Whether you're a consistent emissions reporter or have been flying under the radar, following are some frequently asked questions regarding the often misunderstood Foundry Area Source Rule.

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Editor's Note: Where applicable, references to the text of the area source rule are provided in brackets.

The National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources, or Foundry Area Source Rule (40 CFR Part 63 Subpart ZZZZZ), was first published on Jan. 2, 2008. The rule affects iron and steel metalcasting facilities having the potential to emit less than 10 tons per year of any single hazardous air pollutant (HAP) and less than 25 tons per year of any combination of HAPs (HAP minor sources). If your facility melts and casts iron and/or steel, either the Foundry Area Source Rule or the National Emissions Standard for Hazardous Air Pollutants for Iron and Steel Foundries (40 CFR Part 63 Subpart EEEEEE) is applicable to your operation.

Foundry Area Source Rule compliance obligations depend on whether a casting facility is designated as “large” or “small” and whether the facility is considered “existing” or “new.” A “new” facility is defined as one constructed on or after Sept. 17, 2007, including any plant reconstructed on or after that date with expenditures exceeding 50% of the fixed cost of a comparable new casting plant. A new area

“Small” facilities have annual metal melting capacities of 10,000 tons or less if they are new, 20,000 tons or less if they are existing. “Large” facilities melt more than 10,000 tons annually.
source facility is designated as “small” if annual metal melting capacity is equal to 10,000 tons or less. An existing area source is designated as small if the actual metal production for a calendar year is equal to 20,000 tons or less.

**Area Source FAQs**

A number of area source rule compliance dates have passed for small and large metalcasting facilities, such as pollution prevention management practices for metallic scrap and mercury, and additional large facility requirements are quickly approaching. The following questions and answers address “existing,” “large” source iron and/or steel casting facilities. (Note: All topics of importance to your operations may not be covered, e.g. wet or dry electrostatic precipitators, so the reader is urged to consult the final rule for applicable requirements.)

**Q** What is the compliance date for the rule’s standards and management practice requirements?

The compliance date is no longer than two years from the date the metalcasting facility submitted a written notification to the U.S. Environmental Protection Agency (EPA) identifying the plant as “large.” The last date to make that submission was Jan. 2, 2009. Because the compliance date depends on the submission date, a particular facility’s compliance date could be before but no later than Jan. 2, 2011 (63.10881(a)(3)).

**Q** What are the standards and management practices for large metalcasting facilities?

In most cases, each facility would need to operate a capture and collection system that meets accepted engineering standards for each metal melting furnace and stack and fugitive emission limits (63.10895(b)).

**Q** Must I capture the emissions from all my metal melting furnaces?

Not necessarily. For electric induction furnaces, the rule does provide some options. If the emissions from an electric induction furnace are uncaptured and uncontrolled, the furnace may be part of an emissions averaging group. The facility could install and later remove a temporary enclosure for the purpose of conducting emissions testing. An additional option would be to test a similar furnace at the facility (63.10898(a)(5) and 63.10898(b)(3)).

**Q** Do any other major requirements exist?

In addition to the above, each capture and collection system must meet accepted engineering standards. The facility must have an Operations and Maintenance (O&M) Plan, and ductwork and control devices must undergo initial and periodic inspections unless a baghouse is used to control emissions from the melting operation and a bag leak detection system is used.

**Q** I’m not a major source. Do the general provisions contained in 40 CFR Part 63 Subpart A apply to me?

General Provisions do apply to area sources of HAPs. Table 3 of the Foundry Area Source Rule provides General Provision rule applicability to large metalcasting facilities. General Provision requirements include the development of a written Site Specific Test Plan and Startup, Shutdown and Malfunction Plan.

**Q** Weren’t the Startup, Shutdown and Malfunction requirements vacated by the courts?

The court did vacate a portion of the General Provisions that provided exemptions to emissions limitations (including opacity) during periods of startup, shutdown and malfunctions under certain circumstances. However, a Site Specific Test Plan is still required.

**Q** Do control device(s) other than those serving melting furnaces need to be included in the O&M Plan?

The rule states an O&M Plan is required for each control device that is subject to a particulate matter, metal HAP or opacity emissions limitation per the rule. The exact meaning of this requirement is still being discussed and will be updated in the future.

**Q** Must I complete a performance test by my compliance date? Do any exemptions to testing exist?

The rule states you must conduct the test within 180 days of your compliance date (63.10898(a)). Some exemptions from testing are provided in the rule (63.10898(a)(1), (a)(3), (a)(4), (e)(3)) and discussed elsewhere in this article.

**Q** What is the required frequency for performance/stack testing and opacity observation?

Stack testing is required no less frequently than every five years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions. Testing to demonstrate compliance with the opacity limit is required no less frequently than every six months and each time you make a process change likely to
increase fugitive emissions [63.10898(b) and 63.10898(i)].

Q What emissions factors may I use for an uncontrolled electric induction furnace that is part of an emission averaging group?

The rule provides for three possibilities.

If the furnace has been previously tested (meaning emissions were previously captured and either uncontrolled or tested prior to controls), you must use those results.

If the furnace has not been previously tested, use the default emissions factor provided by the rule.

Use the test results from a similar electric induction furnace to develop an emissions factor assuming the test was conducted in a manner that meets the requirements provided in 63.10898(a)(4).

Q If I am conducting a particulate matter or total metal HAP performance test to meet Foundry Area Source Rule requirements, must I always conduct an opacity observation?

Yes. Both Table 1 and the General Provision requirements state that during any particulate matter or total metal HAP performance test, the facility must conduct the opacity observation concurrently with the performance test unless the opacity observation could not be conducted for a specified reason [Table 1 2.a.ii and 63.6(h)(5)(i)].

Section 63.10898(a)(1) of the rule allows a facility to submit the results of a prior performance test for particulate matter or total metal HAP, if a written notification is provided no later than 60 days after the compliance date. Must I have a Method 9 conducted to request the use of a previous stack test?

No. The rule discusses submission of a previous performance test for particulate matter or total metal HAPs and not opacity. Also, Table 1 2.a.ii, provides that the opacity test be conducted with the performance test, “if applicable” [63.6(h)(5)(i)].

What is the duration of the initial and subsequent opacity observations?

The Foundry Area Source Rule does not provide the duration of the initial or subsequent opacity observations. The General Provisions indicate the duration of the initial opacity observation is three one-hour test periods. EPA has stated that three one-hour test periods are expected for subsequent visible observations for Method 9 or Method 22. EPA stated it will address this issue in the future, should the rule be amended [Table 1 2.b and 63.7(g)(5)ii].

Can I start out using a Method 22 visible observation, or must I conduct a Method 9 for my initial test?

The rule does not differentiate by test method between initial and subsequent opacity observations, so a Method 22 is permissible during the initial observations. If a facility decides to use a Method 22 for initial (or subsequent) opacity observations, it may be beneficial to conduct the test at least 15 days prior to your compliance date (or at the end of a six-month period for subsequent tests). This 15-day period would allow the facility to schedule and conduct a Method 9 should the Method 22 result in visible emissions greater than 10% of the sampling period. [Table 1 2.b.1]

If you have missed making submittals of Notification of Compliance Status and/or semiannual reports in the past, it is likely more advantageous to submit a document late rather than not at all.

Q When conducting opacity observations, can I pick fugitive egress points, windows, openings or vents with the highest visible emissions or must I measure all such points? If I have metalcasting operations in multiple buildings, must I conduct an opacity test on all of the individual buildings?

Yes. The rule allows an observer to identify a limited number of openings or vents that appear to have the highest visible emissions or, alternatively, “a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.” Because both of the above options are limited to a “building or structure,” if you have multiple buildings with metalcasting operations, multiple opacity readings would be necessary [Table 1 2.b.1].

Per 63.10898(a)(1), I am using a previous performance test for stack emissions. By what date must the initial opacity observations be conducted?

Section 63.10898(h) requires a facility to conduct an opacity test for fugitive emissions according to the requirements in 63.6(h)(5). Section 63.6(h)(5)(i)(A) states that an opacity test is due within 120 days if no performance test is required.

Q Given the rule discusses a performance test report and also requires reporting results via a Notification of Compliance Status, how do I report my initial compliance test results?

Section 63.10898(j) states you must certify in your “performance test report” that the capture system operated normally during the performance test. Section 63.10898(a) requires the results be reported with the Notification of Compliance Status, which is supported by the General Provision requirements provided in 63.7(g)(1). To reconcile the two requirements, a facility should submit the performance testing results in a notification using the applicable Table 4 language and indicate the capture system operated normally during the performance test.

Q Do I need to submit my semi-annual opacity results or just keep them on file? If a report is due, by when must it be submitted?

The Foundry Area Source Rule does not provide any guidance directly on this matter, but Table 3 identifies a portion of the General Provisions as applicable. Per 63.10cd(3), a facility should report the results before the close of business on the 30th day following the completion of the observations. If opacity observations are conducted with a performance test, the opacity and performance test results are due before the close of business on the 60th day following the completion of the performance test, unless specified otherwise by the standard or in writing by the administrator.

To whom should I submit the results of my opacity observations?

While it is clear the results of a performance test should be submitted to the EPA region until a Title V permit is issued and then the state (as long as the state has an approved Title V program), the General Provisions do not indicate where to send opacity observations. Therefore, submit them per the performance test requirement.

Q Do I need a Site-Specific Test Plan for initial performance tests?


Yes. Table 3 states that section 63.7(c) is applicable, with (2)(i) requiring the preparation of a Site-Specific Test Plan before conducting a required performance test. Note the test plan only needs to be submitted if requested by the administrator. However, this does not alleviate the metalcaster from complying with any state notification requirements.

**Q** Do I need to prepare a Site-Specific Test Plan when conducting only an opacity test?

A test plan is required when conducting a performance test, but the General Provisions differentiate between a “performance test” and “visual observations” (e.g. 63.10(d)). Given this and the limited applicability of contents of site-specific test plan requirements for visual observations, it appears a site-specific test plan would not be required, though feedback from EPA has been requested. Regardless of any requirement, a metalcasting facility should document how it is going to conduct the opacity observations.

**Q** Do I have to notify EPA prior to each performance test?

Yes. A metalcasting facility must notify the administrator in writing of the intent to conduct a test at least 60 calendar days before the test is initially scheduled. The administrator at that time can request to review and approve the Site-Specific Test Plan and have an observer present. Note there are also requirements to notify EPA should the metalcasting facility be unable to conduct a performance test [63.7(b)].

**Q** Do I have to notify EPA prior to each visual observation?

Yes. A metalcasting facility must notify the administrator in writing of the anticipated date for conducting the opacity observations at least 30 calendar days before the test is scheduled [63.6(b)(4) and 63.9(f)].

**Q** Can I elect to use my existing bag leak detection system instead of conducting the baghouse inspection requirements?

Yes. The rule allows the use of a bag leak detection system, but all requirements contained in the rule would need to be met, including preparation of a Site-Specific Test Plan [63.10897(d)].

**Q** My wet scrubber is not designed with a spray nozzle and/or a de-mister section. How do I comply with the initial and subsequent inspection requirements?

You should document the wet scrubber does not have a spray nozzle and/or demister section in the O&M Plan. Per section 63.10896(a)(3), the plan must include a description of equipment that is to be inspected, making this a good place to document the equipment does not exist.

**Q** For small metalcasting facilities, there is a requirement in the management practices and compliance requirements section to maintain records regarding HAP-containing chemical binder or coating materials. Are large facilities required to maintain this information, and if so, by when?

For large metalcasting facilities, this requirement is listed under the recordkeeping section. While a definite answer cannot be provided, at a minimum a large metalcasting facility would want to begin keeping records on its compliance date as determined above [63.10899(b)(5)].

**Q** I have missed making submittals of Notification of Compliance Status and/or semiannual reports in the past. Should I just bury my head in the sand and hope no one notices?

You may want to consult your company’s legal representation, but it is likely more advantageous to submit a document late rather than not at all.

**Q** Do I have to complete a semiannual report? If so, when was the initial report due? When are subsequent reports due?

The Area Source Rule is not entirely helpful here. While section 63.10899(c) states you must submit a semiannual compliance report “according to the requirements in § 63.10(e), 63.10(c),” which has the heading of “Additional reporting requirements for sources with continuous monitoring systems,” a number of area source facilities do not have a continuous monitoring system. This would be the case for an existing metalcasting facility with electric induction furnaces controlled by a baghouse that does not elect to use a bag leak detection system. In this case, section 63.10(e) would not be applicable. While this is an issue, the preamble to the final rule (p. 229 and 231) and section 63.10899(c)(3) include language regarding the contents of a semiannual report. Therefore, whether a metalcaster has a continuous monitoring system installed or not, a semiannual report should be submitted.

If a facility chose to comply with the pollution prevention management practices for metallic scrap and binder formulations at the possible date, Jan. 2, 2009, the first report would have been due by July 30 for the period of Jan. 2, 2009-June 30, 2009. Subsequent semiannual reports must be postmarked by the 30th day following the end of each calendar half (i.e. July 30 and January 30) [63.6(e)(3)(v)].

For More Information

The AFS (www.afsinc.org) and U.S. Environmental Protection Agency (www.epa.gov/ttn/atw/mactfnalphp.html) websites provide additional information on the Foundry Area Source Rule.

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