (10) days of the effective date of this Order, Respondent shall notify EPA and ADEM in writing of the name, title, and qualifications of the engineer, and of any contractors, or subcontractors and their personnel to be used in carrying out the terms of the Order.

VII. QUALITY ASSURANCE

Throughout all sample collections and analysis activities, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, as specified in the approved Plans. In addition, Respondent shall:

1. Consult with EPA in planning for, and prior to, field sampling and laboratory analysis.

2. Inform the EPA Project Coordinator, ten (10) days in advance of which laboratories will be used by Respondent and ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analyses.

3. Ensure that laboratories used by Respondent for analyses perform such analyses according to EPA methods included in "Test Methods for Evaluating Solid Waste" (SW-846, November 1986 - 3rd. Edition) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondent shall submit all protocols to be used for analyses to EPA for approval within ten days prior to the commencement of analyses.

4. Ensure that laboratories used by Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analysis of samples provided by EPA to demonstrate the quality of the analytical data.

5. Use the EPA guidance to evaluate all data to be used in the proposed plans including data collected prior to EPA approval of these plans required by Section VI of this Order. This evaluation shall be provided to EPA as part of the plans required by Section VI of this Order, and shall be updated as necessary or as required by EPA.

VIII. PUBLIC COMMENT AND PARTICIPATION

1. Following proposed modification or proposed approval by EPA of a CMS Final Report, EPA shall make the RFI Final Report (or summary of report), the CMS Final Report (or summary of report), and EPA's justification for selecting the proposed remedy available to the public for review and comment for at least twenty-one (21) days.

2. Following the public review and comment period, EPA will notify Respondent which alternative corrective measure is selected, if any. If the Corrective Measure recommended in the CMS Final Report is not the corrective measure selected by EPA after consideration of public comments, EPA will inform Respondent in writing of the reasons for such decision and the Respondent shall modify the CMS Final Report as directed by EPA.

IX. ON-SITE AND OFF-SITE ACCESS

1. Respondent shall provide access to EPA or its designated representatives to enter and freely move about all property at the Facility during the effective dates of the Order for the purposes of, inter alia: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of the Respondent in carrying out the terms of this Order; conducting such sampling, tests, or monitoring as EPA or its representatives deem necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to EPA by the Respondent. The Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order. The Respondent shall comply with all approved health and safety plans.

2. To the extent that work required by this Order, or by any approved Work Plans prepared pursuant hereto must be done on property not owned or controlled by the Respondent, Respondent shall use their best efforts to

obtain site access agreements from the present owner(s) of such property within 10 days of approval of any Work Plan for which site access is required. Best efforts as used in this Section shall include, at a minimum, a certified letter from Respondent to the present owners of such property requesting access agreements to permit Respondent, EPA and its authorized representatives to access such property. Any such access agreement shall be incorporated by reference into this Order. In the event that agreements for site access are not obtained within 10 days upon approval of the work plans which identify the need for access, Respondent shall notify EPA in writing regarding both the efforts undertaken to obtain access and its failure to obtain such agreements within 5 days thereafter. In the event that EPA obtains access, Respondent shall undertake EPA approved work on such property.

3. Nothing in this section limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including but not limited to RCRA and CERCLA.

X. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. Respondent shall submit to EPA and ADEM all results of sampling, and/or tests, or other data generated by or on behalf of the Respondent in accordance with the requirements of this Order and its attachments.

2. Respondent shall notify EPA and ADEM at least ten (10) days before engaging in any field activities such as any well drilling, installation of equipment, or sampling. At the request of EPA, Respondent shall provide or allow EPA or its authorized representative to take split or duplicates of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, EPA will allow Respondent or their authorized representatives to take split or duplicates of all samples collected by EPA under this Order. EPA will notify Respondent at least ten (10) days before conducting any sampling under this Order.

3. All information and data shall be available to the public except to the extent that it is confidential business information. Disputes over confidentiality shall be covered by 40 CFR Part 2. Physical or analytical data shall not be deemed confidential.

XI. RECORD PRESERVATION

Respondent shall preserve, during the pendency of this Order and for a minimum of six (6) years after approval or modification of the final CMS report, all records and documents in their possession or in the possession of their divisions, employees, agents or consultants or contractors which relate in any way to this Order or to hazardous waste management and disposal at the Facility. At the conclusion of six (6)

years, Respondent shall then make such records available to EPA for inspection or shall provide copies of any such records to EPA. Respondent shall notify EPA 30 days prior to the destruction of any such records, and shall provide EPA with the opportunity to take possession of any such records.

XII. PROJECT COORDINATOR

1. Within (ten) 10 days of the effective date of this Order, EPA and Respondent shall each designate a Project Coordinator. Respondent shall notify EPA in writing of the Project Coordinator it has selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order. The EPA Project Coordinator will be EPA's designated representative. All communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed through the Project Coordinators.

2. Respondent and EPA shall provide at least ten (10) days written notice prior to changing Project Coordinators.

3. The absence of the EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

4. If EPA determines that activities in compliance or noncompliance with this Order, have caused or may cause a release of hazardous waste or hazardous constituents, hazardous substances, pollutants, or contaminants, or a threat or potential threat to the public health or to the environment, EPA may order Respondent to stop further implementation of the Order for such a period of time as may be needed to abate any such release or threat and/or undertake any action which EPA determines is necessary to abate such a release or threat.

XIII. NOTIFICATION

1. Unless otherwise specified, reports, notices or other submissions required under this Order shall be in writing and shall be hand delivered or sent by certified mail, return receipt requested to:

Allan E. Antley, Chief
Compliance Section
RCRA Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Mrs. Sue Robertson, Chief
Land Division
Alabama Department of
Environmental Management
1751 Congressman Dickinson Dr.
Montgomery, Alabama 36130

2. Documents to be submitted to Respondent will be sent to:

Charles Jones
Manager of Environmental Affairs
Sloss Industries Corporation
P.O. Box 5327
3500 35th Avenue North
Birmingham, AL 35207

XIV. PENALTIES FOR NONCOMPLIANCE

The failure or refusal to carry out the terms of this Order in a manner deemed satisfactory subjects Respondent to a civil penalty in an amount not to exceed \$25,000 for each day of noncompliance with this Order in accordance with Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h).

XV. DISPUTE RESOLUTION

1. If Respondent disagrees, in whole or in part, with any EPA disapproval or other decision or directive made by EPA pursuant to this Order, Respondent shall notify EPA in writing of its objections and the basis therefore within fifteen (15) calendar days of receipt of EPA's disapproval, decision or directive. Said notice shall specify the following: the points in dispute; the position Respondent maintains should be adopted as consistent with the requirements of the Order; the basis for Respondent's position; and any matters which Respondent considers necessary for EPA's determination. Within fifteen (15) business days of EPA's receipt of such written notice, EPA shall provide to Respondent its final decision on the pending dispute which shall be binding upon parties to this Order.

2. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute shall not excuse, toll or suspend any compliance obligation or deadline required pursuant to this Order during the pendency of the dispute resolution process.

3. Notwithstanding any other provisions of this Order, no action or decision by EPA, including without limitation, decisions of the Regional Administrator, Region IV, pursuant to this Order shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondent's compliance with the mandate(s) of this Order.

XVI. RESERVATION OF RIGHTS

1. This Order shall not be construed as a waiver or limitation of any rights, remedies, powers and/or authorities which EPA has under RCRA, CERCLA, or any other statutory or common law enforcement authority of the United States of America.

2. EPA hereby reserves all of its statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any applicable laws and regulations and with any of the requirements of this Order, including but not limited to: the right both to disapprove of work performed by the Respondent and to request that Respondent perform tasks in addition to those stated in the Work Plans; the right to perform any portion of the work herein or any additional site characterization, studies, and response/corrective actions as it deems necessary; the authority to undertake removal actions or remedial actions; the right to seek reimbursement from Respondent for such additional costs incurred by the United States; and the right to take additional enforcement action pursuant to Section 3008(h) of RCRA should the Agency determine that such actions are warranted.

3. Compliance by Respondent with the terms of this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable State or Federal law or regulation including without limitation, any conditions of a permit issued under RCRA or any other applicable State or Federal law or regulation.

XVII. OTHER CLAIMS

Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the facility.

XVIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

XIX. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent shall indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or its agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. The United States government shall not be held out or construed to be a party to any contract entered into by Respondent in carrying out activities pursuant to this Order.

XX. FINANCIAL ASSURANCE

1. Within sixty (60) calendar days of the effective date of this Order, Respondent shall present to EPA for review a summary and analysis of Respondent's existing instruments for financial assurance provisions as established by EPA regulations 40 CFR Part 265.143 [ADEM Administrative Code 14-6-.08(4)] and 40 CFR 265.145 [ADEM Administrative code 14-6-.08(5)] and/or any other instruments that have been provided previously by Respondent for any purpose related to liability coverage, closure, and post-closure care of their facility. Respondent shall also provide a copy of each instrument for which a summary and analysis is being provided in accordance with this Section. The analysis shall describe clearly, but shall not be limited to, the following items:

a. The nature of these instruments and the extent to which they are available for access by EPA for the purpose of ensuring the completion of all requirements established pursuant to this Order, including all tasks described in the Attachments hereto; and

b. Precise dollar amounts that are available to EPA, and schedules for their availability, for the above-stated purposes. The amount of funds available through these instruments must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for the financial assurance of closure, post-closure, liability coverage, and the actions required under this Order.

2. EPA will review the submittal and will provide notice to the Respondent as to the adequacy of its existing financial assurance measures for the above-stated purposes, and shall indicate therein what additional financial assurances, if any, must be provided by Respondent to ensure compliance with the terms of this Order.

3. Within thirty (30) days of Respondent's receipt of a notice from EPA that Respondent's financial assurance measures are inadequate,

Respondent shall establish an irrevocable standby letter of credit or shall otherwise provide [per 40 CFR Part 265.143/ADEM Administrative Code 14-6-.08(4)] additional financial assurances according to the terms provided in said notice. Such additional financial assurance measures shall be available to EPA to perform such terms or conditions established pursuant to the Order, provided that prior to drawing upon any such assurance measure, EPA shall notify Respondent in writing of its alleged failure to perform the requirements of this Order and provide Respondent with a reasonable time period of not less than fifteen (15) calendar days within which to remedy the alleged nonperformance.

4. This Order in no way negates Respondent's obligation to establish and/or maintain financial assurance for closure and post-closure care under 40 CFR Parts 265.143 [ADEM Administrative Code 14-6-.08(4)] and 40 CFR 265.145 [ADEM Administrative code 14-6-.08(5)].

XXI. SUBSEQUENT MODIFICATION

1. This Order may be amended by EPA. Such amendments shall be in writing, shall have as their effective date the date on which they are signed by EPA, and shall be incorporated into this Order.

2. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon approval or modification by EPA, incorporated into this Order. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of the requirements of this Order and shall subject the Respondent to the statutory penalty provisions referenced in Section XIV of this Order and other sanctions.

3. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedule and any other writing submitted to Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XXII. SEVERABILITY

If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

XXIII. TERMINATION AND SATISFACTION

The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Order, including any additional tasks which, subject to the limitations set forth

herein, Respondent is ordered to undertake, have been satisfactorily completed. EPA shall issue such notices after receipt of notice by Respondent that they have completed the requirements of the Order.

XXIV. NOTICE OF OPPORTUNITY TO REQUEST A HEARING

In accordance with Section 3008(b) of RCRA, 42 U.S.C. 6928(b), the Initial Administrative Order shall become final unless Respondent files a response and requests a public hearing in writing no later than thirty (30) days after service of the Initial Administrative Order in accordance with 40 CFR Part 24.

(a) The response and request for hearing must be filed with

Regional Hearing Clerk
345 Courtland Street, N.E.
Atlanta, Georgia 30365

A copy of the response and request for a hearing and copies of any subsequent documents filed in this action should be sent to Office of Regional Counsel, at the same address. The response must specify each factual or legal determination or relief provision that is contested and for which the hearing is requested, raising all issues regarding appropriateness of the terms of the Order including any proposals for modifications of the Order. Respondent must also submit affidavits and exhibits that support any of its allegations, claims or defenses at the time that it files a response. Any hearings on the Order will be conducted in accordance with the attached provisions.

The Order directs the respondent to undertake only an RFI and a CMS, which includes monitoring, surveys, testing, information gathering, analyses, and studies (including studies designed to develop recommendations for appropriate corrective measures); therefore, according to 40 CFR 24.08, the appropriate hearing procedure is that set forth in Subpart B. Respondent may include with its response to the Order and request for a hearing a statement indicating whether it believes the Subpart C hearing procedure should be employed for the requested hearing and the reason(s) therefore.

(b) Respondent's failure to file a written response and request a hearing within thirty (30) days of service of this Order will constitute a binding admission of all allegations contained in the Order and a waiver of Respondent's right to a hearing.

XXV. SETTLEMENT CONFERENCE

Whether or not Respondent requests a hearing, an informal conference may be requested in order to discuss the facts of this case and to arrive at settlement. To request an informal conference contact:

Zylpha Pryor
Office of Regional Counsel
EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

A request for an informal conference does not extend the thirty (30) day period during which a written response and request for a hearing must be submitted. The informal conference procedure may be pursued simultaneously with the adjudicatory hearing procedure.

XXVI. SURVIVABILITY/PERMIT INTEGRATION

Subsequent to the issuance of this Order, A RCRA permit may be issued to the facility incorporating the requirements of this Order by reference into the permit.

Any requirements of this Order shall not terminate upon the issuance of a RCRA permit unless the requirements are expressly replaced by more stringent requirements in the permit.

XXVII. EFFECTIVE DATE

This Order shall become effective thirty (30) days after it is served unless Respondent requests a public hearing pursuant to RCRA Section 3008(b), 42 U.S.C. Section 6928(b).

IT IS SO ORDERED:

BY: _____

Don Guiryard
Patrick M. Tobin, Director
Waste Management Division
U.S. Environmental Protection Agency
Region IV

9/29/89
Date

Effective Date:

CERTIFICATE OF SERVICE

I hereby certify that I have caused a copy of the foregoing Administrative Order to be served upon the person designated below on the date below, by causing said copy to be deposited in the U.S. Mail First Class (certified mail: return receipt requested, postage prepaid) in Atlanta, Georgia, in an envelope addressed to:

D. R. Wedell, President
Sloss Industries Corp.
P.O. Box 5327
3500 35th Avenue, North
Birmingham, Alabama 35207

I have further caused the original and one copy of the Administrative Order and this certification of service to be filed with the Regional Hearing Clerk, United States Environmental Protection Agency, Region IV, 345 Courtland Street, N.E., Atlanta, Georgia 30365 on the date specified below.

These are said persons' last known address to the subscriber.

Date this 27th day of September 1989.

Angela Teagle
Compliance Clerk
Waste Compliance Section

Attachment A

ATTACHMENT A

SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION (RFI)

AT

SLOSS INDUSTRIES INCORPORATED,

BIRMINGHAM, ALABAMA

An RFI is to determine the nature and extent of releases of hazardous wastes or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study (CMS). The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RCRA remedial investigation at SLOSS INDUSTRIES, INCORPORATED, Birmingham, Alabama.

SCOPE

The RFI consists of seven tasks:

- Task I: Description of Current Conditions
 - A. Facility Background
 - B. Nature and Extent of Contamination
 - C. Implementation of Interim Measures

- Task II: Preinvestigation Evaluation of Corrective Measures Technologies

- Task III: RFI Work Plan Requirements
 - A. Project Management Plan
 - B. Data Collection Quality Assurance Plan
 - C. Data Management Plan
 - D. Health and Safety Plan
 - E. Community Relations Plan

- Task IV: Facility Investigation
 - A. Environmental Setting
 - B. Source Characterization
 - C. Contamination Characterization
 - D. Potential Receptor Identification

- Task V: Investigation Analysis
 - A. Data Analysis
 - B. Protection Standards
 - C. Draft and Final Reports

- Task VI: Laboratory and Bench-Scale Studies

- Task VII: Reports
 - A. Preliminary and Work Plan
 - B. Progress
 - C. Draft and Final

TASK I: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to EPA and ADEM for EPA review and approval, a report providing the background information pertinent to the Facility, plus contamination and interim measures as set forth below. The data gathered during any previous investigations, including but not limited to, the RFA, or inspections and other relevant data shall be included.

A. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general Facility physiography, hydrogeology, and historical use of the Facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

1. Map(s) depicting the following:
 - a. General geographic location;
 - b. Property lines, with the owners of all adjacent property clearly indicated;
 - c. Topography and surface drainage depicting all waterways, wetlands, floodplains, water features, drainage patterns, and surface water containment areas. The map shall show contours at 10 foot intervals with 5 foot supplementals and will clearly show the pattern of surface water flow in the vicinity of and from each operational unit and solid waste management units. The scale of the map should be a maximum scale of 1 inch equals 200 feet;
 - d. All tanks, buildings, utilities, paved areas, easements, right-of-ways, and other features;
 - e. All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
 - f. All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980.
 - g. All known past and present product and waste underground tanks or piping;
 - h. Surrounding land uses (residential, commercial, agricultural, recreational); and

- i. The location of all production and groundwater monitoring wells within a 3 mile radius of the site. These wells shall be clearly labeled and ground and top of casing elevations and construction details included (these elevations and details may be included as an attachment).
- j. Cross-sections of the Facility including but not limited to solid and hazardous waste management units.
- k. Aerial photographs of the entire facility.

All maps shall be consistent with the requirements set forth in 40 CFR Part 270.14(b)(19)/ADEM Administrative Code 14-8-.02(5)(B)18, and be of sufficient detail and accuracy to locate and report all current and future work performed at the site;

2. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the Facility;
3. Approximate dates or periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or federal response units or private parties), including any inspection reports or technical reports generated as a result of the response; and
4. A summary of past permits requested and/or received, any enforcement actions and their subsequent responses and a list of documents and studies prepared for the Facility.

B. Nature and Extent of Contamination

The Respondent shall prepare and submit to EPA and ADEM, for EPA review and approval, a preliminary report describing the existing information on the nature and extent of contamination.

1. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following:
 - a. Location of unit/area (which shall be depicted on a Facility map);

- b. Quantities of solid and hazardous wastes;
 - c. Hazardous waste or constituents, to the extent known for each area; and
 - d. Identification of areas where additional information is necessary.
2. The Respondent shall prepare an assessment and description of the existing degree and extent of contamination. This should include:
- a. Available monitoring data, sampling results and qualitative information on locations and levels of contamination at the Facility, including both an areal and cross-sectional view of plume extent (define a zero line);
 - b. All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
 - c. The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

TASK II: PRE-INVESTIGATION EVALUATION OF CORRECTIVE MEASURE TECHNOLOGIES

Prior to starting the Facility investigation, the Respondent shall submit to EPA and ADEM a report that identifies the potential corrective measures technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. This report shall also identify any field data that needs to be collected in the Facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.). This report shall be submitted with the Description of Current Situation (Task I) report.

TASK III: RFI WORK PLAN REQUIREMENTS

The Respondent shall prepare an RFI Work Plan. This RFI work plan shall include the development of several plans, which shall be prepared concurrently. During the RFI, it may be necessary to revise the RFI Work Plan to increase or decrease the detail of information collected to accommodate the Facility specific situation. The RFI Work Plan includes the following:

A. Project Management Plan

The Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and personnel. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RFI.

B. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

1. Data Collection Strategy

The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

- a. Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;
- b. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurements data;
- c. Description of the rationale used to assure that the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition or an environmental condition. Examples of factors which shall be considered and discussed include:
 - i) Environmental conditions at the time of sampling;
 - ii) Number of sampling points;
 - iii) Representativeness of selected media; and
 - iv) Representativeness of selected analytical parameters.
- d. Description of the measures to be taken to assure that the following data sets can be compared to each other:

- i) RFI data generated by the Respondent over some time period;
 - ii) RFI data generated by an outside laboratory or consultant versus data generated by the Respondent;
 - iii) Data generated by separate consultants or laboratories, and
 - iv) Data generated by an outside consultant or laboratory over some time period.
- e. Details relating to the schedule and information to be provided in quality assurance reports. The reports should include but not be limited to:
- i) Periodic assessment of measurement data accuracy, precision, and completeness;
 - ii) Results of performance audits;
 - iii) Results of system audits;
 - iv) Significant quality assurance problems and recommended solutions; and
 - v) Resolutions of previously stated problems.

2. Sampling

The Sampling section of the Data Collection Quality Assurance Plan shall discuss:

- a. Selecting appropriate sampling locations, depths, etc.;
- b. Providing a statistically sufficient number of sampling sites;
- c. Measuring all necessary ancillary data;
- d. Determining conditions under which sampling should be conducted;
- e. Determining which media are to be sampled (e.g., ground-water, air, soil, sediment, etc.);
- f. Determining which parameters are to be measured and where;

- g. Selecting the frequency of sampling and length of sampling period;
- h. Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- i. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;
- j. Documenting field sampling operations and procedures, including:
 - i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);
 - ii) Procedures and form for recording the exact location and specific considerations associated with sample acquisition;
 - iii) Documentation of specific sample preservation method;
 - iv) Calibration of field devices;
 - v) Collection of replicate samples;
 - vi) Submission of field-biased blanks, where appropriate;
 - vii) Potential interferences present at the Facility;
 - viii) Construction materials and techniques, associated with monitoring wells and piezometers;
 - ix) Field equipment and sample containers listing;
 - x) Sampling order; and
 - xi) Decontamination procedures.
- k. Selecting appropriate sample containers;
- l. Sample preservations; and
- m. Chain-of-custody, including;

- i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment; and
- ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

3. Field Measurements

The Field Measurements section of the Data Collection Quality Assurance Plan shall discuss:

- a. Selecting appropriate field measurement locations, depths, etc.;
- b. Providing a statistically sufficient number of field measurements;
- c. Measuring all necessary ancillary data;
- d. Determining conditions under which field measurements should be conducted;
- e. Determining which media are to be addressed by appropriate field measurements (e.g., groundwater, air, soil, etc.);
- f. Determining which parameters are to be measured and where;
- g. Selecting the frequency of field measurement and length of field measurements period; and
- h. Documenting field measurement operations and procedures, including:
 - i) Procedures and forms for recording raw data and the exact location, time, and Facility-specific considerations associated with the data acquisition;
 - ii) Calibration of field devices;
 - iii) Collection of replicate measurements;
 - iv) Submission of field-biased blanks, where appropriate;

- v) Potential interferences present at the Facility;
- vi) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
- vii) Field equipment listing;
- viii) Order in which field measurements were made; and
- ix) Decontamination procedures.

4. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

- a. Chain-of-Custody procedures, including:
 - i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
 - ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.
- b. Sample storage procedures and storage times;
- c. Sample preparation methods;
- d. Analytical procedures, including:
 - i) Scope and application of the procedure;
 - ii) Sample matrix;
 - iii) Potential interferences;
 - iv) Precision and accuracy of the methodology; and
 - v) Method detection limits.

- e. Calibration procedures and frequency;
- f. Data reduction, validation and reporting;
- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check sample(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vi) "Blind" quality control sample(s);
 - vii) Control samples;
 - viii) Surrogate samples;
 - ix) Zero and span gases; and
 - x) Reagent quality control checks.

A performance audit will be conducted by EPA on the laboratories selected by the Respondents. This audit must be completed and approved prior to the facility investigation.

- h. Preventive maintenance procedures and schedules;
- i. Corrective action (for laboratory problems); and
- j. Turn-around time.

C. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation. The Data Management Plan shall include:

1. Data Record

The data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement location and sample or measurement type;
- c. Sampling or field measurement raw data;
- d. Laboratory analysis identification number;
- e. Property or component measured; and
- f. Results of analysis (e.g., concentration).

2. Tabular Displays

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. Results for each medium, or for each constituent monitored;
- c. Data reduction for statistical analysis;
- d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- e. Summary data.

3. Graphical Displays

The following data shall be presented in graphical format (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three-dimensional graphs, etc.):

- a. Display sampling location and sampling grid;
- b. Indicate boundaries of sampling area, and areas where more data are required;
- c. Display levels of contamination at each sampling location;
- d. Display geographical extent of contamination;
- e. Display contamination levels, averages, and maxima;

- f. Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and
- g. Indicate features affecting intramedia transport and show potential receptors.

D. Health and Safety Plan

The Respondent shall prepare a Facility Health and Safety Plan.

- 1. Major elements of the Health and Safety Plan shall include:
 - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
 - b. Describe the known hazards and evaluate the risks associated with each activity conducted;
 - c. List key personnel and alternates responsible for site safety, responses operations, and for protection of public health;
 - d. Delineate work area;
 - e. Describe levels of protection to be worn by personnel in work area;
 - f. Establish procedures to control site access;
 - g. Describe decontamination procedures for personnel and equipment;
 - h. Establish site emergency procedures;
 - i. Address emergency medical care for injuries and toxicological problems;
 - j. Describe requirements for an environmental surveillance program;
 - k. Specify any routine and special training required for field personnel; and
 - l. Establish procedures for protecting workers from weather-related problems.

2. The Facility Health and Safety Plan shall be consistent with:
 - a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - b. EPA Order 1440.1 - Respiratory Protection;
 - c. EPA Order 1440.3 - Health and Safety Requirements for Employees Engaged in Field Activities;
 - d. Facility Contingency Plan;
 - e. EPA Standard Operating Safety Guide (1984);
 - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
 - g. State and local regulations; and
 - h. Other EPA guidance as provided.

E. Community Relations Plan

The Respondent shall prepare a plan for the dissemination of information to the public regarding investigation activities and results.

TASK IV: FACILITY INVESTIGATION

The Respondent shall conduct those investigations necessary to: characterize the Facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to support the development and evaluation of the corrective measure alternative or alternatives during the CMS.

The site investigation activities shall follow the plans set forth in Task III. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the Facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall conduct a program to evaluate hydrogeologic conditions at the Facility. This program shall provide the following information:

- a. A description of the regional and Facility-specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Facility, including:
 - i) Regional and Facility-specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts;
 - ii) Structural geology: description of local and regional structural features (e.g., folding, faulting, tilting, jointing, etc.).
 - iii) Depositional and post-depositional history;
 - iv) Identification and characterization of areas and amounts of recharge and discharge.
 - v) Regional and facility-specific groundwater flow patterns; and
 - vi) Characterize seasonal variations in the groundwater flow regime.
- b. An analysis of any topographic features that might influence the groundwater flow system. (Note: Stereographic analysis of aerial photographs may aid in this analysis).
- c. Based on field data, test, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the Facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:
 - i) Hydraulic conductivity and porosity (total and effective);
 - ii) Lithology, grain size, sorting, degree of cementation;
 - iii) An interpretation of hydraulic interconnections between saturated zones including but not limited to the depths, thickness, and degree of lateral

continuity and hydraulic characteristics of any discernible confining units between water-bearing zones underneath the Facility; and

- iv) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.).
- d. Based on field studies and cores, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
- i) Sand and gravel deposits in unconsolidated deposits;
 - ii) Zones of fracturing or channeling in consolidated or unconsolidated deposits;
 - iii) Zones of relatively higher or lower permeability that might direct or restrict the flow of contaminants;
 - iv) The uppermost aquifer: geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells and springs; and
 - v) Water-bearing zones above the first confining layer that may serve as a pathway for contaminant migration including perched zones of saturation.
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the the BTF Sewer (SWMU #4), the Spill Area Around Diesel Tank (SWMU #6), Coal Tar Decanters 1, 2, 3, 4, and 5 (SWMUs #10, #11, and #12), the Equalization Basin (SWMU #13), the BTF Emergency Basin (#21), the Polishing Pond (SWMU #22), the Biological Sludge Disposal Area (SWMU #23) and other sources of contamination, a representative description of water levels or fluid pressure monitoring including:
- i) Water-level contour and/or potentiometric maps;
 - ii) Hydrologic cross sections showing vertical gradients;

- iii) The flow system, including the vertical and horizontal components of flow; and
 - iv) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences.
- f. A description of man-made influences that may affect the hydrogeology of the site, identifying:
- i) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and
 - ii) Man-made hydraulic structures (pipelines, french drains, ditches, unlined ponds, septic tanks, NPDES outfalls, retention areas, etc.).

2. Soils

The Respondent shall conduct a program to characterize the soil and rock units above the water table in the vicinity of all contaminant release(s). Such characterization shall include but not be limited to, the following information:

- a. USGS soil classification;
- b. Surface soil distribution;
- c. Soil profile, including ASTM classification of soils;
- d. Transects of soil stratigraphy;
- e. Hydraulic conductivity (saturated and unsaturated);
- f. Relative permeability;
- g. Bulk density;
- h. Porosity;
- i. Soil sorptive capacity;
- j. Cation exchange capacity (CEC);
- k. Soil organic content;
- l. Soil pH;
- m. Particle size distribution;
- n. Elevation and depth of water table;
- o. Moisture content;
- p. Effect of stratification on unsaturated flow;
- q. Infiltration
- r. Evapotranspiration;
- s. Storage capacity;
- t. Vertical flow rate; and
- u. Mineral content.

3. Surface Water and Sediment

The Respondent shall conduct a program to characterize the surface water bodies in the vicinity of the Facility. Such characterization shall include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface-water bodies including:
 - i) For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
 - ii) For impoundments: location, elevation, surface area, depth, volume, freeboard, and purpose of impoundment;
 - iii) For rivers, streams, ditches, drains, swamps and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (i.e., 100 year event);
 - iv) Drainage patterns; and
 - v) Evapotranspiration.
- b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients (NH_3 , $\text{NO}_3^-/\text{NO}_2^-$, PO_4^{-3}), chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.
- c. Description of sediment characteristics including:
 - i) Deposition area;
 - ii) Thickness profile; and
 - iii) Physical and chemical parameters (e.g., grain size, density, organic carbon content, ion exchange capacity, pH, etc.).

4. Air

The Respondent shall provide information characterizing the climate in the vicinity of the Facility. Such information shall include, but not be limited to:

- a. A description of the following parameters:
 - i) Annual and monthly rainfall averages;
 - ii) Monthly temperature averages and extremes;
 - iii) Wind speed and direction;
 - iv) Relative humidity/dew point;
 - v) Atmospheric pressure;
 - vi) Evaporation data;
 - vii) Development of inversions; and
 - viii) Climate extremes that have been known to occur in the vicinity of the Facility, including frequency of occurrence.
- b. A description of topographic and man-made features which affect air flow and emission patterns, including:
 - i) Ridges, hills or mountain areas;
 - ii) Canyons or valleys;
 - iii) Surface water bodies (e.g., rivers, lakes, bays, etc.);
 - iv) Wind breaks and forest; and
 - v) Buildings.

B. Source Characterization

The Respondent shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, collected or removed including: type; quantity; physical form; disposition (containment or nature of deposits); and Facility characteristics affecting release (e.g., Facility security, and engineered barriers).

The source characterization shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal Area Characteristics:

- a. Location of unit/disposal area;
- b. Type of unit/disposal area;
- c. Design features and dimensions;
- d. Operating practices (past and present);
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and
- h. Method used to close the unit/disposal area.

2. Waste Characteristics:

a. Type of waste placed in the unit;

- i) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
- ii) Quantity; and
- iii) Chemical composition.

b. Physical and chemical characteristics;

- i) Physical form (solid, liquid, gas);
- ii) Physical description (e.g., powder, oily sludge);
- iii) Temperature;
- iv) pH;
- v) General chemical class (e.g., acid, base, solvent);
- vi) Molecular weight;
- vii) Density;
- viii) Boiling point;
- ix) Viscosity;
- x) Solubility in water;
- xi) Cohesiveness of the waste;
- xii) Vapor pressure;
- xiii) Flash point.

c. Migration and dispersal characteristics of the waste;

- i) Sorption;
- ii) Biodegradability, bioconcentration, biotransformation;
- iii) Photodegradation rates;
- iv) Hydrolysis rates; and
- v) Chemical transformations.

The Respondent shall document the procedures used in making the above determinations.

C. Contamination Characterization

The Respondent shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the Facility. This data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Respondent shall address the following types of contamination at the Facility:

1. Groundwater Contamination

The Respondent shall conduct a Groundwater Investigation to characterize any plumes of contamination at the Facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility;
- b. The horizontal and vertical direction of contaminant movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of Appendix IX constituents in the plume(s);
- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation to characterize the contamination of the soil and rock units above the water table in the vicinity of any contaminant releases. The

Investigation shall include, but not be limited to, the BTF Sewer (SWMU #4), the Spill Area Around Diesel Tank (SWMU #6), Coal Tar Decanters 1, 2, 3, 4, and 5 (SWMUs #10, #11, and #12), the Equalization Basin (SWMU #13), the BTF Emergency Basin (#21), the Polishing Pond (SWMU #22), the Biological Sludge Disposal Area (SWMU #23) and the Blast Furnace Emission Control Sludge Waste Pile (SWMU #24). For each area, the Respondent shall identify the following:

- a. A description of the vertical and horizontal extent of contamination.
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, photolysis, oxidation and other factors that might affect contaminant migration and transformation.
- c. Specific contaminant concentrations.
- d. The velocity and direction of contaminant movement.
- e. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations.

3. Surface-Water and Sediment Contamination

The Respondent shall conduct a surface-water investigation to characterize contamination in surface-water bodies resulting from contaminant releases at the Facility. The investigation shall include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The contaminant velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;

- e. An extrapolation of future contaminant movement; and
- f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.;

The Respondent shall document the procedures used in making the above determinations.

4. Air Contamination

The Respondent shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of the release; and
- c. The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

The Respondent shall document the procedures used in making the above determinations.

5. Subsurface Gas Contamination

The Respondent shall conduct an investigation to characterize subsurface gases emitted from buried hazardous waste constituents in the groundwater. This investigation shall include the following information:

- a. A description of the horizontal and vertical extent of subsurface gases mitigation;
- b. The chemical composition of the gases being emitted;
- c. The rate, amount, and density of the gases being emitted; and
- d. Horizontal and vertical concentration profiles of the subsurface gases emitted.

The Respondent shall document the procedures used in making the above determinations.

D. Potential Receptors

The Respondent shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the Facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of groundwater:
 - a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and
 - b. Location of groundwater users including wells and discharge areas.
2. Local uses and possible future uses of surface waters and drainage from the Facility:
 - a. Domestic and municipal (e.g., potable and lawn/gardening watering);
 - b. Recreational (e.g., swimming, fishing);
 - c. Agricultural;
 - d. Industrial; and
 - e. Environmental (e.g., fish and wildlife propagation).
3. Human use of or access to the Facility and adjacent lands, including but not limited to:
 - a. Recreation;
 - b. Hunting;
 - c. Residential;
 - d. Commercial;
 - e. Zoning; and
 - f. Relationships between population locations and prevailing wind direction.

4. A description of the biota in surface water bodies on, adjacent to, or affected by the Facility.
5. A description of the ecology on and adjacent to the Facility.
6. A demographic profile of the people who use or have access to the Facility and adjacent land, including but not limited to: age; sex; and sensitive subgroups.
7. A description of any endangered or threatened species near the facility.

TASK V: INVESTIGATION ANALYSIS

The Respondent shall prepare an analysis and summary of all the Facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support the CMS.

A. Data Analysis Draft and Final Report

The Respondent shall prepare and submit to EPA and ADEM, for EPA approval, a draft RFI Report which shall contain an analysis and summary of all Facility investigations implemented pursuant to Task IV and their results. EPA will review the Draft RFI Report and will provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall submit the revised RFI Report to EPA and ADEM. EPA will approve the revised RFI Report or modify it. The revised RFI Report as approved or modified by EPA shall become the Final RFI Report.

The RFI Report shall describe the nature and extent of contamination at the Facility including sources and migration pathways, potential threat to human health and/or the environment, and to support the CMS. The report shall describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area. The report shall include the identification of applicable protection standards including these under item B below.

B. Protection Standards

1. Groundwater Protection Standards

For regulated units, Respondent shall provide information to support the Agency's selection/development of Groundwater Protection Standards for all of the Appendix VIII constituents found in the groundwater during the Facility Investigation (Task IV).

- a The Groundwater Protection Standards shall consist of:
- i) For any constituents listed in Table 1 of 40 CFR 264.94, the respective value given in that table (MCL) if the background level of the constituent is below the one given in Table 1; or
 - ii) The background level of that constituent in the groundwater; or
 - iii) An EPA approved Alternate Concentration Limit (ACL).
- b. Information to support EPA's subsequent selection of ACLs shall be developed by the Respondent in accordance with EPA's guidance. For any proposed ACLs, the Respondent shall include a justification based upon the criteria set forth in 40 CFR 264.94(b).
- c. Within 90 calendar days of receipt of any proposed ACLs, the EPA shall notify the Respondent in writing of approval, disapproval or modifications. The EPA shall specify in writing the reason(s) for any disapproval or modification.
- d. Within 60 calendar days of receipt of the EPA's notification or disapproval of any proposed ACL, the Respondent shall amend and submit revisions to the EPA.

2. Other Relevant Protection Standards

The Respondent shall identify all relevant and applicable standards for the protection of human health and the environment (e.g., National Ambient Air Quality Standards, Federally-approved State Water Quality Standards, etc.).

TASK VI: LABORATORY AND BENCH-SCALE STUDIES

The Respondent shall conduct laboratory and/or bench-scale studies to determine the applicability of a corrective measure technology or technologies to the Facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

The Respondent shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Respondent shall prepare a report summarizing the testing program and its results, both positive and negative.

TASK VII: REPORTS

A. Preliminary and Work Plan

The Respondent shall submit to EPA and ADEM, for EPA review and approval, reports on tasks I and II when it submits the RFI Work Plan (Task III).

B. Progress

The Respondent shall at minimum provide EPA with signed, monthly, progress reports containing:

1. A description and estimate of the percentage of the RFI completed;
2. Summaries of all findings;
3. Summaries of all changes made in the RFI during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel involved with the RFI during the reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

C. Draft and Final

As outlined in Task V, the Respondent shall prepare a Draft RFI Report to present and document the findings of Tasks IV-V. The RFI Report

shall be developed in draft form for EPA review. The RFI Report shall be developed in final format incorporating comments received on the Draft RFI Report. Task VI shall be submitted as a separate report when the Final RFI Report is submitted. All reports become final upon EPA approval.

Three copies of all reports, including the Task I report, Task II report, Task III work plan, Task VI report and both the Draft and Final RFI Reports (Task IV-V) shall be provided by Respondent to EPA.

Facility Submission Summary

A Summary of the information reporting requirements contained in the RFI Scope of Work is presented below.

<u>Facility Submission</u>	<u>Due Date</u>
Description of Current Situation (Task I)	Within 30 days after the effective date of this Order
Pre-Investigation Evaluation of Corrective Measure Technologies (Task II)	Within 30 days after the effective date of this Order
RFI Work Plan (Task III)	Within 45 days after the effective date of this Order
Implementation of approved RFI Work Plan (Task IV)	Within 10 days of notice of approval of revised RFI Work Plan
Draft RFI Report (Task IV and V)	365 days after RFI Work Plan approval
Final RFI Report (Tasks IV and V)	30 days after Comments on Draft RFI Report
Laboratory and Bench-Scale Studies (Task VI)	Concurrent with Final RFI Report
Progress Reports on Tasks I through VI	Monthly, pursuant to the Order

Attachment B

ATTACHMENT B

SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY (CMS)

AT

SLOSS INDUSTRIES INCORPORATED

BIRMINGHAM, ALABAMA

ATTACHMENT B

SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY (CMS)

AT

SLOSS INDUSTRIES INCORPORATED

BIRMINGHAM, ALABAMA

PURPOSE

The purpose of this Corrective Measures Study (CMS) is to develop and evaluate the corrective action alternative or alternatives, and to recommend the corrective measure or measures to be taken at Sloss Industries Incorporated, Birmingham, Alabama. Respondent will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified. Respondent shall submit to EPA and ADEM, ninety (90) calendar days after submittal of the Final RFI Report, a Draft CMS Report. This report shall contain all information requested in the task outlined below. EPA will review the Draft CMS report and EPA will provide comments to Respondent. Within thirty (30) calendar days of receipt of EPA comments, Respondent shall modify the Draft CMS Report to incorporate such comments and shall submit the revised CMS Report to EPA and ADEM. EPA will approve the revised CMS Report or modify it. The revised CMS Report as approved or modified by EPA shall become the Final CMS Report. Upon receipt of the Final CMS Report, EPA shall announce its availability to the public for review and comments, and then inform Respondent of its final decision as to the approved corrective measures to be implemented.

SCOPE

The CMS consists of four tasks:

- Task VIII: Identification and Development of the Corrective Measure Alternative or Alternatives
- A. Description of Current Situation
 - B. Establishment of Corrective Action Objectives
 - C. Screening of Corrective Measures Technologies
 - D. Identification of the Corrective Measure Alternative or Alternatives
- Task IX: Evaluation of the Corrective Measure Alternative or Alternatives
- A. Technical/Environmental/Human Health/Institutional
 - B. Cost Estimate
- Task X: Justification and Recommendation of the Corrective Measure or Measures
- A. Technical
 - B. Environmental
 - C. Human Health

PURPOSE

The purpose of this Corrective Measures Study (CMS) is to develop and evaluate the corrective action alternative or alternatives, and to recommend the corrective measure or measures to be taken at Sloss Industries Incorporated, Birmingham, Alabama. Respondent will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified. Respondent shall submit to EPA and ADEM, ninety (90) calendar days after submittal of the Final RFI Report, a Draft CMS Report. This report shall contain all information requested in the task outlined below. EPA will review the Draft CMS report and EPA will provide comments to Respondent. Within thirty (30) calendar days of receipt of EPA comments, Respondent shall modify the Draft CMS Report to incorporate such comments and shall submit the revised CMS Report to EPA and ADEM. EPA will approve the revised CMS Report or modify it. The revised CMS Report as approved or modified by EPA shall become the Final CMS Report. Upon receipt of the Final CMS Report, EPA shall announce its availability to the public for review and comments, and then inform Respondent of its final decision as to the approved corrective measures to be implemented.

SCOPE

The CMS consists of four tasks:

- Task VIII: Identification and Development of the Corrective Measure Alternative or Alternatives
- A. Description of Current Situation
 - B. Establishment of Corrective Action Objectives
 - C. Screening of Corrective Measures Technologies
 - D. Identification of the Corrective Measure Alternative or Alternatives
- Task IX: Evaluation of the Corrective Measure Alternative or Alternatives
- A. Technical/Environmental/Human Health/Institutional
 - B. Cost Estimate
- Task X: Justification and Recommendation of the Corrective Measure or Measures
- A. Technical
 - B. Environmental
 - C. Human Health

- Task XI: Reports
- A. Progress
 - B. Draft
 - C. Final

**TASK VIII: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION
ALTERNATIVE OR ALTERNATIVES**

Based on the results of the RFI and consideration of the identified Preliminary Corrective Measure Technologies (Task II), Respondent shall identify, screen and develop the alternative or alternatives for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

Respondent shall submit an update to the information describing the current situation at the Facility and the known nature and extent of the contamination as documented by the RFI Report. Respondent shall provide an update to information presented in Task I of the RFI to the Agency regarding previous response activities, and any interim measures which have or are being implemented at the Facility. Respondent shall also make a Facility-specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

Respondent, in conjunction with the EPA, shall establish site-specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable Federal statutes. At a minimum, all corrective actions concerning groundwater releases from regulated units must be consistent with, and as stringent as, those required under 40 CFR 264.100

C. Screening of Corrective Measure Technologies

Respondent shall review the results of the RFI and reassess the technologies specified in Task II and to identify additional technologies which are applicable at the Facility. Respondent shall screen the preliminary corrective measure technologies identified in Task II of the RFI, and any supplemental technologies to eliminate

those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

D. Identification of the Corrective Measure Alternative or Alternatives

Respondent shall develop the Corrective Measure Alternative or Alternatives based on the corrective action objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task II of the RFI and as supplemented following the preparation of the RFI Report. Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable

for the site. Technologies can be combined to form the overall corrective action alternative or alternatives. The alternative or alternatives developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. Respondent shall document the reasons for excluding technologies, identified in Task II, as supplemented in the development of the alternative or alternatives.

TASK IX: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE
OR ALTERNATIVES

Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VIII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. Respondent shall also develop cost estimates of each corrective measure.

A. Technical/Environmental/Human Health/Institutional

Respondent shall provide a description of each corrective measure alternative which includes, but is not limited to, the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. Respondent shall evaluate each alternative in the four following areas:

Technical;

1. Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.
 - a. Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:
 - 1) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

- ii) Useful life is defined as the length of time to level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.
- b. Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:
- i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered, and
 - ii) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- c. Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:
- i) Constructability is determined by conditions both internal and external to the Facility conditions and include such items as location of underground

utilities, depth to water table, heterogeneity of subsurface materials, and location of the Facility (i.e., remote location vs. a congested urban area). Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

ii) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

d. Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

2. Environmental;

Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the Facility condition and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

3. Human Health; and

Respondent shall assess each alternative in terms of the extent to which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction

over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA.

4. Institutional.

Respondent shall assess relevant institutional needs for each alternative. Especially, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. Cost Estimate

Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (non construction and overhead) costs.

a. Direct capital costs include:

- i) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure.
- ii) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
- iii) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and
- iv) Building and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.

b. Indirect capital costs include:

- i) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;

- ii) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permit for installation and operation;
 - iii) Start-up and shake-down costs: Costs incurred during corrective measure start-up; and
 - iv) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate Facility characterization.
2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. Respondent shall consider the following operation and maintenance cost components:
- a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
 - b. Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
 - c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
 - d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
 - e. Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
 - f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
 - g. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

- h. Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- i. Other costs: Items that do not fit any of the above categories.

TASK X. JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted. EPA will select the corrective measure alternative or alternatives to be implemented based on the results of Tasks IX and X. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

A. Technical

1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
2. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and Facility conditions similar to those anticipated will be given preference;
3. Implementability - corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

B. Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

C. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

TASK XI: REPORTS

Respondent shall prepare a CMS Report presenting the results of Task VIII through X and recommending a corrective measure alternative. Two copies of the preliminary report shall be provided by Respondent to EPA and ADEM for EPA review and approval.

A. Progress

Respondent shall at a minimum provide the EPA and ADEM with signed, monthly progress reports containing:

1. A description and estimate of the percentage of the CMS completed;
2. Summaries of all findings;
3. Summaries of all changes made in the CMS during the reporting period;
4. Summaries of all contacts with representative of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel involved with the CMS during reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

B. Draft

The Report shall at a minimum include:

1. A description of the Facility;
 - a. Site topographic map and preliminary layouts.

2. A summary of the corrective measure or measures;
 - a. Description of the corrective measure or measures and rationale for selection;
 - b. Performance expectations;
 - c. Preliminary design criteria and rationale;
 - d. General operation and maintenance requirements; and
 - e. Long-term monitoring requirements.
3. A summary of the RFI and impact on the selected corrective measure or measures;
 - a. Field studies (groundwater, surface water, soil, air); and
 - b. Laboratory studies (bench scale, pick scale).
4. Design and Implementation Precautions:
 - a. Special technical problems;
 - b. Additional engineering data required;
 - c. Permits and regulatory requirements;
 - d. Access, easements, right-of-way;
 - e. Health and safety requirements; and
 - f. Community relations activities.
5. Cost Estimates and Schedules:
 - a. Capital cost estimate;
 - b. Operation and maintenance cost estimate; and
 - c. Project schedule (design, construction, operations).

Two copies of the draft shall be provided by Respondent to EPA and ADEM.

C. Final

Respondent shall finalize the CMS Report incorporating comments received from EPA on the Draft CMS Report. The report shall become final upon EPA approval.

D. Public Review and Final Selection of Corrective Measures

Upon receipt of the Final CMS Report, EPA shall announce its availability to the public for review and comment. At the end of the comment period, EPA shall review the comments and then inform the Respondent of its final decision as to the approved corrective measures to be implemented.

Facility Submission Summary

A summary of the information reporting requirements contained in the CMS Scope of Work is presented below:

<u>Facility Submission</u>	<u>Due Date</u>
Draft CMS Report (Tasks VIII, IX, and X)	90 calendar days after submittal of the Final RFI
Final CMS Report (Tasks VIII, IX, and X)	30 calendar days after comments on the Draft CMS
Progress Reports (Tasks VIII, IX, and X)	Monthly

Exhibit E

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013

EPA names Walter Coke Inc. among nation's largest polluters

By ConlinMezrano on February 14th, 2013



The Environmental Protection Agency released their "EPA Enforcement and Compliance Annual Results" report for 2012; which listed Walter Coke, Inc. as one of the country's largest polluters (page 3, point 2). Walter Coke, Inc. operates an industrial plant near the north Birmingham neighborhoods of Collegeville, Fairmont and Harriman Park. In September of 2012 the EPA entered into an agreement with Walter Coke, Inc. to begin cleaning up areas surrounding the plant that had been polluted.

Check below to read the full EPA report, and for further information about the Walter Coke contamination visit [our site](#).

[fy2012annualresults-analysisitrends](#)

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By CM Law on March 1st, 2013

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"These recoveries and testimonials are not an indication of future results. Every case is different, and regardless of what friends, family, or other individuals may say about what a case is worth, each case must be evaluated on its own facts and circumstances as they apply to the law. The valuation of a case depends on the facts, the injuries, the jurisdiction, the venue, the witnesses, the parties, and the testimony, among other factors. Furthermore, no representation is made that the quality of the legal services to be performed is greater than the quality of legal services performed by other lawyers."

Exhibit F

Enforcement Annual Results for Fiscal Year 2012

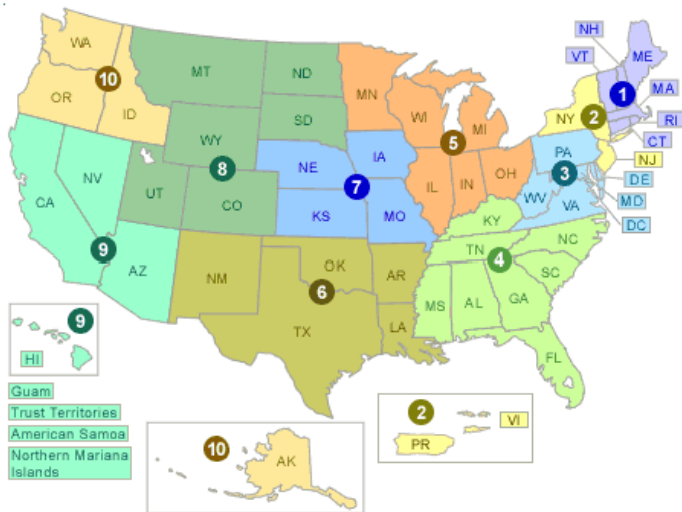
Accomplishments by EPA Region

EPA's regional offices work with state and tribal governments to ensure compliance with our nation's environmental laws. Our civil and criminal enforcement actions are focused on the most serious water, air and chemical hazards including those identified in EPA's national enforcement initiatives and advance environmental justice by protecting overburdened communities.

To see results of EPA's enforcement work in our regional areas, select your state from the list or map below to go to your state's EPA regional enforcement results.

Alabama - Region 4

Choose Your State or Region.



EPA Region 1

Serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	1,631,525
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	4,233,948
Enforcement Activities	
Case initiations	163
Case conclusions	170

Find additional information on [enforcement activities in Region 1](#)

EPA Region 2

Serving New Jersey, New York, Puerto Rico, and the U.S. Virgin Islands.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	65,098,791
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	226,400,209

Estimated contaminated soil and water to be cleaned up (Cubic Yard)	18,567,108
Enforcement Activities	
Case initiations	463
Case conclusions	464

Find additional information on [enforcement activities in Region 2](#)

EPA Region 3

Serving Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	27,259,954
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	1,831,860
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	3,147,247
Enforcement Activities	
Case initiations	245
Case conclusions	234

Find additional information on [enforcement activities in Region 3](#)

EPA Region 4

Serving Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	1,713,180,981
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	191,645
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	44,753,561
Enforcement Activities	
Case initiations	492
Case conclusions	482

Find additional information on [enforcement activities in Region 4](#)

EPA Region 5

Serving Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	87,909,210
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	123,040
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	890,529
Enforcement Activities	
Case initiations	340
Case conclusions	351

Find additional information on [enforcement activities in Region 5](#)

EPA Region 6

Serving Arkansas, Louisiana, New Mexico, Oklahoma, and Texas

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	13,204,060
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	4,128,528,000
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	108,532,477
Enforcement Activities	
Case initiations	535
Case conclusions	508

Find additional information on [enforcement activities in Region 6](#)

EPA Region 7

Serving Iowa, Kansas, Missouri, and Nebraska.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	116,332,355
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	28,851
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	19,840,899
Enforcement Activities	
Case initiations	211
Case conclusions	217

Find additional information on [enforcement activities in Region 7](#)

EPA Region 8

Serving Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	7,493,673
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	255
Enforcement Activities	
Case initiations	154
Case conclusions	145

Find additional information on [enforcement activities in Region 8](#)

EPA Region 9

Serving Arizona, California, Hawaii, Nevada, American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Marshall Islands, and Republic of Palau.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds). ¹	10,728,294
Estimated hazardous waste treated, minimized, or properly disposed of (Pounds). ¹	10,783,345
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	87,786,204

Enforcement Activities	
Case initiations	182
Case conclusions	184

Find additional information on [enforcement activities in Region 9](#)

EPA Region 10

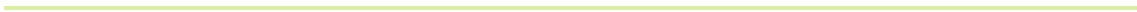
Serving Alaska, Idaho, Oregon, and Washington.

Accomplishments:

Civil Cases	
Estimated pollution reduced, treated or Eliminated (Pounds) ¹	139,874,129
Estimated contaminated soil and water to be cleaned up (Cubic Yard)	128,573,825

Enforcement Activities	
Case initiations	195
Case conclusions	187

Find additional information on [enforcement activities in Region 10](#)



Sources for Data displayed in this document: Integrated Compliance Information System (ICIS), Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS).

Footnotes:

1. Projected pollution reductions to be achieved during the one year period after all compliance actions have been completed. ([return to text](#))

Exhibit G

Max Zygmont

From: Redleaf-Durbin.Joan@epamail.epa.gov
Sent: Friday, February 01, 2013 9:52 AM
To: Max Zygmont
Cc: Bob Mowrey; Uslu.Gayla@epamail.epa.gov
Subject: Re: FOIA No. EPA-R4-2013-002543
Attachments: FOIA No EPA-R4-2013-002543.pdf; image001.png

Hi - did you get the letter with the estimated cost - and the explanation that it has to be prepaid for us to conclude the search and respond?

Also, as I mentioned, there was no CCDS done for Walter Coke. The calculations and final numbers were all discussed and handled by email.

Thanks
Joan

Joan Redleaf Durbin
Associate Regional Counsel
(404) 562-9544


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▼ Max Zygmont ---02/01/2013 09:47:53 AM---Please see the attached amendment to FOIA Request No. EPA-R4-2013-002543. Sincerely,

From: Max Zygmont <max.zygmont@m2c2law.com>
To: Group R4Foia@EPA
Cc: Bob Mowrey <bob.mowrey@m2c2law.com>, Joan Redleaf-Durbin/R4/USEPA/US@EPA, Gayla Uslu/R4/USEPA/US@EPA
Date: 02/01/2013 09:47 AM
Subject: FOIA No. EPA-R4-2013-002543

Please see the attached amendment to FOIA Request No. EPA-R4-2013-002543.

Sincerely,
Max

 <p>Atlanta * Washington www.m2c2law.com</p>	<p>C. Max Zygmont 1100 Peachtree Street, Suite 650 Atlanta, Georgia 30309 Direct phone: (404) 969-0747 fax: (404) 335-7220 max.zygmont@m2c2law.com</p>
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(See attached file: FOIA No EPA-R4-2013-002543.pdf)

(See attached file: image001.png)

Exhibit H

C. Max Zygmunt
(404) 969-0747
max.zygmunt@m2c2law.com

February 1, 2013

Via Email and First-Class Mail

EPA
Freedom of Information Officer
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW
Atlanta, GA 30303-8960
r4foia@epa.gov

Re: FOIA Request No. EPA-R4-2013-002543

Dear Sir or Madam:

On January 4, 2013, I submitted FOIA request EPA-R4-2013-002543 on behalf of this firm's client Walter Coke, Inc. This letter amends FOIA request EPA-R4-2013-002543 to confirm and expressly state that the request was and is on behalf of Walter Coke, Inc. Thus, on behalf of Walter Coke, Inc., FOIA request EPA-R4-2013-002543 asks that EPA

Please provide the completed "Case Conclusion Data Sheet" prepared by EPA for the entry by EPA and Walter Coke, Inc., of the RCRA Administrative Order on Consent ("AOC"), Docket No. RCRA-04-2012-4255 (Sept. 17, 2012). Please also provide any and all documents and notes of whatever kind or format reflecting the manner in which conclusions on the Case Conclusion Data Sheet were reached, specifically including documents reflecting the calculation of the pounds of pollution allegedly reduced or eliminated as a result of the AOC. Please also provide any and all documents and notes of whatever kind or format, whether or not related to the Case Conclusion Data Sheet, related in any way to EPA's conclusion or process for reaching the conclusion that the AOC would allegedly eliminate or reduce 1.4 billion pounds of pollution.

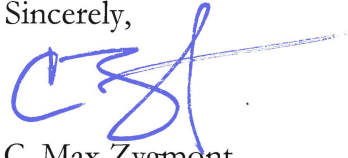
Freedom of Information Officer

February 1, 2013

Page 2 of 2

Please contact me with any questions or comments regarding the effect of this amendment, including without limitation its effect, if any, on EPA's processing of the request.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. Max Zygmont', with a long horizontal stroke extending to the right.

C. Max Zygmont

cc: Gayla Uslu, EPA Region 4 FOIA Officer
Joan Redleaf-Durbin, EPA Region 4 Associate Regional Counsel