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Area Source Boiler NESHAP, 40 CFR Part 63, Subpart JJJJJJ (6J)

Questions and Answers

This question and answer (Q&A) document is in response to a number of questions the EPA has received from delegated state and local agencies and the regulated community regarding the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers at Area Sources codified in 40 CFR part 63, subpart JJJJJJ (Area Source Boiler NESHAP). The NESHAP was published in the Federal Register on March 21, 2011, and EPA finalized changes to the rule in the Federal Register on February 1, 2013 and on September 14, 2016. This document has been updated, where appropriate, to reflect rule changes.

This document is not a regulation, nor is it designed to supersede the requirements specified in the Area Source Boiler NESHAP. It does not impose legally binding requirements on the EPA, state/local agencies, or the regulated community. This Q&A document does not confer legal rights or impose legal obligations upon any member of the public. The answers provided in this document are not site-specific and may not apply in all circumstances. Also note that answers to general provision questions as they apply to the Area Source Boiler NESHAP may not be applicable to other subparts of the NESHAP and New Source Performance Standards (NSPS) programs. As with all applicability determinations, site-specific information should be carefully reviewed before making a determination.

Table of Contents

General.....3

Applicability.....3

Implementation: Tune-up Requirements.....9

Implementation: Energy Assessment Requirements.....13

Implementation: General.....14

Monitoring and Testing.....14

Startup and Shutdown.....15

Reporting and Recordkeeping.....16
Resources for More Information.....18

General

Q1: What is the new rule and who is affected?

- A. EPA finalized the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 40 CFR Part 63 Subpart 6J on March 21, 2011 and finalized amendments on February 1, 2013 and September 14, 2016.

This rule applies to existing and new industrial boilers, institutional boilers, and commercial boilers located at area sources of hazardous air pollutants. Area sources are facilities that emit or have the potential to emit less than 10 tons per year of a single hazardous air pollutant, or less than 25 tons per year of combined hazardous air pollutants. The list of hazardous air pollutants is available on the [EPA website](#). Boiler is defined, in general terms, as an enclosed combustion device in which water is heated to recover thermal energy in the form of steam and/or hot water.

- Industrial boilers are used in manufacturing, processing, mining, refining, or any other industry.
- Commercial boilers are used in commercial establishments such as stores/malls, laundries, apartments, restaurants, and hotels/motels.
- Institutional boilers are used in medical centers (hospitals, clinics, nursing homes), educational and religious facilities (schools, universities, churches), and municipal buildings (courthouses, prisons).

See 40 CFR § 63.11237 (definitions of “Boiler,” “Industrial boiler,” “Commercial boiler,” and “Institutional boiler.”)

Applicability

Q2: Are gas-fired boilers covered under the rule?

- A. No. Gas-fired boilers, which burn gaseous fuel not combined with any solid fuels and only burn liquid fuel during periods of gas curtailment, gas supply interruption and periodic testing, maintenance, or operator training up to 48 hours per year, are not covered under the rule. [See 40 CFR § 63.11237 (definition of “Gas-fired boiler”)]

Q3: To be considered a gas-fired boiler, is a permit limit restricting the boiler’s oil usage required?

- A. No. Under subpart 6J, the boiler must only meet the definition of gas-fired boiler to be considered a gas-fired boiler. [See 40 CFR § 63.11237 (definition of “Gas-fired boiler”)]

Q4: When must an existing boiler meet the requirements of the “gas-fired boiler” definition to be considered a gas-fired boiler by the subpart 6J compliance date (i.e., March 21, 2014)?

- A. To initially qualify as an existing “gas-fired boiler” under subpart 6J, your boiler must meet the definition of “gas-fired boiler” for the period March 21, 2014 through December 31, 2014. Specifically, this means that during the period March 21, 2014, through December 31, 2014, your existing boiler that burns gaseous fuels not combined with any solid fuels must only burn liquid fuel for allowable purposes as specified in the subpart 6J definition of “gas-fired boiler” (i.e., during periods of gas curtailment, gas supply interruption, startups or periodic testing on liquid fuel (periodic testing cannot exceed a combined total of 48 hour during any calendar year)). To continue to qualify as a “gas-fired boiler,” your existing boiler must continue to meet the subpart 6J definition of “gas-fired boiler.” [See 40 CFR § 63.11237 (definition of “Gas-fired boiler”)]

Q5: What are the requirements for an existing or new “gas-fired boiler” that no longer meets the subpart 6J definition of “gas-fired boiler” (e.g., the facility decides to burn liquid fuel for cost purposes or exceeds the 48 hours per calendar year of allowed periodic testing on liquid fuel)?

- A. Your boiler would become an oil-fired boiler subject to all applicable subpart 6J requirements at the time it no longer meets the subpart 6J definition of “gas-fired boiler.” Section 63.11225(g) requires notification of such a change within 30 days of the change and section 63.11210(h) requires that compliance must be demonstrated within 180 days of the change. [See 40 CFR § 63.11225(g) and § 63.11210(h)]

Q6: What are the requirements for an existing or new oil-fired boiler that switches to firing gaseous fuel such that it meets the subpart 6J definition of “gas-fired boiler?”

- A. If the fuel switch is the result of a physical change (e.g., removal of fuel oil tanks or fuel oil feed piping) or permit limit and your boiler no longer has the capability of firing liquid fuel, your boiler would become a “gas-fired boiler” at the time of the physical change (i.e., when your boiler meets the subpart 6J definition of “gas-fired boiler”) or permit limit. Notification of the fuel switch would be required within 30 days of the fuel switch/physical change or permit limit as specified in section 63.11225(g).

If the fuel switch is the result of an administrative decision and your boiler retains the capability of firing liquid fuel and your boiler did not meet the definition of “gas-fired boiler” during the calendar year (e.g., you burned oil for more than 48 hours in the year for testing or you burned oil for cost reasons during the year), your boiler must continue to comply with all applicable subpart 6J requirements for oil-fired boilers until the end of the current calendar year (i.e., December 31). To then qualify as a “gas-fired boiler,” your boiler must meet the subpart 6J definition of “gas-fired boiler” beginning on January 1 of the next calendar year. Notification of the fuel switch at the end of the calendar year

would be required within 30 days of the fuel switch (i.e., 30 days after December 31) as specified in section 63.11225(g). [See 40 CFR § 63.11225(g)]

Q7: Does the regulation define and exclude hot water heaters?

- B. Yes. The rule defines a hot water heater as (1) a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass fuel and hot water is withdrawn for use external to the vessel or (2) a hot water boiler (i.e., a boiler that generates hot water but not steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour. Hot water heaters that meet the above definition are not covered under the rule. Tankless units that provide hot water on demand are also hot water heaters and not covered under the rule. [See 40 CFR § 63.11237 (definition of “Hot water heater”)]

Q8: Is a boiler used only for comfort heat located at an industrial facility covered under the rule if it meets the definition of a “hot water heater”?

- A. No. As noted above, by definition under the rule, a hot water boiler (e.g., one not generating steam) with a heat input capacity of less than 1.6 MMBtu/hr burning oil, biomass, or gas is not covered under the rule. [See 40 CFR § 63.11237 (definition of “Hot water heater”)]

Q9: Are forced hot air furnaces regulated under the rule?

- A. No. The rule only applies to boilers with the primary purpose of recovering thermal energy in the form of steam and/or hot water. [See 40 CFR § 63.11237 (definition of “Boiler”)]

Q10: A gas-fired boiler is allowed to burn oil during periods of gas curtailment and still be considered gas-fired and not covered under the rule. If a source has a contract with a gas supplier, and under the terms of the contract the gas supply is curtailed, does this qualify as a period of gas curtailment?

- A. Yes. A period of gas curtailment or supply interruption means a period of time during which the supply of gas is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of the facility. However, an increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not qualify as a period of natural gas curtailment or supply interruption. Onsite gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility. [See 40 CFR § 63.11237 (definition of “Period of gas curtailment or supply interruption”)]

Q11: Is there a limit on the number of hours a gas-fired boiler may burn oil during periods of gas curtailment or supply interruption and still be considered a gas-fired boiler and not covered by the rule?

A. No. [See 40 CFR § 63.11237 (definition of “Gas-fired boiler”)]

Q12: If an existing gas-fired boiler is a dual-fuel fired boiler which only burns oil when gas supplies are curtailed or during allowed testing and it now chooses to burn oil other than for an allowed reason (e.g., a voluntary switch to oil for cost reasons), does it become an oil fired unit subject to the rule?

A. Yes. An existing dual-fuel fired boiler (i.e., commenced construction or reconstruction on or before June 4, 2010) which now chooses to burn oil for cost reasons would be considered an existing oil-fired unit as long as the boiler was designed to accommodate burning oil. The boiler must meet all requirements for an existing oil fired unit. Compliance with applicable standards must be demonstrated within 180 days of the effective date of the fuel switch. Notification of such fuel switches must be submitted according to section 63.11225(g). [See 40 CFR § 63.11194(d)]

Q13: If a new gas-fired boiler that is physically capable of burning oil chooses to burn oil for reasons other than those allowed under the rule’s definition of gas-fired boiler, does it become a new oil-fired unit subject to the rule?

A. Yes. A new gas-fired boiler (i.e., commenced construction or reconstruction after June 4, 2010) that chooses to burn oil for reasons other than those allowed under the rule would be considered a new oil-fired boiler, regardless of whether it is physically capable of burning oil or is physically changed such that it can accommodate burning oil. [See 40 CFR § 63.11194(c)]

Q14: A facility operates a municipal wastewater treatment plant that includes anaerobic digestion. The anaerobic digestion process produces a gaseous fuel that is commonly referred to as “digester gas”. The primary constituents of the digester gas are methane, carbon dioxide and water vapor. If this digester gas is burned in a boiler, is it covered by subpart 6J?

A. No. The area source boiler rule does not apply to boilers burning gaseous fuel, including biogas. Biogas is the gaseous product of the anaerobic digestion (decomposition without oxygen) of organic matter. It is typically made up of 50-80% methane, 20-50% carbon dioxide, and traces of gases such as hydrogen, carbon monoxide (CO), and nitrogen. In contrast, natural gas is typically made up of more than 70% methane, with most of the rest being other hydrocarbons (such as propane and butane) and only small amounts of carbon dioxide and other contaminants. Biogas is sometimes called swamp gas, landfill gas, or digester gas. [See 40 CFR § 63.11237 (definitions of “Gas-fired boiler,” and “Gaseous fuel”)]

Q15: What is biomass and how is the biomass subcategory defined?

- A. *Biomass* means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste. [See 40 CFR § 63.11237 (definition of “Biomass”)]

The *biomass subcategory* includes any boiler that burns any biomass and is not in the coal subcategory, which includes any boiler that burns any solid fossil fuel and no more than 15 percent biomass on an annual heat input basis. [See 40 CFR § 63.11237 (definitions of “Biomass subcategory,” and “Coal subcategory”)]

Q16: Are warm-season grasses such as switch grass and big blue stem grass considered biomass?

- A. Inclusion of the phrase “. . . This includes, but is not limited to, . . .” in subpart 6J’s definition of biomass is a clear indication that the rule’s definition does not list every type of biomass-based solid fuel. Warm-season grasses such as switch grass and big blue stem grass are considered biomass. [See 40 CFR § 63.11237 (definition of “Biomass”)]

Q17: What is the difference between solid waste and fuel?

- A. EPA finalized a rule codified in 40 CFR Part 241, subpart B which identifies whether a non-hazardous secondary material (NHSM) is, or is not, a solid waste when burned in combustion units. Boilers which burn NHSM that is a solid waste would be regulated under incinerator regulations developed under Section 129 of the CAA. Boilers which burn NHSM that is not a solid waste would be regulated under boiler regulations developed under Section 112 of the CAA. [See 40 CFR §63.11195(b)-(c) and 63.11196(d)]

Q18: Are propane-fired boilers covered under subpart 6J?

- A. No. The rule does not apply to gas-fired boilers burning any gaseous fuels, including natural gas. Natural gas is defined to include propane or propane-derived synthetic natural gas. [See 40 CFR § 63.11237 (definitions of “Gas-fired boiler,” and “Natural gas”)]

Q19: If a university, boarding school, or other institution owns residential buildings which are used to house students or staff, are the boilers serving those buildings considered institutional?

- A. Yes. However, residential boilers used to provide heat and/or hot water for any dwelling with four or fewer family units or a single unit residence dwelling that has since been converted or subdivided into condominiums or apartments are not covered by the rule. This includes residential boilers used in a dwelling with four or fewer family units at a university, but not a boiler in a large dormitory at a university. [See 40 CFR § 63.11237 (definitions of “Institutional boiler,” and “Residential boiler”)]

Q20: Are commercial, outdoor, biomass boilers covered under the rule?

- A. Yes. [See 40 CFR § 63.11237 (definition of “Boiler”)]

Q21: Are apartment complexes considered commercial?

- A. Yes, unless owned by an institution (e.g., university, military installation). However, a boiler in an apartment complex which meets the definition of a residential boiler is not covered under the rule. A residential boiler includes boilers used primarily to provide heat and/or hot water for a dwelling containing four or fewer families, or a single unit residence that has been converted or subdivided into condominiums or apartments. [See 40 CFR § 63.11237 (definitions of “Commercial boiler,” and “Residential boiler”)]

Q22: Are boilers which burn vegetable- and animal-derived fats, such as yellow grease, poultry grease and tallow regulated under the area source boiler rule?

- A. Yes. The rule applies to boilers burning liquid fuel and this includes liquid biofuels, such as yellow grease and poultry grease. [See 40 CFR § 63.11237 (definition of “Liquid fuel”)]

Q23: Are electric boilers regulated under the area source boiler rule?

- A. No. Electric boilers (i.e., boilers in which electric heating serves as the source of heat) are not covered by the rule. [See 40 CFR § 63.11195(j)]

Q24: Are electric boilers that burn oil during power outages regulated under the rule?

- A. No. Electric boilers that burn gaseous or liquid fuel during periods of electrical power curtailment or failure are considered to be electric boilers under the rule and, thus, are not covered by the rule. [See 40 CFR § 63.11237 (definition of “Electric boiler”)]

Q25: Is a process heater using an equal mixture of glycol and water considered to be a boiler?

- A. No. The rule does not apply to process heaters. A process heater means an enclosed device using controlled flame, where the unit’s primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g.,

glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. Process heaters include units that heat water/water mixtures for pool heating, sidewalk heating, cooling tower water heating, power washing, or oil heating. [See 40 CFR § 63.11237 (definition of “Process heater”)]

Q26: Are gas-fired and liquid fuel-fired temporary boilers regulated under subpart 6J?

- A. No. The rule does not apply to gaseous or liquid fuel-fired temporary boilers. A temporary boiler is designed to be, and capable of being, carried or moved from one location to another (e.g., on wheels, skids, carrying handles, dollies, trailers, or platforms). A boiler is not a temporary boiler if any of the following conditions exists:
1. The equipment is attached to a foundation.
 2. The boiler or a replacement remains at a location for more than 12 consecutive months, unless an extension is granted by the regulatory agency. Any temporary boiler that replaces a temporary boiler and performs the same or similar function will be included in calculating the consecutive time period unless there is a gap in operation of 12 months or more.
 3. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
 4. The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition

[See 40 CFR § 63.11237 (definition of “Temporary boiler”)]

Q27: What is the deadline by which an existing major source would have to limit their potential to emit such that they would become an area source and be subject to subpart 6J?

- A. Subpart 6J does not contain a specific provision identifying the date by which a source can limit its potential to emit (PTE) to become an area source. EPA has issued guidance on this issue, however. Specifically, on May 16, 1995, EPA issued a memorandum entitled “Potential to Emit for MACT standards – Guidance on Timing.” This guidance reflects the agency’s current views of the statute and the policy issues surrounding this question. The guidance provides generally that a major source can become an area source before the first substantive compliance date of the relevant MACT standard.

Implementation: Tune-up Requirements

Q28: What is a tune-up?

A. A tune-up consists of the actions defined in section 63.11223(b) (For more detail see the rule and the [Tune-up Guide for Owners and Operators \[https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-area-0\]](https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-area-0)):

- Inspect the burner, as applicable, and clean/replace any components of the burner as necessary.
- Inspect the flame pattern, as applicable, and adjust the burner to optimize the flame pattern, consistent with the manufacturer's specifications, if available.
- Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.
- Optimize total emissions of CO, consistent with the manufacturer's specifications, if available, and any applicable nitrogen oxide requirements.
- Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).
- Maintain an onsite report with the concentrations of CO in the exhaust gas in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, measured before and after the tune-up of the boiler, a description of any corrective actions taken as a part of the tune-up of the boiler and the type and amount of fuel used over the 12 months prior to the tune-up of the boiler if the unit was capable of using more than one fuel during that period.

[See 40 CFR § 63.11223(b)]

Q29: As part of the tune-up, facilities are required to measure CO in the effluent stream before and after tune-up adjustments are made according to section 63.11223(b)(5). Must facilities use the test methods specified in Table 4 (Performance Stack Testing Requirements) to subpart 6J to measure CO or may a portable CO meter be used to measure CO before and after the tune-up?

A. Facilities are not required to use test methods specified in Table 4 to subpart 6J to measure CO before and after tune-up adjustments. Section 63.11223(b)(5) specifies that measurements may be taken using a portable CO analyzer. EPA does not specify the instrument that must be used during tune-ups and allows owners or operators to choose the method of measurement. [See 40 CFR § 63.11223(b)(5)]

Q30: What is the tune-up timeline if I already completed the initial tune-up for my existing boiler?

A. You are not required to perform another initial tune-up by March 21, 2014, which is the amended compliance date. Your next tune-up will be due no later than two years or five

years, as applicable, from when the initial tune-up was conducted. If your initial tune-up was conducted more than 25 months prior to March 21, 2014, you may elect to repeat your initial tune-up by March 21, 2014; however, you must then resubmit your notification of compliance status (NOCS) report to certify the tune-up is your initial tune-up. [See 40 CFR § 63.11223(b), (c), (d), (e), and (f)]

Q31: Which boilers are required to have a tune-up every two years?

A. The following types of boilers must have a tune-up every two years:

- New and existing coal-fired boilers having a heat input capacity of less than 10 MMBtu/hr that do not meet the definition of limited-use boiler or do not use an oxygen trim system that maintains an optimum air-to-fuel ratio.
- New and existing biomass-fired boilers that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio.
- New and existing oil-fired boilers having a heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal use boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio.

[See 40 CFR § 63.11223(b)]

Q32: When does the next biennial (i.e., two-year) tune-up need to be conducted?

A. Each two-year tune-up must be conducted no more than 25 months (i.e., two years plus one month) after the previous tune-up. For a new or reconstructed boiler subject to a two-year tune-up, the first two-year tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler. [See 40 CFR § 63.11223(b)]

Q33: Which boilers are required to have a tune-up every five years?

A. The following types of boilers must have a tune-up every five years:

- New and existing seasonal boilers.
- New and existing limited-use boilers.
- New and existing oil-fired boilers having a heat input capacity equal to or less than 5 MMBtu/hr.
- New and existing boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a two-year tune-up.

[See 40 CFR § 63.11223(c), (d), (e), and (f)]

Q34: When does the next five-year tune-up need to be conducted?

- A. Each five-year tune-up must be conducted no more than 61 months (i.e., five years plus one month) after the previous tune-up. For a new or reconstructed boiler subject to a five-year tune-up, the first five-year tune-up must be no later than 61 months after the initial startup. [See 40 CFR § 63.11223(c), (d), (e), and (f)]

Q35: Tune-ups are required for existing boilers by March 21, 2014. May a facility conduct its tune-up early?

- A. Yes. A tune-up conducted early may be used to meet the rule requirements as long as the tune-up included all elements of the tune-up specified in the rule under section 63.11223. In addition, the next tune-up is due no later than 25 months or 61 months, as applicable, after the date of the early tune-up. [See 40 CFR § 63.11223(b), (c), (d), (e), and (f)]

Q36: If a boiler is dual-fueled and burns both oil and gas, which fuel should the boiler burn during tune-ups?

- A. As required for all boilers subject to tune-ups, a dual fuel-fired boiler must conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. [See 40 CFR § 63.11223(a)]

Q37: When must a new unit do its initial tune-up?

- A. New boilers which commence construction after June 4, 2010 are not required to conduct an initial tune-up at startup, but must conduct the required two-year or five-year tune-up within 25 months or 61 months, (respectively), as applicable, of startup of the boiler. [See 40 CFR § 63.11223(b), (c), (d), (e), and (f)]

Q38: Does the person conducting the boiler tune-up need to be certified?

- A. No. The rule does not require certification, or define who is eligible to conduct the boiler tune-ups. Instead the rule defines what the boiler tune-up must entail. A source owner or operator could hire a contractor, or use in-house personnel to conduct boiler tune-ups. (For more detail see the rule, the [Tune-up Guide for Owners and Operators](#) and the [Tune-up Guide for Technicians](#) [<https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-area-0>]. [See 40 CFR § 63.11223(b)]

Q39: If a boiler is shut down on the date it is required to conduct its tune-up, must it start up to conduct the tune-up?

- A. No. If a boiler is not operating on the required date for a tune-up, the tune-up is required within 30 days of startup [See section 63.11223(b)(7)]

Implementation: Energy Assessment Requirements

Q40: Which facilities must conduct an energy assessment?

- A. Facilities with existing coal, biomass, or liquid fuel fired boilers ≥ 10 MMBtu/hr, except limited use boilers, must conduct a one-time energy assessment by March 21, 2014 on the ≥ 10 MMBtu/hr affected boilers. EPA has developed a Summary of Energy Assessment Requirements [<https://www.epa.gov/stationary-sources-air-pollution/summary-energy-assessment-requirements-under-area-source-boiler>] which explains what an energy assessment must cover and defines a qualified energy assessor. [See 40 CFR § 63.11196(a)(3) and 63.11201(b)]

Q41: How is heat input capacity calculated for each affected boiler?

- A. Heat input capacity for each boiler is calculated based on 8,760 hours per year (i.e., 24 hours/day x 365 days/year).

Q42: How is heat input capacity for facilities with affected boilers calculated for the purpose of determining which heat input capacity thresholds and associated maximum on-site technical labor hours in the definition of “Energy assessment” apply to the facility’s energy assessment (e.g., for facilities with affected boilers with less than 0.3 trillion Btu/year heat input capacity, the assessment will be 8 on-site technical labor hours in length maximum)?

- A. Facility heat input capacity is calculated by adding together the heat input capacity for each boiler subject to the energy assessment requirement (i.e., only boilers with heat input capacity equal to and greater than 10 MMBtu/hr).

Q43: Is there is a minimum number of on-site technical hours that must be spent in order to meet the energy assessment requirement?

- A. No. There is no minimum number of hours required for the energy assessment. A cap on the length of the energy assessment, in on-site technical hours, based on ranges of boiler annual heat input capacity is provided. The cap may be exceeded at the owner’s/operator’s discretion. [See 40 CFR § 63.11237 (definition of “Energy assessment”)]

Q44: How does a facility determine which on-site energy use systems must be evaluated to identify energy savings opportunities as part of their energy assessment? For example, which on-site energy use systems must be evaluated for a facility that has a single boiler with a heat input capacity of < 0.3 trillion BTU/yr and that provides steam to ten separate

on-site energy use systems with each energy use system accounting for approximately 10% of the boiler’s energy production?

- A. Each on-site energy use system is examined separately to determine how much of the boiler’s energy production it uses. For a facility that has a single boiler with a heat input capacity of < 0.3 trillion BTU/yr, subpart 6J requires that the energy assessment be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source, and that the boiler system and any on-site energy use systems accounting for at least 50% of the affected boiler’s energy (e.g., steam, hot water, or electricity) production will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour energy assessment. Thus, for the facility described in the example, only the boiler would need to be evaluated to identify energy savings opportunities because none of the ten on-site energy use systems account for at least 50% of the boiler’s energy production. [See 40 CFR § 63.11237 (definition of “Energy assessment”)]

Implementation: General

Q45: If a facility has numerous similar affected boilers subject to emission limits, do they have to test each boiler?

- A. Yes.

Q46: The rule defines an existing affected source as “the collection of all existing” boilers within a subcategory. Gas-fired boilers are allowed to burn liquid fuel during periodic testing, maintenance, or operator training for a combined total of 48 hours per year. Does the 48 hour limit apply per boiler or to the collection of all gas-fired boilers? This has implications for facilities with multiple boilers that may run diesel for periodic maintenance purposes.

- A. The 48 hours for testing, maintenance, or operator training applies to each gas-fired boiler individually and is separate from the amount of time a boiler burns liquid fuel during a period of gas curtailment.

Monitoring and Testing

Q47: A facility is installing a new oil fired boiler with heat input capacity \geq 10 MMBtu/hr and it will burn oil without any add-on controls. What are the operating limits and continuous monitoring requirements?

- A. A new oil-fired boiler that burns only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur) is not subject to the PM emission limit in the rule. This provision finalized on September 14, 2016 replaced the February 2013 final rule’s

alternative PM standard for new oil-fired boilers that combust low-sulfur oil (i.e., containing less than or equal to 0.50 weight percent sulfur). New or reconstructed oil-fired boilers that commenced construction or reconstruction on or before September 14, 2016 and that are currently meeting the alternative PM standard for low-sulfur oil burning boilers are provided 3 years before becoming subject to the PM emission limit, providing them time to decide how to comply (i.e., combust only ultra-low-sulfur liquid fuel or conduct a performance test demonstrating compliance). Such units meeting the provisions for burning ultra-low-sulfur liquid fuel or low-sulfur oil must monitor and record the type of fuel combusted on a monthly basis. If the new oil-fired boiler is not meeting the provisions for burning ultra-low-sulfur liquid fuel or low-sulfur oil, under Table 3, Item 7 of subpart 6J, boilers subject to emission limits with no add-on controls are required to demonstrate compliance by performance stack testing and to maintain the operating load of each unit, on a 30-day rolling average, such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. Such units are required to monitor the operating load and may use a fuel meter to track the operating load. In addition, they are required to develop a site-specific monitoring plan according to section 63.11224(c). [See 40 CFR § 63.11210(e) and 63.11222(a)]

Q48: A new boiler with a heat input capacity of ≥ 10 MMBtu/hr will have an electrostatic precipitator (ESP) and a multi-cyclone for control. Must this boiler monitor opacity and maintain opacity at 10%?

- A. No. Owners or operators of boilers with ESPs have the option of monitoring either opacity or total secondary electric power. Table 3 of Subpart 6J specifies the operating limits for boilers subject to emission limits. Table 3, Item 5 requires sources with any other add-on air pollution control to monitor and maintain opacity to 10% but this is intended for sources using only a dry control system other than an ESP or fabric filter control. It would not apply to a boiler using an ESP with a multi-cyclone because using the ESP allows the source to demonstrate compliance with the emission limit and monitor either opacity or secondary electric power. [See 40 CFR § 63.11222(a) and Table 3, Items 2 and 5)]

Startup and Shutdown

Q49: When a new boiler is installed, the contractor will generally start the boiler to perform an initial tune-up and test the boiler to make sure that it is operating properly. The intent is not to supply steam or heat for heating and/or producing electricity. The boiler is then turned over to the owner who will then start it for normal operations to supply steam or heat for heating and/or producing electricity. Is the date of startup, as defined by subpart 6J, considered to be the date of the first startup by the contractor for purposes of ensuring that the boiler is operating properly or is it the date that the owner starts the boiler for use in regular operations for supplying heat and/or electricity?

- A. An EPA guidance document “Instruction Manual for Clarification of Startup in Source Categories Affected by New Source Performance Standards” (EPA-68-01-4143)¹ lists “pre-startup” activities that are done as part of installing a new boiler. There is a distinction between installation activities and actual startup. Hot water, steam or heat leaving the boiler to complete the purpose of the boiler (i.e., supply hot water, or steam or heat for heating and/or producing electricity) would be considered startup. However, hot water, steam, or heat leaving the boiler as part of a “pre-startup” or installation procedure would not be considered startup. [See 40 CFR § 63.11237 (definition of “Startup”)]

Q50: If a facility vents steam during startup of a boiler, would the period of time when steam is vented and not being supplied for heating and/or producing electricity be considered part of the startup period?

- A. Yes. “Venting” steam is not considered to mean “supplying” steam. Thus, venting steam does not mean that startup has ended. In the September 14, 2016 final action, the EPA adopted two alternative definitions of “startup.” The first definition defines “startup” to mean the first-ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating and/or producing electricity or for any other purpose. Under this definition, startup ends when any of the useful thermal energy (such as steam or hot water) from the boiler is supplied for heating, producing electricity, or any other purpose. The second definition of “startup” defines the period as beginning with the first-ever firing of fuel, or the firing of fuel after a shutdown event, in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or for producing electricity, and ending 4 hours after the boiler supplies useful thermal energy (such as steam or hot water) for those purposes. [See 40 CFR § 63.11237 (definition of “Startup”)]

Reporting and Recordkeeping

Q51: If I submitted an initial notification and later realize I am exempt from the rule (e.g., because my boiler meets the definition of “hot water heater”), then must I withdraw my initial notification?

- A. No. If you incorrectly sent in an initial notification of applicability you may send in a letter withdrawing the notification; however, you are not legally obligated to do so if you are not regulated under the rule.

Q52: Is a gas-fired unit required to keep records of fuel use under this rule?

¹ <https://www.epa.gov/title-v-operating-permits/instruction-manual-clarification-startup-source-categories-affected-new>

- A. No. Gas-fired units are not covered by the rule and have no requirements under subpart 6J as long as they meet the definition of gas-fired boiler.

Q53: If I have an oil-fired boiler, must I install a fuel meter to track my fuel usage?

- A. No. EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery – instead of fuel consumption – will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies. Records documenting the type and amount of fuel used over the 12 months prior to a boiler tune-up must be kept if the boiler was physically and legally capable of using more than one type of fuel during that period. Records of fuel type and total fuel use by each affected boiler subject to an emission limit must be kept for each calendar month within the reporting period. Units sharing a fuel meter may estimate the fuel use by each unit. [See 40 CFR § 63.11223(b)(6)(iii) and 63.11225(c)(2)(iv)]

Q54: When does a facility need to start keeping fuel records?

- A. Sources must keep records when they first become subject to the rule. For existing area sources, this would be the effective date of the rule, May 20, 2011. New sources which commenced construction after June 4, 2010 must start keeping records on May 20, 2011, or upon startup, whichever is later. [See 40 CFR § 63.11196]

Q55: Section 63.11222(a)(2) requires sources that have an applicable mercury or PM emission limit to keep records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing). Since only coal-fired boilers are subject to mercury emission limits, why would new biomass- and oil-fired boilers that are only subject to PM emission limits have to track fuels to determine if they are below the applicable mercury emission limit if they have no mercury emission limits?

- A. As specified in section 63.11225(c)(2)(iv), each boiler subject to an emission limit in Table 1 to subpart 6J must keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. Thus, new biomass- and oil-fired boilers subject to PM emission limits are required to keep such records. They, however, are not required to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing). This obligation is contingent on having a mercury emission limit, which these types of boilers do not have. [See 40 CFR § 63.11225(c)(2)(iv)]

Q56: If a boiler is temporarily shut down, is the facility required to submit an initial notification by the January 20, 2014, deadline?

- A. Yes. If the boiler is regulated by the area source boiler rule it must submit an initial notification even if it is temporarily shut down. However, boilers that have been decommissioned (e.g., by removing vital parts and taking the boiler off of the state's inventory of affected sources) do not need to notify. [See 40 CFR § 63.11225(a)(2)]

Q57: If I previously submitted a paper copy of my notification of compliance status (NOCS), do I need to submit an electronic notification of compliance status report using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx)?

- A. No. Sources are not required to resubmit an electronic NOCS if the paper report was submitted prior to the electronic reporting form being available. The electronic reporting template for the NOCS report was completed on January 1, 2014. As of that date, sources are required to submit the NOCS electronically using CEDRI. [See 40 CFR § 63.11225(a)(4)(iv)]

Q58: For boilers subject only to tune-up requirements when must I prepare Compliance Certification Reports?

- A. Your first Compliance Certification Report certifying that you complied with the requirement to conduct a tune-up of your existing boiler must be prepared by March 1, 2015. For existing and new boilers that are required only to conduct a two-year or five-year tune-up and are not subject to emission or operating limits, you are only required to prepare a two-year or five-year Compliance Certification Report. Reports should be prepared by March 1 of the year after the calendar year during which a tune-up is completed. [See 40 CFR § 63.11225(b)]

Resources for More Information

Q59: Where can I get additional information?

- A. Additional information on the proposed and final rules, implementation and compliance information and forms is available from the following EPA websites:

EPA CAA Standards and Guidelines for Energy, Engines, and Combustion,
<https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-standards-and-guidelines-energy-engines-and>

EPA boilers and process heaters webpage, <https://www.epa.gov/boilers>

EPA Area source boiler webpage, <https://www.epa.gov/stationary-sources-air-pollution/compliance-area-sources-industrial-commercial-and-institutional>

EPA compliance for Area source boilers webpage, <https://www.epa.gov/stationary-sources-air-pollution/industrial-commercial-and-institutional-area-source-boilers>

Small Entity Compliance Guide, <https://www.epa.gov/sites/production/files/2015-06/documents/areasourcesmallbizcomplianceguidemar2013.pdf>