



# Federal Register

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**Wednesday,  
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**Part II**

## **Environmental Protection Agency**

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**40 CFR Part 63**

**National Emission Standards for  
Hazardous Air Pollutants for Iron and  
Steel Foundries Area Sources; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

[EPA-HQ-OAR-2006-0359; FRL-8509-6]

RIN 2060-AM36

**National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** EPA is issuing national emission standards for hazardous air pollutants for two area source categories (iron foundries and steel foundries). The requirements for the two area source categories are combined in one subpart. The final rule establishes different requirements for foundries based on size. Small area source foundries are required to comply with pollution prevention management practices for metallic scrap, the removal of mercury switches, and binder formulations. Large area source foundries are required to comply with the same pollution prevention management practices as small foundries in addition to emissions standards for melting furnaces and foundry operations. The final standards reflect the generally achievable control technology and/or management practices for each subcategory.

**DATES:** This final rule is effective on January 2, 2008. The incorporation by reference of certain publications listed in this final rule is approved by the Director of the Federal Register as of January 2, 2008.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2006-0359. All

documents in the docket are listed in the Federal Docket Management System index at <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the NESHAP for Iron and Steel Foundries Area Sources Docket, at the EPA Docket and Information Center, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** Mr. Conrad Chin, Sector Policies and Programs Division, Office of Air Quality Planning and Standards (D243-02), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number: (919) 541-1512; fax number: (919) 541-3207; e-mail address: [chin.conrad@epa.gov](mailto:chin.conrad@epa.gov).

**SUPPLEMENTARY INFORMATION:**

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**I. General Information**

*A. Does this action apply to me?*

The regulated category and entities potentially affected by this final action include:

Category	NAICS code <sup>1</sup>	Examples of regulated entities
Industry .....	331511	Iron foundries. Iron and steel plants. Automotive and large equipment manufacturers.
	331512	Steel investment foundries.
	331513	Steel foundries (except investment).

<sup>1</sup> North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. To determine whether your facility would be regulated by this action, you should examine the applicability criteria in 40 CFR 63.10880 of subpart ZZZZZ (National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources). If you have any questions regarding the

applicability of this action to a particular entity, consult either the air permit authority for the entity or your EPA regional representative as listed in 40 CFR 63.13 of subpart A (General Provisions).

*B. Where can I get a copy of this document?*

In addition to being available in the docket, an electronic copy of this final action will also be available on the

Worldwide Web (WWW) through EPA's Technology Transfer Network (TTN). A copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: <http://www.epa.gov/ttn/oarpg/>. The TTN provides information and technology exchange in various areas of air pollution control.

### C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by March 3, 2008. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Section 307(d)(7)(B) also provides a mechanism for us to convene a proceeding for reconsideration, “[i]f the person raising an objection can demonstrate to the EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.” Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20004.

### II. Background Information

Section 112(k)(3)(B) of the CAA requires EPA to identify at least 30 hazardous air pollutants (HAP), which, as the result of emissions of area sources,<sup>1</sup> pose the greatest threat to public health in urban areas. Consistent with this provision, in 1999, in the Integrated Urban Air Toxics Strategy, EPA identified the 30 HAP that pose the greatest potential health threat in urban areas, and these HAP are referred to as the “Urban HAP.” See 64 FR 38715, July 19, 1999. Section 112(c)(3) requires EPA to list sufficient categories or

<sup>1</sup> An area source is a stationary source of hazardous air pollutant (HAP) emissions that is not a major source. A major source is a stationary source that emits or has the potential to emit 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAP.

subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 Urban HAP are subject to regulation. EPA listed the source categories that account for 90 percent of the Urban HAP emissions in the Integrated Urban Air Toxics Strategy.<sup>2</sup> Sierra Club sued EPA, alleging a failure to complete standards for the area source categories listed pursuant to CAA sections 112(c)(3) and (k)(3)(B) within the time frame specified by the statute. See *Sierra Club v. Johnson*, No. 01–1537, (D.D.C.). On March 31, 2006, the court issued an order requiring EPA to promulgate standards under CAA section 112(d) for those area source categories listed pursuant to CAA section 112(c)(3). Among other things, the court order, as amended on October 15, 2007, requires that EPA complete standards for nine area source categories by December 15, 2007. We are issuing this final rule in response to the court order. Other final NESHAP will complete the required regulatory action for the remaining area source categories.

Under CAA section 112(d)(5), the Administrator may, in lieu of standards requiring maximum achievable control technology (MACT) under section 112(d)(2), elect to promulgate standards or requirements for area sources “which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants.” As explained in the preamble to the proposed NESHAP, we are issuing emission standards based on GACT for the control of the Urban HAP for which the source category was listed (compounds of chromium, lead, manganese, and nickel) that are emitted from metal melting furnaces at area source facilities classified as large iron and steel foundries.

In addition, we are establishing pollution prevention management practices based on GACT that apply to all area source foundries. The pollution prevention management practices reduce HAP emissions of organics, metals, and mercury generated from furnace charge materials and prohibit the use of methanol as a component of binder formulations in certain applications. Another pollution prevention management practice requires that foundries keep a record of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records may assist area

<sup>2</sup> Since its publication in the Integrated Urban Air Toxics Strategy in 1999, EPA has revised the area source category list several times.

source foundry owners or operators in their pursuit of pollution prevention opportunities.

### III. Summary of the Final Rule and Changes Since Proposal

#### A. What are the applicability provisions and compliance dates?

The final NESHAP applies to each new and existing iron and steel foundry that is an area source of HAP. The final rule allows 2 years (instead of 1 year as proposed) for existing foundries to comply with the pollution prevention standards for mercury. As proposed, all foundries must comply with the pollution prevention management practices for scrap management and binder formulations by January 2, 2009. A large existing foundry must comply with applicable emissions limitations and operation and maintenance requirements no later than 2 years after initial classification.<sup>3</sup>

As proposed, different rule requirements apply to facilities classified as large foundries or small foundries. Based on public comment, we have revised the threshold level in the definitions of large foundry” and “small foundry” as they apply to existing affected sources. For an existing affected source, we are defining a “small foundry” as an iron and steel foundry that has an annual metal melt production of 20,000 tons or less (instead of 10,000 tons). An existing affected source that has an annual metal melt production greater than 20,000 tons is classified as a large foundry. For new affected sources, we have revised the basis for determining the threshold. For a new affected source, we are defining a “small foundry” as an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less. A new affected source that has an annual metal melt capacity greater than 10,000 tons is classified as a large foundry. The term, “annual metal melt capacity” is defined in the final rule as:

\* \* \* the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the

<sup>3</sup> If additional time is needed to install controls, the owner or operator of an existing source can, pursuant to 40 CFR 63.6(i)(4), request from the permitting authority up to a 1-year extension of the compliance date. See CAA section 112(i)(3)(B).

furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

Each existing foundry must determine its initial classification as a small or large foundry using production data for calendar year 2008. After the initial classification, an existing affected source classified as a small foundry that exceeds the 20,000 ton annual metal melt production threshold during the preceding calendar year must comply with the applicable requirements for a large foundry within 2 years of the date of the foundry's notification that the annual metal melt production exceeded 20,000 tons (provided the facility has never been classified as a large foundry). For example, if an existing small foundry produces more than 20,000 tons of melted metal from January 1 through December 31, 2009, that facility is required to comply with the requirements for a large foundry by January 2012. If the small foundry has previously been classified as a large foundry, the facility must comply with the requirements for a large foundry immediately (no later than the date of the foundry's most recent notification that the annual melt production exceeded 20,000 tons). If an existing facility is initially classified as a large foundry (or a small foundry becomes a large foundry), that facility must meet the applicable requirements for a large foundry for at least 3 years, even if its annual metal melt production falls below 20,000 tons. After 3 years, the foundry may reclassify the facility as a small foundry provided the annual metal melt production for the preceding calendar year was 20,000 tons or less. A large foundry that is reclassified as a small foundry must continue to comply with the applicable requirements for small foundries immediately (no later than the date the foundry notifies the Administrator of the reclassification). A large foundry that is reclassified as a small foundry and then exceeds an annual metal melt production of 20,000 tons for a subsequent calendar year, must comply with the applicable requirements for large foundries immediately (no later than the date the foundry notifies the Administrator of the reclassification).

The owner or operator of a new area source foundry must comply with the rule requirements by January 2, 2008 or upon startup, whichever is later. Each new foundry must determine its initial classification as a small or large foundry based on its annual metal melting capacity at startup. Following the initial determination, a small foundry that increases their annual metal melting

capacity to greater than 10,000 tons must comply with the requirements for a large foundry no later than the startup date for the new equipment or if applicable, the date of issuance for their revised State or Federal operating permit. If the new foundry is initially classified as a large foundry (or a small foundry subsequently becomes a large foundry), the owner or operator must comply with the requirements for a large foundry for at least 3 years before reclassifying the facility as a small foundry. After 3 years, the owner or operator may reclassify the facility as a small foundry provided the annual metal melting capacity is 10,000 tons or less. If a large foundry is reclassified as a small foundry, the owner or operator must comply with the requirements for a small foundry no later than the date the melting equipment was removed or taken out of service or if applicable, the date of issuance for their revised State or Federal operating permit.

*B. What emissions standards are in the form of pollution prevention management practices?*

1. Metallic Scrap

The material specification requirements are based on pollution prevention and require removal of HAP-generating materials from metallic scrap before melting. All foundries must prepare and operate according to written material specifications for one of two equivalent compliance options.

One compliance option requires foundries to prepare and operate pursuant to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include metallic scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. The term "free liquids" is defined as material that fails the paint filter test by EPA Method 9095B (incorporated by reference—see 40 CFR 63.14) in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". A new provision states that the requirement for no free liquids does not apply if the owner or operator can demonstrate that the free liquid results from scrap exposed to rain.

The second compliance option requires foundries to prepare and operate pursuant to written material specifications for the purchase and use of scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the foundry. Except for a cupola equipped with an afterburner, metallic

scrap charged to a scrap preheater or metal melting furnace must be depleted (to the extent practicable) of used oil filters, chlorinated plastic parts, accessible lead-containing components, and free liquids. For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, the material specifications must include requirements for metal scrap to be depleted (to the extent practicable) of chlorinated plastics, accessible lead-containing components, and free liquids. In response to comments, we deleted a provision in the proposed rule that would have exempted the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace.

Either material specification option will achieve a similar HAP reduction impact. Foundries may have certain scrap subject to one option and other scrap subject to another option provided the metallic scrap remains segregated until charge make-up.

2. Mercury Switch Removal

The final standards for mercury are based on pollution prevention and require a foundry owner or operator who melts scrap from motor vehicles either to purchase (or otherwise obtain) the motor vehicle scrap only from scrap providers participating in an EPA-approved program for the removal of mercury switches or to fulfill the alternative requirements described below. The final rule clarifies that the requirements do not apply to scrap providers who do not provide motor vehicle scrap or to contracts and shipments that do not include motor vehicle scrap. Foundries participating in an approved program must maintain records identifying each scrap provider and documenting the scrap provider's participation in the EPA-approved mercury switch removal program. An equivalent compliance option is for the foundry to prepare and operate pursuant to an EPA-approved site-specific plan that includes specifications to the scrap provider that mercury switches must be removed from motor vehicle bodies at an efficiency comparable to that of the EPA-approved mercury switch removal program (see below). An equivalent compliance option is provided for facilities that recover only specialty scrap that does not contain mercury switches. Provisions are also included for scrap that does not contain motor vehicle scrap.

We expect most facilities that use motor vehicle scrap will choose to comply by purchasing motor vehicle scrap only from scrap providers who participate in a program for removal of

mercury switches that has been approved by the Administrator. The NVMSRP<sup>4</sup> is an approved program under this final standard as is the mercury switch recovery program implemented by the State of Maine. Facilities choosing to use the NVMSRP as a compliance option must assume all of the responsibilities as described in the MOU.

Foundries may also obtain scrap from scrap providers participating in other programs. To do so, the facility owner or operator must submit a request to the Administrator for approval to comply by purchasing scrap from scrap providers that are participating in another switch removal program and demonstrate to the Administrator's satisfaction that the program meets the following specified criteria: (1) There is an outreach program that informs automobile dismantlers of the need for removal of mercury switches and provides training and guidance on switch removal, (2) the program has a goal for the removal of at least 80 percent of the mercury switches, and (3) the program sponsor must submit annual progress reports on the number of switches removed and the estimated number of motor vehicle bodies processed (from which a percentage of switches removed is easily derivable).

Facilities that purchase motor vehicle scrap from scrap providers that do not participate in an EPA-approved mercury switch removal program must prepare and operate pursuant to and in conformance with a site-specific plan for the removal of mercury switches, and the plan must include provisions for obtaining assurance from scrap providers that mercury switches have been removed. The plan must be submitted to the Administrator for approval and demonstrate how the facility will comply with specific requirements that include: (1) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper disposal of the mercury switches, (2) provisions for obtaining assurance from scrap providers that motor vehicle scrap provided to the facility meets the scrap specifications, (3) provisions for periodic inspection, or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap, (4)

provisions for taking corrective actions if needed, and (5) requiring each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information from the owner or operator at any time. The site-specific plan must establish a goal for the removal of at least 80 percent of the mercury switches. All documented and verifiable mercury-containing components removed from motor vehicle scrap count towards the 80 percent goal.

In response to comments, we have revised the final rule to include provisions designed to increase the effectiveness and enforceability of the EPA-approved programs. The requirements for a site-specific plan specify that the owner or operator must operate according to the plan during the review process, operate according to the plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. The owner or operator may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. A new provision also requires the site-specific plan to include documentation of direction to appropriate staff to communicate to suppliers throughout the supply chain the need to promote the removal of mercury switches from end of life vehicles. The owner or operator must provide examples of materials that are used for outreach to suppliers at the request of the Administrator or delegated authority. We have also clarified that the information in the semiannual progress reports for each scrap provider can be submitted in aggregated form and does not have to be submitted for each shipment. We have also revised the option for approved mercury programs to require that foundries develop and maintain onsite a written plan demonstrating the manner through which the facility is participating in the EPA-approved program. The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility. The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury

switches from end-of-life vehicles. The owner or operator also must conduct periodic inspections or provide other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

An equivalent compliance option is provided for foundries that recover specialty metals. The option requires the facility to certify that the only materials they are charging from motor vehicle scrap are materials recovered for their specialty alloy content, such as chromium in certain exhaust systems, and these materials are known not to contain mercury switches. We have added to the final rule certification requirements for facilities that do not use motor vehicle scrap containing mercury switches.

Records are required to document conformance with the material specifications for metallic scrap, restricted scrap, and mercury switches. Each foundry is required to submit semiannual reports that clearly identify any deviation from the scrap management requirements. These reports can be submitted as part of the semiannual reports required by 40 CFR 63.10 of the general provisions.

### 3. Binder Formulations

For each furfuryl alcohol warm box mold or core making line, new and existing foundries must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system. This final rule includes recordkeeping requirements to document conformance with this requirement.

#### *C. What are the requirements for small iron and steel foundries?*

This final rule requires each new and existing affected source that is classified as a small foundry to comply with the pollution prevention management practices for metallic scrap, mercury switches, and binder formulations described above. The owner or operator is required to submit an initial notification of applicability no later than May 1, 2008 (or within 120 days after the foundry becomes subject to the standard; see 40 CFR 63.9(b)(2)). The foundry is also required to submit an initial written notification to the Administrator that identifies their facility as a small (or large) foundry; this notification is due no later than January 2, 2009. Subsequent notifications are required within 30 days for a change in

<sup>4</sup>For details see: <http://www.epa.gov/mercury/switch.htm>. In particular, see the signed Memorandum of Understanding.

process or operations that reclassifies the status of the facility and its compliance obligations. A small foundry is also required to submit a notification of compliance status according to the requirements in 40 CFR 63.9(h) of the General Provisions (40 CFR part 63, subpart A). The notification of compliance status must include certifications of compliance for the pollution prevention management practices. This final rule also requires small foundries to keep records of monthly metal melt production and report any deviation from the pollution prevention management practices in the semiannual report required by 40 CFR 63.10 of the NESHAP general provisions.

We are also requiring small foundries to keep a record of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Data Safety Sheets, or other documentation that provide information on binder materials. The purpose of this requirement is to encourage foundries to investigate and use nonHAP binder and coating materials wherever feasible.

#### *D. What are the requirements for large iron and steel foundries?*

This final NESHAP requires new and existing affected sources that are classified as large foundries to comply with the pollution prevention management practices described in section III.B of this preamble. In addition, large foundries are required to operate capture and collection systems for metal melting furnaces and comply with emissions standards, operation and maintenance, monitoring, testing, and recordkeeping and reporting requirements.

#### 1. Emissions Limitations

New and existing affected sources that are classified as large foundries must comply with emissions limits for metal melting furnaces. A metal melting furnace includes cupolas, EAF, EIF, or other similar devices (excluding holding furnaces, argon oxygen decarburization vessels, or ladles that receive molten metal from a metal melting furnace, to which metal ingots or other materials may be added to adjust the metal chemistry). The final emissions limits for metal melting furnaces are:

- 0.8 pounds of PM per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged for each metal melting furnace at an existing iron and steel foundry.

- 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged for each metal melting furnace at a new iron and steel foundry.

The owner or operator of a new or existing affected source may choose to comply with these emission limits utilizing emissions averaging as specified in this rule so that the production-weighted average emissions from all metal melting furnaces at the foundry for any calendar month meet the applicable emissions limit.

The proposed rule included operating parameter limits that applied to PM control devices applied to emissions from a metal melting furnace. We eliminated the operating limit for baghouse pressure drop in response to comments because this operating parameter was determined not to be an appropriate indicator of performance. We have revised the other operating limits to apply to PM control devices at new affected sources instead of existing affected sources to minimize costs to existing sources associated with monitoring system retrofits. For a wet scrubber, a foundry must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test. For an electrostatic precipitator, a foundry must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test. The final rule does not include an operating limit for baghouses at existing or new affected sources. The final NESHAP also includes a fugitive emissions opacity limit of 20 percent for each building or structure housing iron and steel foundry operations revised since proposal to allow one 6-minute average per hour that does not exceed 30 percent. Foundry operations covered by the fugitive emissions opacity limit include all process equipment and practices used to produce metal castings for shipment including mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding and other metal finishing operations; and sand handling.

#### 2. Operation and Maintenance Requirements

The owner or operator is required to prepare and operate by an O&M plan for each control device used to comply with the standards. Any other O&M, preventative maintenance, or similar plan which satisfies the specified

requirements may be used to comply with the requirements for an O&M plan.

#### 3. Monitoring Requirements

In response to comments, we have revised the proposed monitoring requirements in several respects. The monitoring requirements in the final rule apply to new and existing affected sources that are classified as large foundries (those having an annual metal melt production greater than 20,000 tons instead of 10,000 tons in the proposed rule). We are requiring that large foundries at new and existing affected sources conduct initial and periodic inspections of PM control devices (baghouses, wet scrubbers, and electrostatic precipitators) in lieu of the proposed monitoring requirements. As an alternative means of compliance, the owner or operator of an existing area source may use a bag leak detection system to demonstrate continuous compliance with a PM or total metal HAP emissions limit instead of complying with the inspection requirements for baghouses.

We are requiring that large iron and steel foundries at new affected sources install and operate CPMS to measure and record operating parameters of wet scrubbers and electrostatic precipitators used to comply with PM or total metal HAP emissions limit. All CPMS must be operated and maintained according to the O&M plan. These foundries are also subject to control device operating limits that are the same as the proposed operating limits for wet scrubbers and electrostatic precipitators. No operating limits apply to baghouses at existing or new affected sources.

Bag leak detection systems are required for positive or negative pressure baghouses at a new area source foundry. If a bag leak detection system is used, the owner or operator must prepare and operate pursuant to a monitoring plan for each bag leak detection system; specific requirements for the plan are included in this final rule. For additional information on bag leak detection systems that operate on the triboelectric effect, see "Fabric Filter Bag Leak Detection Guidance", U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, September 1997, EPA-454/R-98-015, National Technical Information Service (NTIS) publication number PB98164676. This document is available from the NTIS, 5385 Port Royal Road, Springfield, VA 22161.

Monthly inspections of the equipment that is important to the performance of the capture system are also required. The owner or operator must repair any defect or deficiency in the capture

system as soon as practicable but no later than 90 days and record the results of each inspection and the date of any repair.

If a large foundry complies with the emissions limits for furnaces using emissions averaging, the final NESHAP requires the owner or operator to demonstrate compliance on a monthly basis. The facility must determine the weighted average emissions from all metal melting furnaces at the foundry using an equation included in this final rule. We have reduced the default emissions factor for uncontrolled induction furnaces in an emissions averaging group from 3 pounds of PM per ton of metal charged (lb/ton) to 1.6 lb/ton. The owner or operator must maintain records of the monthly calculations and report any exceedance in the semiannual report.

#### 4. Performance Tests

We are requiring that each large foundry conduct a performance test to demonstrate initial compliance with the PM or total metal HAP emissions limit and the opacity limit for fugitive emissions within 180 days of the applicable compliance date and submit the results in the notification of compliance status. In lieu of conducting an initial performance test to demonstrate compliance with the applicable PM or total metal HAP limit for metal melting furnaces, the owner or operator of an existing foundry is allowed to submit the results of a previous performance test provided the test was conducted within the last 5 years using the methods and procedures specified in the rule and either no process changes have been made since the test, or the test results reliably demonstrate compliance with the applicable emissions limit despite process changes. If the owner or operator does not have a previous performance test that meets the rule requirements, a test must be conducted within 180 days of the compliance date. Special provisions also are included for testing electric induction furnaces (EIFs) at existing foundries. Performance tests are required for all new area source foundries. Subsequent tests for furnaces are required every 5 years and each time an operating limit is changed or a process change occurs that is likely to increase metal HAP emissions from the furnace. Provisions are included in this final rule for determining compliance with PM or total metal HAP emissions limits in a lb/ton of metal charged format and for establishing control device operating parameter limits. This final rule also includes requirements to perform opacity testing by Method 9 (40

CFR part 60, appendix A-4) every 6 months. This final rule describes the methods and requirements for these semiannual opacity observations. In response to comments, we have revised the proposed rule to allow an alternative to the Method 9 test. The alternative allows the owner or operator to conduct semiannual VE observations by Method 22 (40 CFR part 60, appendix A-7). If visible fugitive emissions from foundry operations occur for more than 10 percent of the Method 22 observation period (i.e., more than a cumulative 6 minutes of the 1-hour period), the owner or operator must conduct a Method 9 test of the fugitive emissions from foundry operations as soon as possible, but no later than 15 days after the Method 22 test to determine compliance with the opacity limit.

#### 5. Recordkeeping and Reporting Requirements

The owner or operator is required to submit an initial notification that identifies the facility as a large (or small) foundry. In addition, the owner or operator is required to comply with certain requirements of the General Provisions (40 CFR part 63, subpart A), which are identified in Table 3 of this final rule. The General Provisions include specific requirements for notifications, recordkeeping, and reporting, including provisions for a startup, shutdown, and malfunction plan/reports required by 40 CFR 63.6(e). In addition to the records required by 40 CFR 63.10, all foundries are required to maintain records to document conformance with the pollution prevention management practice emissions standards for metallic scrap, mercury switch removal, and binder formulations as well as to maintain records of annual melt production and corrective action(s). Large foundries must also prepare and operate according to the O&M plan and record monthly compliance calculations for metal melting furnaces that comply using emissions averaging, if applicable. The owner or operator must submit semiannual reports that provide summary information on excursions or exceedances (including the corrective action taken), monitor downtime incidents, and deviations from management practices or O&M requirements according to the requirements in 40 CFR 63.10.

We are also requiring all foundries to keep a record of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Data Safety Sheets, or

other documentation that provide information on binder materials. The primary purpose of this requirement is to encourage foundries to investigate and use nonHAP binder and coating materials wherever feasible.

#### 6. Exemption From Title V Permitting Requirements

For the reasons discussed in the preamble to the proposed rule, we are exempting iron foundries and steel foundries area source categories from title V permitting requirements. Although the final rule exempts facilities that do not have a title V permit from the requirement to obtain a permit for the purposes of this rule, sources that already have a title V permit generally must include the requirements of this rule through a permit reopening or at renewal according to the requirements of 40 CFR part 70 and the title V permit program.

#### IV. Summary of Comments and Responses

We received a total of 37 comments on the proposed area source NESHAP from 31 companies, trade associations, and anonymous members of the public and from 6 States and State associations during the public comment period (September 17, 2007 to November 1, 2007). A public hearing was held on October 2, 2007, where we received testimony from two industry representatives. Sections IV.A through IV.G of this preamble provide responses to the public comments received on the proposed NESHAP, including our rationale for changes made as a result of the comments.

##### A. Applicability and Compliance Dates

*Comment:* Nine commenters stated that EPA should consider a higher plant size threshold of 15,000 tons per year (tpy) of melted metal because of the significant economic burden associated with the proposed rule. In addition, one commenter said the industry subcategorization threshold should be "significantly above" 15,000 tpy. Another commenter stated that it would be difficult to justify the proposed rule for foundries with a production of 30,000 tpy, and that it is not cost-effective to require controls on foundries with a melt production less than 15,000 tpy. One commenter recommended a threshold of 20,000 tpy and two commenters said that the threshold should be "significantly above" 30,000 tpy. One commenter opposed the rule as proposed and recommended that EPA reconsider the proposed size threshold of 10,000 tpy.

One commenter supported the co-proposal which would implement only the pollution prevention management practices. The commenter stated that foundries are adequately regulated by existing Federal, State, and local regulations and the proposed rule would impose significant burden without significant environmental improvement.

*Response:* Based on our consideration of comments, including the combined effect of the emission and cost impacts on both the nationwide cost-effectiveness and the economic impacts of the rule, we concluded that the proposed rule using a 10,000 tpy threshold for new and existing affected sources that are classified as large foundries may not be appropriate. Based on the revised impact analysis, we determined that the most appropriate size threshold for existing affected sources classified as large foundries is 20,000 tpy. However, we found no basis for increasing the size threshold for new affected sources. New affected sources do not have the same retrofit issues as existing affected sources. Moreover, there are existing affected sources with metal melt production of 10,000 tpy that operate controls. Therefore, we have retained the 10,000 tpy threshold at which a new affected source is classified as a large foundry.

*Comment:* One commenter requested that EPA clarify that the rule does not apply to foundries that produce nonferrous metals where nonferrous metal means "any pure metal other than iron or any metal alloy for which a metal other than iron is its major constituent by percent in weight."

*Response:* We agree. The types of facilities identified by the commenter are covered under other source categories depending on the type of metal produced (e.g., secondary nonferrous metals, secondary aluminum, secondary copper, etc.). In response to this comment, we have added a definition of "nonferrous metal" to the final rule and revised the definition of "iron and steel foundry" to clarify that nonferrous metal in scrap, metal melting furnaces, and foundry operations is not covered by the rule.

*Comment:* Twelve commenters requested 3 years to comply with the mercury switch removal program to allow for the program to develop based on participation by the larger steel producers. Another commenter requested 5 years to comply with the mercury switch removal program.

*Response:* We agree that the typical area source foundry does not have the financial resources and market force over its scrap providers when compared

with the much larger mini-mills. The area source foundries purchase only a small fraction of the national supply of scrap from end-of-life vehicles; the vast majority is used in steelmaking. Over time, we expect many more dismantlers will join the National Vehicle Mercury Switch Recovery Program (NVMSRP), and even the smaller scrap providers will find it to their advantage to participate. We believe that an appropriate solution to the difficulties identified by the commenters is to allow more time for these area source foundries to comply with the mercury requirements. Consequently, we are revising the rule to allow additional time (up to 2 years) to comply with the pollution prevention requirements for mercury.

#### *B. Pollution Prevention Management Practices*

##### 1. Requirements for Metallic Scrap

*Comment:* Three commenters stated that the phrase "to the extent practicable" makes the requirements in the scrap specifications unenforceable. The commenters recommended that EPA either define the term or establish concrete criteria. One of the commenters recommended that for scrap containing free liquid, EPA should define "to the extent practicable" as scrap failing the paint filter test, similar to § 63.10885(a)(1). Another of the commenters asks what "to the extent practicable" means and recommends that the phrase "according to standard industry practice" be used instead; this would make the foundry and electric arc furnace (EAF) rules more consistent.

*Response:* The commenters are referring to the term, "to the extent practicable" as used in § 63.10885(b)(2) of the proposed rule. We used this term to demonstrate our understanding that furnace charge materials can not be depleted of 100 percent of the organics and HAP metals or the presence of used oiled filters, chlorinated plastic parts, accessible lead-containing components, and free liquids. We do not see the need to codify a definition of "practicable" but note here that our intent is that something is practicable if it is capable of being put into practice and is feasible. However, we believe that the term "standard industry practice" does not have a significantly clearer meaning, and in fact may not result in as much removal. We are replacing the term in the final EAF rule with the term "to the extent practicable" as it relates to the removal of lead-containing components such as batteries and wheel weights. Therefore, we decided not to revise the proposed rule for foundries to replace

"to the extent practicable" with "standard industry practice."

*Comment:* One commenter stated that the requirements for metallic scrap management in the proposed rule should be the same as for the EAF rule in that the pollution prevention plan should have Administrator approval and should require compliance inspections and corrective action.

*Response:* The requirements for scrap management under the proposed foundries rule differ from the requirements for scrap management under the proposed EAF rule because we determined that GACT for the iron foundries and steel foundries area source categories is represented by written material specifications. The proposed area source rule for foundries requires that the facility operate by written specifications for the purchase and use of specified material or of only scrap that has been depleted of organics and HAP metals. These written specifications must be kept onsite and be readily available; consequently, they can be reviewed at any time by EPA or the delegated agency for completeness and for compliance with the rule's requirements. The owner or operator must maintain records demonstrating compliance with these requirements and must submit a certification of compliance to that effect. We continue to believe that these written material specifications represent GACT for iron and steel foundries, and the additional requirements recommended by the commenter are not warranted and would be unnecessarily burdensome for the large population of small area source foundries.

*Comment:* One commenter stated that the proposed rule must be revised to require the facility's owner or operator to ensure the "baghouse bags, internal process materials and maintenance materials" that are charged in the foundry do not contain organics, HAP metals, chlorinated plastics, and free organic liquids. The commenter explained that under § 63.10885(a)(1), if an inspector found organics, HAP metals, chlorinated plastics or free organic liquids in charge materials, the inspector would need to demonstrate that these wastes do not stem from "internal process materials or maintenance materials." The commenter stated that this type of loophole will make enforcement difficult.

*Response:* We agree with the commenter that the provision exempting baghouse bags, internal process materials and maintenance materials from scrap management requirements is not needed in this rule



and have deleted the provision from the final rule.

*Comment:* One commenter requested clarification on the limitations for scrap managed using a scrap preheater equipped with an afterburner.

*Response:* We have revised the proposed rule to clarify that the limitations for metallic scrap are the same for all scrap preheaters and metal melting furnaces whether or not the preheater or furnace (except for a cupola) is equipped with an afterburner. A different set of limitations for metallic scrap applies only to cupolas with afterburners.

*Comment:* One commenter stated that it is virtually impossible to ensure no free liquids on scrap received when it rains during the transport of the scrap. The commenter stated that the impact of this requirement has been underestimated.

*Response:* Our intent in prohibiting free liquids was to minimize the presence of organic liquids. We have clarified in the final rule that the requirement for no free liquids does not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

## 2. Requirements for Mercury Switch Removal

*Comment:* One commenter requested that EPA establish mercury emission performance standards to supplement the scrap management program. The commenter recommended that EPA adopt emissions limits (effective in 2010) from the New Jersey standards which require a mercury limit of 35 milligrams per ton (mg/ton) of steel produced or a reduction of least 75 percent at the exit of the mercury control system. The commenter stated that the rule allows facilities time to reduce emissions by removing sources of mercury from the scrap they process but requires additional control if the source separation programs are not sufficient to meet the emissions limit. The commenter said that one New Jersey foundry had already installed an activated carbon injection system for mercury control and a baghouse for the cupola; mercury emission test results show mercury reductions greater than 90 percent. The commenter argued that such an emissions limit is needed to determine the success of the source separation program and the need for add-on controls for melters.

Three commenters recommended that the final rule include testing and monitoring to verify the effectiveness of the mercury switch source reduction program. Two commenters stated that

the final rule should require facilities to test emissions within 6 months of the final rule to establish a baseline for each facility. One of these commenters also stated that percent reduction targets and timelines be included in the final rule along with a sampling program. The third commenter requested that the final rule include performance or stack testing (inlet/outlet) and baghouse hopper dust analysis to confirm and demonstrate reduced mercury inputs and emissions. This commenter stated that baghouse hopper dust testing is used in some States and EPA should evaluate State requirements to develop national minimum requirements.

Two of the commenters stated that there are monitoring technologies that are adaptable for use by any facility in this industry. The commenters noted that batch process emissions are tested and monitored in many industrial sectors, and EPA has established emission standards for many batch processes without requiring the use of continuous monitors, including Pesticide Active Ingredient Manufacturing and Miscellaneous Organic Chemical Manufacturing. The commenters also said that EPA has recently promulgated the "sorber tube" method for sampling stack gases at coal-fired power plants (40 CFR part 75, appendix K). The commenters explained that because this method of monitoring mercury is capable of sampling flue gases over any period of time (hours or even days), there appears to be little impediment to using this method to sample "batch" processes like those at foundries. There are also several statistical sampling techniques that account for the variability of emissions.

*Response:* We understand from the commenter that there is one major source foundry with a cupola that has installed emission controls for mercury. However, we are not aware that any of the more than 400 area source iron and steel foundries for which we have emission control information have installed mercury emission controls, and consequently, we do not believe that such controls represent GACT for area sources. On the other hand, pollution prevention practices have been used to reduce mercury emissions at foundries and similar sources, such as EAF steelmaking facilities, and these practices have been demonstrated to be successful at reducing mercury emissions. We determined that the pollution prevention requirements for mercury were economically and technologically feasible and concluded they represent GACT for iron and steel foundries that are area sources.

As part of the GACT determination, we concluded that it was not feasible to prescribe or enforce an emission limit for mercury because mercury emissions are highly variable, and we have insufficient information to determine an emission limit that might be achieved on a continuing basis. On the other hand, the pollution prevention approach quantifies the reduction in mercury release to the environment by requiring that the amount of mercury recovered from end-of-life vehicles be reported. This type of recordkeeping and reporting is an important monitoring component of the rule and provides assurance that the requirements are achieving mercury reductions. The monitoring for mercury recommended by the commenters is not appropriate because it is not related to the rule requirements and provides no information related to enforcing the rule. We have chosen monitoring requirements that are applicable to the pollution prevention requirements in the rule.

*Comment:* Three commenters recommended that the final rule include enforceable measures of accountability to ensure the effectiveness of the collection programs. The commenters stated that these measures should include written documentation and audits of the participation of suppliers and evaluation of switch recovery rates. One commenter recommended a provision for expectations that a certain percentage of switches will be collected from the vehicles and another commenter recommended quantifiable measures such as the fraction of switches collected from the vehicles. Both commenters stated that the final rule should include consequences if the programs do not meet their goals.

One commenter was concerned about using an estimate of the percentage of mercury switches removed to determine whether an approved plan should continue to be approved because the estimate of the percentage of mercury switches removed is highly uncertain and dependant on many assumptions. The commenter stated that determining the effectiveness of site-specific mercury switch removal programs by comparing uncertain statistics with an aggressive removal goal (80 percent) may cause effective programs to have their approval revoked.

*Response:* We determined at proposal that GACT for mercury emissions was the pollution prevention practice of removing mercury switches from end-of-life vehicles before the vehicles were crushed and shredded for use. GACT would be implemented by foundry owners purchasing scrap only from

scrap providers that were participating in an EPA-approved program for switch removal, operating pursuant to an EPA-approved site-specific plan (of equal effectiveness to an EPA-approved program) that ensured scrap providers had removed mercury switches, or by not melting scrap from end-of-life vehicles. We determined that the National Vehicle Mercury Switch Removal Program (NVMSRP) met the requirements of an EPA-approved program. However, we received two comments questioning how the effectiveness of an EPA-approved program would be ensured and suggestions for improving aspects of the rule related to program transparency, enforcement, and implementation. We have incorporated several of these suggested improvements into the final rule. The improvements include developing and maintaining a plan showing how the facility is participating in the approved program, documentation of communication to suppliers of the need to remove mercury switches and corroboration to ensure suppliers are implementing switch removal procedures.

The NVMSRP resulted from a 2-year process of collaboration and negotiation among a diverse group of stakeholders to create a dedicated nationwide effort to remove mercury-containing switches from end-of-life vehicles. The stakeholders included EPA, automakers, steel manufacturers, environmental groups, automobile scrap recyclers, and State agency representatives. These stakeholders signed a Memorandum of Understanding (MOU) detailing their respective responsibilities and commitments in the national switch recovery effort. This effort will result in substantial reductions in mercury emissions from foundries by removing the majority of mercury from metal scrap. In addition, it will have environmental benefits from reducing mercury emissions from sources other than foundries and will reduce mercury releases to media other than air. EPA recounts this history not to show that the Agency is blindly accepting this negotiated agreement, but that EPA has examined the agreement anew in light of the requirements of section 112(d) and finds that the program resulting from that agreement meets the statutory requirements. The success of the program has been documented by direct measurements of mercury in switches removed, and as of November 28, 2007, over 843,000 switches with 1,855 pounds of mercury have been recovered.

As we stated in detail at proposal, this pollution prevention approach was determined to be GACT for reducing

mercury emissions from foundries. Emissions of mercury result from the melting of scrap metal that contains mercury components. When these components are removed prior to charging the scrap to a metal melting furnace, the mercury emissions are prevented. Thousands of automobile recyclers have already joined the NVMSRP, although not all members have yet sent in recycled switches. Information on the program, including scrap suppliers who have joined and the number of switches they have turned in to date, can be found on the End of Life Vehicle Solutions (ELVS) Web site (<http://www.elvsolutions.org>).

There are many elements in the NVMSRP that are designed to measure success and to evaluate its effectiveness. One year following the effective date of the MOU and each year thereafter, the parties or their designees and EPA agreed to meet to review the effectiveness of the program at the State level based upon recovery and capture rates. The parties to the agreement will use the results to improve the performance of the program and to explore implementation of a range of options in that effort. Two and one-half years from the inception of the program, the parties agreed to meet and review overall program effectiveness and performance. This review will include discussion of the number of switches that have been collected and what factors have contributed to program effectiveness.

We note here that the Administrator is committed to evaluating the effectiveness of the approved program on a continuing basis and is a party to the agreement that established the NVMSRP. The parties (including the Administrator) recently reviewed the program's effectiveness after 1 year. The 1-year review showed reasonable progress, with recycling programs now available in every State. The national program was slightly ahead of the schedule projected for start-up. We now expect switch removals to steadily increase over the next year as these programs begin to fully operate. If the Administrator finds the program to be ineffective at the next scheduled review under the MOU, or at any time as provided in the rule, the Administrator may disapprove the program in whole or in part (e.g., for a particular State), and participation in the program would no longer be a compliance option, leaving foundry owners or operators obligated to develop site-specific programs for EPA approval in order to meet the requirements of this rule. Under the site-specific program, it would fall on the foundry owner or

operator to provide a detailed accounting of switches removed and vehicles processed from all of their scrap providers to enable the Administrator or permitting authority to evaluate whether the facility is in compliance with the switch removal requirements. The somewhat lower documentation feature of the NVMSRP provides a strong incentive to all of the parties involved in switch removal to make every effort to ensure the NVMSRP is effective on a continuing basis. However, if the national program were to prove unsatisfactory and be subsequently disapproved as a compliance option, the burden would be on the foundry owner or operator to implement a site-specific approach. In either case (whether a national program or site-specific program), we have codified an approach that provides accountability and measures of effectiveness.

A key element of measuring the success of the program is maintaining a database of participants that has detailed contact information; documentation showing when the participant joined the program (or started submitting mercury switches); records of all submissions by the participant including date, number of mercury switches; and confirmation that the participant has submitted mercury switches as expected. Another important element is aggregated information to be updated on a quarterly basis, including progress reports, summaries of the number of program participants by State, individual program participants, and records of State and national totals for the number of switches and the amount of mercury removed. The program is also estimating the number of motor vehicles recycled. The NVMSRP will issue reports quarterly during the first year of the program, every 6 months in the second and third year of the program, and annually thereafter. The reports prepared by ELVS will include the total number of dismantlers or other potential participants identified; the total number of dismantlers or others contacted; and the total number of dismantlers or others participating. The annual report will include the total mercury (in pounds) and number of mercury switches recovered nationwide; the total pounds of mercury, number of mercury switches, and an estimated national capture rate, with information organized by State, compared with the expected range of mercury switch retirement rates for each State; and the total number and identity of dismantlers or others dropped due to inactivity or withdrawal

from the program. Mercury switch removal is already underway—more than 1,855 pounds of mercury from more than 843,000 switches have been recovered to date by program participants. This represents almost 20 percent of our estimated reduction in mercury emissions of 5 tons per year once the final rule is implemented.

The commenters make valid points that the effectiveness of the rule could be improved by incorporating certain elements that the steel manufacturers have already agreed to in the MOU. We have revised the proposed rule to provide more specificity to the foundry owner or operator responsibilities and to improve the effectiveness of EPA-approved programs, which may include programs other than the NVMSRP. In addition, we are including these same requirements in the option for developing a site-specific plan for switch removal. The rule changes include:

- Foundry owners or operators must develop and maintain onsite a plan demonstrating the manner through which their facility is participating in the EPA-approved program. The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.
- Foundry owners or operators must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, the owner or operator must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.
- Foundry owners or operators must conduct periodic inspections or provide other means of corroboration to ensure that suppliers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

In regard to the commenter's question regarding estimates of the recovery rate, the 80 percent minimum recovery rate is a goal that all parties to the MOU agreed to work toward. We recognize that 80 percent recovery will not be achieved in the first year or two; however, the parties to the MOU agreed to aim for collection of at least four million switches in the first 3 years of the NVMSRP and agreed to exceed this amount if possible. We believe that recovery of four million switches

(approximately 4.4 tons of mercury at 1 gram per switch) in the first 3 years is a good beginning for working toward recovery of 80 percent of mercury switches. It is necessary to acknowledge that there will be an initial delay in many States that have recently joined the NVMSRP while individual dismantlers accumulate sufficient switches to make a shipment for recovery. It has been estimated that it may take from 6 to 12 months to fill a switch collection bucket (e.g., according to the ELVS website at [www.elvsolutions.org](http://www.elvsolutions.org), switches are typically collected in 3.5 gallon buckets that can hold up to 450 pellets).

Furthermore, the goal of removing 80 percent of the mercury switches is not the only criteria used to evaluate the success of a program. The Administrator can evaluate the success of an EPA-approved program at any time, identify States where improvements might be needed, recommend options for improving the program in a particular State, and if necessary, disapprove the program as implemented in a State from being used to demonstrate compliance with the rule based on an assessment of this performance. The evaluation would be based on progress reports submitted to the Administrator that provide the number of mercury switches removed, the estimated number of vehicles processed, and percent of mercury switches recovered. The Administrator can assess the information with respect to the program's goal for percent switch recovery and trends in recovery rates. For example, as the NVMSRP has ramped up, switch recovery rates have increased from 241,000 switches in 2006 to 602,000 through the first 10 months of 2007.

*Comment:* One commenter stated that unlike the corresponding section of the EAF rule, § 63.10885(b)(2) of the proposed foundries rule does not indicate or confirm that the NVMSRP is a program pre-approved by the EPA Administrator. The commenter states that this omission is counter to EPA's intentions as stated in section V.8.A of the MOU and does not provide a quick pathway for scrap providers to participate in a mercury switch removal program. The commenter stated that the final rule should provide pre-approval of the NVMSRP and pre-approval of existing State programs based on section VII.2.A.1.c of the MOU (which refers to existing State programs in its articulation of the NVMSRP's goal). The commenter argued that pre-approval of the eight existing State programs (which account for about 1,900 participants) would eliminate the need for scrap providers participating in those

programs to obtain EPA's approval of their site-specific plans under § 63.10885(b)(1).

*Response:* We have revised the area source rule for iron and steel foundries to be consistent with the rule for EAF steelmaking by adding language confirming that the NVMSRP is a program pre-approved by the EPA Administrator. We are also identifying the mercury switch recovery program mandated by State law in Maine as an EPA-approved program because they submitted documentation that the requirements are equivalent to (or more stringent than) the approved national program. No other States made such requests or submitted information showing equivalency; consequently, we are not currently identifying other State programs as EPA-approved in the final rule.

*Comment:* One commenter pointed to the provision in § 63.10885(b)(2)(iii) which allows the Administrator to revoke approval for all or part of the NVMSRP based on review of the reported data. The commenter asked if the 90-day period between the revocation notice and the effective date of the revocation provides sufficient time for the Administrator to approve 100 site-specific plans under § 63.10885(b)(1) and if there was a process in place for seeking reconsideration of the revocation.

*Response:* The final rule requires the Administrator or delegated agency to review and approve the site-specific plan. This is what the proposed rule allowed because this authority was not among those listed in the rule as not being delegated. We believe the 90-day period is adequate for the approval process. The rule has no formal process for seeking reconsideration of revocation.

*Comment:* One commenter stated that the requirement in § 63.10885(b)(2)(iii) for the program sponsor to submit reports at least yearly should be consistent with the corresponding requirement in the proposed EAF rule. The commenter noted that the proposed foundries rule required that the report contain, among other data, the number of vehicles processed while the proposed EAF rule requires "the estimated number of vehicles processed." The commenter requested correction of the proposed foundries rule to read "the estimated number of vehicles processed".

Three commenters requested that EPA harmonize the language and content of the proposed foundries rule and the proposed EAF rule. Each of these commenters said that the proposed rule did not identify the NVMSRP as an

approved program while the EAF proposed rule does identify the NVMSRP as an approved program. Two commenters added that the MOU suggests that the foundry rule should include and refer to the NVMSRP in its mercury requirements. One commenter objected to the requirement in § 63.10885(b)(1)(iv) for a mercury switch removal goal of 80 percent because this requirement does not apply the goal to each provider as does the proposed EAF rule. The implication is that there can be different mercury switch removal standards for different scrap providers to foundries. This language has the potential to create inequalities. One commenter noted several differences between the proposed foundries rule and the proposed EAF rule including different heading, different phrasing of the same requirements, and specific differences in requirements and definitions.

*Response:* We agree that the pollution prevention requirements for mercury for iron and steel foundries should be consistent with those for EAF steelmaking facilities because the technology for controlling mercury emissions (i.e., mercury switch removal from end-of-life vehicles) is the same for both source categories. We are making revisions to the final rule to ensure they are consistent. Changes to the site-specific plan for mercury switches include adding references to Resource Conservation and Recovery Act (RCRA) requirements and corrective action, requiring an 80 percent goal for each scrap provider and a separate semiannual report. Changes to the option for approved mercury programs include statements that the NVMSRP and the State of Maine program for mercury switch removal are EPA-approved programs, requiring reporting of an estimate of the number of vehicles processed instead of the number of vehicles processed, adding parenthetical mention of RCRA requirements, and adding a database requirement for progress reports. We have revised § 63.10905 (Who implements and enforces this subpart?) to remove the phrase "in addition to EPA" and make the list of nontransferable authorities the same in both rules. We have also revised § 63.10906 (What definitions apply to this subpart?) to add definitions applicable to the mercury switch removal program.

*Comment:* Fifteen commenters stated that it is technically and economically unviable for small foundries to implement a site-specific plan for mercury switch removal that meets the proposed rule requirements. Also, small foundries do not have significant buying

power to push suppliers to implement an EPA-approved mercury switch removal program, according to the commenters. While the commenters support the mercury switch removal efforts, they believe that the proposed rule requirements are unnecessarily onerous for foundries. One commenter stated they would support the mercury switch removal provisions once 80 percent of scrap dealers are registered in the Federal program.

*Response:* Only foundries that purchase shredded motor vehicle scrap from non-program participants are required to prepare a site-specific plan. Most of the smaller area source foundries do not use shredded motor vehicle scrap, so they would not be required to prepare a site-specific plan for mercury switch removal. Furthermore, as indicated previously, we are providing area source foundries 2 years to comply with the mercury switch removal program specifically because area source foundries purchase much smaller quantities of scrap compared to EAF steel mills. By providing this additional compliance time, we believe that the NVMSRP will be sufficiently mature that area source foundries will be able to purchase motor vehicle scrap from participants of the program. Therefore, very few area source foundries will need to prepare a site-specific plan for mercury switch removal as a consequence of this final rule. Based on our analysis, we do not expect any foundries to incur a significant adverse economic impact as a result of the mercury switch removal requirements in this final rule. The commenters provided no additional information on the specific requirements they claim to be "unnecessarily onerous." Consequently, we made no direct revisions to the requirements for the site-specific plan, if it is selected as the compliance option.

*Comment:* One commenter noted that scrap supply has been very tight and the costs have doubled over the past year. Another commenter estimated that eliminating shredded auto scrap could cost the commenter's foundries approximately \$4 million per year.

*Response:* We understand that the price of scrap has increased over the past few years; however, the past increase and any future changes in price will not be affected in any significant way by the rule requirements for mercury switch removal. We expect most facilities will comply by participating in the NVMSRP and purchasing scrap only from scrap providers who are also participants. This program is independently funded and administered by several

stakeholders. Consequently, there is no reason for the commenter to eliminate shredded automobile scrap.

*Comment:* One commenter stated the corrective action requirements present significant obstacles to getting reasonable site-specific plans approved. The commenter also said that what constitutes an acceptable plan will vary by State and region, resulting in uneven regulatory burden and unfair competitive advantages.

*Response:* Corrective actions are an important component of the site-specific plan to ensure that scrap providers are removing mercury switches. Corrective actions are not unique to the area source rule in that iron and steel foundries impose specifications on scrap related to quality and safety, and facilities take corrective actions when scrap shipments do not meet these specifications. The Administrator or delegated authority is the appropriate entity for review and approval of these plans, and the rule provides a clear description of the requirements for the plans that can be used as criteria for approval or disapproval.

*Comment:* Sixteen commenters stated that the mercury switch removal requirements should not apply to automotive scrap, such as brake rotors and pump housings, that do not contain mercury switches. Two commenters recommended that EPA clarify the type of scrap subject to the metallic scrap requirements by describing it as "shredded auto bodies" or "post-consumer automotive body scrap." One commenter requested specific exemptions from the mercury switch requirements for foundries that melt only pre-consumer scrap or that the rule be written to apply to only those melting recycled auto bodies. One commenter requested that the proposed rule include a fourth option that specifically excludes scrap that does not come in contact with mercury from the mercury switch removal provisions.

*Response:* We have added a definition of the term "motor vehicles scrap" to the final rule. "Motor vehicle scrap" means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. This definition does not include automobile manufacturing bundles or miscellaneous vehicle parts such as wheels, bumpers, or other components that do not contain mercury switches. We have also clarified the rule by adding provisions specific to scrap that does not contain motor vehicle scrap. The final rule requires that for each scrap provider, contract, or shipment, the foundry must procure all scrap that does not contain

motor vehicle scrap according to the requirements in § 63.10885(b)(4) of the final rule. Section 63.10885(b)(4) requires the owner or operator to certify in the notification of compliance status that the scrap used at the foundry does not contain motor vehicle scrap and to keep records to document the certification.

*Comment:* Four commenters stated other products that contain mercury beside automotive switches are included in the scrap metal used by foundries and should be covered by the mercury requirements. Three of the commenters said that components in household and commercial appliances, sump and bilge pumps, heating and air conditioning units, and industrial equipment (e.g., tilt switches, thermometers, flame sensors, float sensors, relays, switches, barometers, manometers, floats, and other types of sensing and control equipment) also contain mercury and should be included in a removal program. This could be done by expansion of the NVMSRP or through the establishment and funding by mercury product manufacturers and the steelmaking sector and/or collection programs targeting other products that contain mercury.

One commenter stated that the proposed rule should be expanded to require the removal of all automotive switches, not just 80 percent of convenience light switches. Another commenter stated that the rule should expand the scope of the switch program to include any original equipment or aftermarket mercury tilt switch installed in a vehicle and used in convenience lighting, anti-lock braking systems (ABS) sensors, security systems, active ride control, or other applications.

*Response:* During the development of the proposed EAF rule, the EPA considered the removal of other mercury-containing components in automobiles, such as switches in ABS, and determined the option was not justified as a beyond-the floor standard (72 FR 53824). Similarly, we conclude that removal of these sources of mercury does not represent GACT for iron and steel foundries. These sensors are considerably more difficult and time consuming to remove than are convenience light switches, and they contribute much less mercury (e.g., 87 percent of the mercury in end-of-life vehicles comes from convenience light switches). The commenters provided no data or rationale to support that the removal of other sources of mercury from the scrap supply was economically and technologically feasible for

foundries or that their removal should represent GACT.

Most mercury-containing components in appliances were phased out several years ago, and any that might remain would contribute very little mercury to the scrap supply compared to switches in automobiles. While some ABS contained mercury sensors, these too have been phased out and were much less common than mercury convenience light switches.

*Comment:* One commenter stated that the NVMSRP is a voluntary program in his State and not all suppliers participate. The final rule should require effective participation by suppliers or compliance with the national program.

Two commenters stated that the requirements of the mercury switch removal program must be incorporated in air permits, and the provisions must be clearly understood and enforceable by air agencies and their counterparts in other media programs. If these provisions are not explicit in the program, the pollution prevention approach will not be effective.

Two commenters claimed that EPA has not taken the NVMSRP into account when developing these regulations in the development of this rule as required by the MOU. The commenters stated that the MOU was written as a nonbinding contract for EPA and several industries for the voluntary removal and disposal of mercury switches while the requirements in the rule are mandatory.

*Response:* Although participation in the NVMSRP is voluntary, the pollution prevention standard for mercury establishes clear mandatory requirements for the removal of mercury switches to reduce mercury emissions from iron and steel foundries. Participation in the NVMSRP is only one option for compliance, and although we expect it to be the preferred compliance approach, each of the compliance approaches have common requirements to ensure switch removal and to provide an accounting of the number of switches removed and number of vehicles processed. The number of scrap providers participating in the NVMSRP has increased steadily since its inception, and as the area source rules for iron and steel foundries and EAF steelmaking are implemented, there will be additional incentives for many more scrap providers to participate to maintain their customer base.

The rule requirements are explicit and should be clearly understood and enforceable by air agencies. Although the final rule exempts facilities that do not have a title V permit from the

requirement to obtain a permit for the purposes of this rule, sources that already have a title V permit generally must include the requirements of this rule through a permit reopening or at renewal according to the requirements of 40 CFR part 70 and the title V permit program.

*Comment:* One commenter stated that EPA must address ways to encourage or require mercury removal from scrap destined for export.

*Response:* This area source rule addresses mercury in scrap destined for iron and steel foundries, and removal of mercury from scrap destined for export is not within the scope of the rule. However, we expect that the NVMSRP and State programs for mercury switch removal will result in the reduction in mercury in scrap for all users, including scrap that is exported.

*Comment:* One commenter recommended that a sunset clause be added to the mercury switch removal requirements as mercury switches have been phased out of new automobiles.

*Response:* Our information indicates that there is a 10-year supply of end-of-life vehicles that may contain mercury switches. Consequently, we do not think it is appropriate to add a sunset provision. However, review of the mercury requirements will be appropriate when the 8-year review of the standard is conducted.

*Comment:* One commenter stated that the requirement to inspect the scrap poses a safety risk to the personnel inspecting the scrap.

*Response:* Our information indicates that many facilities already inspect incoming scrap and have established procedures for doing so safely.

*Comment:* One commenter stated that it is inappropriate to direct that every recycling facility should be removing the same amount of switches because there is no mechanism that can accurately gauge if facilities are removing the maximum number of switches. The commenter explained that a facility can be removing only 10 switches per month and be maximizing their removal while another facility can be removing 1,000 switches per month and only removing a portion of available switches based on the age and origin of the vehicles handled by the facility. Attempting to determine the recovery rate necessitates having both the number of switches recovered and the total number of vehicles processed but the number of vehicles processed is confidential business information (CBI). The commenter stated that the rate could vary from facility to facility and not be indicative of the facilities level of participation in an approved program.

Another commenter said that the requirements in § 63.10885(b)(1)(ii)(C), (b)(1)(iii), and (b)(1)(v) may require scrap providers to divulge CBI or to provide sensitive information to foundry operators to comply.

*Response:* The NVMSRP does not require that facilities remove the same number of switches. There are two key statistics in determining the recovery rate of mercury switches: the number of switches removed and the number of vehicles processed. This information is essential in determining the progress towards meeting the recovery goal of 80 percent. The percent of switches recovered (the capture rate as defined in the MOU) is the number of mercury switches removed from end-of-life vehicles divided by the total mercury switch population in end-of-life vehicles in a given time period (e.g., each year of the program) times 100. Furthermore, the 80 percent goal recognizes that the total mercury switch population is dependent on the age of the vehicles processed. This approach accounts for the differences in the capacity or processing rate of different facilities, which is the subject of the comment.

It is in the interest of both the scrap provider and foundry operator to provide the information required by the rule and to establish procedures if necessary to protect confidential information. The requirements in the final rule include: (1) Periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to remove mercury switches; (2) estimates of the number of switches removed; and (3) semiannual progress reports that provide the number of switches or weight of mercury removed, number of vehicles processed, estimate of the percent of switches removed, and certification of proper disposal of the switches. This information is an essential monitoring component of the rule to measure the effectiveness of a facility's pollution prevention program. The information on number of vehicles processed can be aggregated for a facility if it is important not to reveal the number of vehicles processed by a given scrap provider. We do not see nor did the commenter identify exactly what component of the requested information would be CBI; however, if the case can be made that the information is not emissions data and there is CBI involved, EPA and the permitting authorities have established procedures for managing and safeguarding CBI and will, of course, utilize them.

*Comment:* One commenter stated that in § 63.10885(b)(1)(i) and (ii), the requirement for removal of mercury switches from vehicle bodies used to make scrap does not seem to recognize the possibility of inaccessible switches. The commenter suggests replacing "mercury switches" with "accessible mercury switches."

*Response:* We have defined mercury switch to include only those switches that are part of a convenience light switch mechanism. Our information indicates that these switches are accessible and are easily removed, and it is important to the success of the pollution prevention program that they be removed. Consequently, we are not adding the additional requirement that they be "accessible," which would introduce additional uncertainty because of the judgment that must be made as to what is accessible.

*Comment:* One commenter stated the requirement in § 63.10885(b)(1)(B) for assurances from scrap providers that scrap meets specifications does not seem to allow for uncertainty or error. The commenter suggested that the language read "Provisions for obtaining assurance from scrap providers that to the best of their knowledge, motor vehicle scrap provided to the facility meets the scrap specification".

*Response:* We disagree that the change recommended by the commenter is necessary because the phrase "to the best of their knowledge" is subjective and provides no improvement. The foundry owner or operator must obtain assurance to their satisfaction that the scrap meets specifications.

*Comment:* One commenter said the requirement in § 63.10885(b)(1)(ii)(C) for a means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap should be replaced with appropriate steps "to encourage the removal of accessible mercury switches from motor vehicles to be shredded".

*Response:* We disagree because corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap is necessary to ensure the effectiveness and credibility of the pollution prevention requirements.

*Comment:* One commenter asked what is meant by taking corrective action in § 63.10885(b)(1)(ii)(D) since the nonconforming actions are committed by different parties? Does a scrap provider have any recourse when

corrective actions are deemed necessary by a foundry?

One commenter stated that any corrective action plan elements approved by the Administrator should reference MOU sections V.3.H and V.7.C, which defines good faith participation as "the actual removal of switches or the implementation of source control programs to assure removal of switches prior to receipt".

*Response:* The procedures for taking corrective actions must be described by the owner or operator in the site-specific plan, and these procedures may vary depending on the type of scrap, scrap provider, and other factors, some of which may be unique to the facility. The concept is not a new one because foundry owners or operators have historically taken corrective actions when scrap does not meet their specifications. The area source rule places no direct requirements on the scrap provider; however, we expect that the scrap provider would work with customers (the iron and steel foundry owners or operators) to resolve any questions of recourse with respect to corrective actions.

*Comment:* One commenter objected to the requirement in § 63.10885(b)(1)(iii), which effectively compels scrap providers to collect switch removal information from all upstream sources of end-of-life vehicles. The commenter stated that to impose such burdensome requirements on the suppliers of the regulated entity far exceeds the Agency's regulatory authority, poses CBI concerns, and imposes excessive paperwork and recordkeeping requirements on the scrap provider. These comments also apply to § 63.10885(b)(1)(v) because the requirements are likely to compel scrap providers to provide information to foundry operators to comply. Another commenter stated that it is unreasonable to burden foundries to ensure scrap providers and dismantlers are implementing appropriate steps to remove and dispose of mercury switches. The commenter also noted that foundries would not be able to obtain information on the number of mercury switches or weight of mercury removed because most foundries use scrap brokers and are a step or two removed from the dismantlers. Another commenter stated that it is inappropriate for EPA to regulate end-users and that EPA should directly regulate the scrap sellers and processors with respect to mercury switch removal.

*Response:* The burden imposed by the Agency is on the foundry owner or operator to obtain switch removal information because it is a critical

monitoring component of the rule. The owner or operator in turn must require this information from scrap providers, and if such information is not obtained, the owner or operator could be found in violation of the rule. It is in the interest of the scrap provider, the owner or operator, the public health, and the environment that such information be obtained to ensure that mercury releases to the environment are reduced by the removal of mercury switches.

*Comment:* One commenter objected to the credit allowed in § 63.0085(b)(1)(iv) for calculating the 80 percent mercury switch removal goal for site-specific plans. The commenter objected to the credit because it allows counting of mercury removed from components other than convenience lighting while the approved plan requires only the removal of mercury switches from convenience lighting. The commenter stated that the provision is not consistent with the MOU, which states that only mercury switches used for convenience lighting will be counted for purposes of measuring program performance. The commenter argued that site-specific plans should not be held to a higher standard than the NVMSRP.

*Response:* While it is true that only switches from convenience lighting apply to the 80 percent minimum goal of the NVMSRP, ELVS accepts switches from anti-lock brake systems and the automobile or scrap recyclers that remove them are paid the incentive fee of \$1.00 per switch. We believe that this provides an incentive to remove switches from anti-lock brake systems as well as for convenience lighting. In the requirements for site-specific plans, other sources of mercury are included in determining the 80 percent goal, such as in anti-lock brake systems, security systems, active ride control, and other applications. Inclusion of these other components in the site-specific programs provides an incentive for their removal. These mercury-containing components contribute less mercury (13 percent compared to 87 percent from convenience light switches), and they are more difficult to locate, identify, and remove. Mercury-containing components in anti-lock brake systems will be the components other than convenience light switches that are most often removed. The removal of these components requires removing the rear seat and dismantling the anti-lock brake system. We believe that if a dismantler chooses to take the time to remove and recover mercury components from anti-lock brake systems or other components, they should receive some type of credit for doing so, thus they can include them

in their 80 percent minimum recovery goal.

### *C. Requirements for Large Iron and Steel Foundries*

#### 1. Subcategorization of Metal Melting Furnaces

*Comment:* Five commenters stated that EPA should also consider a 5 ton per hour (tph) melting capacity threshold for each EIF as the most appropriate way to minimize impacts on small area source foundries if the per furnace basis is used. Another commenter recommended a size threshold 5 tph for EIF if the per furnace basis was used. In addition, two commenters opposed the proposed rule and asked EPA to reconsider the applicability to melting processes or allowable emissions. As discussed in section IV.F of this preamble, several commenters stated that control of metal melting furnaces and/or EIF was not cost-effective.

*Response:* We considered EIF-specific thresholds, but concluded that these were not appropriate for several reasons. First, as described previously, we increased the size threshold for large area source foundries to 20,000 tpy. The increased size threshold more effectively reduced burden to the smaller foundries than an EIF-specific cut-off. Second, we could not identify a strong rationale as to why smaller induction furnaces at foundries with production greater than 20,000 tpy should be subcategorized. A significant portion of EIFs at foundries greater than 20,000 tpy metal melting capacity were controlled, regardless of the EIF size. Finally, emissions from EIF furnaces are much better correlated with the total melt production than the size of the furnace. Smaller furnaces can have higher emissions than larger furnaces if they process more metal. Therefore, we determined that an EIF-specific threshold was not appropriate and is not included in this final rule.

#### 2. Emission Standards

*Comment:* One commenter stated that because area source standards will not be subject to residual risk standards, it is important to regulate emissions of particulate matter (PM) and HAP as well as possible under this rule.

*Response:* We agree. As discussed in the proposal preamble, we evaluated more stringent emission limits, but found that these were not cost-effective for existing sources. Although we increased the size threshold in this final rule, we rejected higher thresholds or additional EIF-specific thresholds specifically to regulate emissions of PM

and HAP as well as possible, while considering the costs of these regulations.

*Comment:* One commenter noted that in the proposal preamble EPA refers to the emission limit as pounds per ton of metal melted, but the regulatory language in § 63.10895(b)(1) refers to “per ton of metal charged.” The commenter requested clarification as to EPA’s intent, and recommended the use of “per ton metal charged” as the charge into the furnace is more amenable to measurement.

*Response:* We agree with the commenter. We intended to require foundries to measure and record the tons of metal charged to the furnace as indicated in the proposed regulatory language. Although we commonly refer to this as tons of metal melted, we acknowledge that there is a subtle difference and we have tried to consistently refer to “tons metal charged” as the basis of the standards in this final rule and preamble.

*Comment:* One commenter stated that the PM emissions limit (0.8 pound of PM per ton of metal charged) is too low because some existing wet scrubbers cannot achieve this emission limit and because the alternatives to improve the emission performance of these systems would be very costly.

*Response:* The available data clearly indicate that the 0.8 lb/ton emission limit is easily achievable with a well performing wet scrubber or baghouse control system. The available data also indicated that a small percentage of cupola wet scrubbers would need to be upgraded in order to meet this emission limit. We have considered the costs of these upgrades and determined that these upgrades are reasonable for the large area source foundries. GACT need not be an emission limit that all wet scrubbers can meet, regardless of their design or performance. We selected the 0.8 lb/ton PM limit as GACT because this level of performance represented the typical performance of the generally available control technologies used to reduce PM and metal HAP emissions from foundry melting furnaces at reasonable cost.

*Comment:* One commenter noted that § 63.10895(a) requires “each” melting furnace to operate a capture system, but § 63.10898(e)(3) provides default emission factors for uncontrolled EIF not equipped with a capture system for use in emissions averaging calculation. The commenter requested clarification that capture and collection systems are not required for “each” melting furnace.

*Response:* We agree. We have revised the language in § 63.10895(a) of the proposed rule and § 63.10895(b) of the

final rule to indicate that “You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group.”

*Comment:* One commenter requested elaboration on EPA’s intent when referencing “accepted engineering standards published by ACGIH” for capture systems.

*Response:* Accepted engineering standards such as design procedures for local exhaust hoods and exhaust systems are included in each annual edition of *Industrial Ventilation: A Manual of Recommended Practice* published by the American Conference of Governmental Industrial Hygienists (ACGIH). The purpose of the rule requirement is to require foundries to install and operate capture systems using appropriate design factors for the hood and furnace emissions so that the capture systems will operate properly.

*Comment:* One commenter said that he assumed the PM emissions limit applies only to melting (SCC 30400303), but it would be impossible to segregate these emissions from charge handling and inoculation (SCC 30400315 and 30400310), and stated that this issue requires further evaluation.

*Response:* In general, all activities that are performed in the metal melting furnaces are subject to the emission limits. These include, but are not limited to: Charging, melting, alloying, refining, slagging, and tapping. We have provided more detail regarding the operating conditions for the performance tests to clarify this issue. Generally, inoculation is performed in the transfer ladle and transfer ladle operations are subject only to the building opacity limit. However, if inoculation occurs in the melting furnace, then inoculation emissions are subject to the overall furnace emission limit.

*Comment:* Two commenters argued that the proposed opacity limit is more restrictive than the major source rule since it does not include an allowance for one 6-minute period per hour of up to 30 percent opacity. The commenters stated that the area source rule should not be more stringent than the major source foundry rule, which was based on MACT, and recommended that EPA include, at a minimum, an allowance for one 6-minute period per hour of up to 30 percent opacity. Another commenter stated that the opacity limit should not be based on MACT, but on GACT, which the commenter believes would be 30 percent or 40 percent average opacity.

*Response:* We agree that the proposed opacity limit should not be more stringent than the corresponding MACT standard. We reviewed the State and local agency opacity requirements for selected States with significant foundry populations. There are several States that require 20 percent opacity, but nearly all of these State programs provide an allowance for one 6-minute period per hour; allowances provided in different State regulations include: 27, 30, 40 and 60 percent opacity limits. Although we do not agree with the second commenter that a limit of 30 to 40 percent opacity limit would represent GACT, we do agree that one 6-minute period per hour of up to 30 percent opacity reflects GACT for area source foundries. In response to the commenters’ concerns, we have revised the proposed opacity limit to include the allowance for one 6-minute period per hour of up to 30 percent opacity.

### 3. Monitoring

*Comment:* Eighteen commenters said that EPA should allow visible emissions (VE) observations to document compliance with the fugitive emissions limit in order to reduce burden on small foundries. One of the commenters stated that EPA underestimated the burden associated with Method 9 observations. The commenters recommended that if visible emissions were observed, a Method 9 test could be conducted to demonstrate compliance with the opacity limit. Another commenter stated that EPA should require VE observations on a weekly basis (noncertified individual would be acceptable under certain conditions) in addition to the semiannual Method 9 readings because weekly observations would be more effective for compliance than a certified reading occurring twice a year.

*Response:* We agree with the commenters that allowing VE observations by Method 22 (40 CFR part 60, appendix A–7), with a subsequent test by Method 9 (40 CFR part 60, appendix A–4) is a reasonable alternative for determining compliance with the opacity limit for fugitive emissions from foundry operations and may reduce compliance costs. In response, we have revised Table 1 of the final rule to include such an alternative. The alternative allows foundries to conduct the semiannual performance tests using Method 22 instead of Method 9. The results of the Method 22 test demonstrate compliance with the opacity limit if no visible emissions occur for at least 90 percent of the 1-hour observation period. If visible fugitive emissions from foundry

operations occur for more than 10 percent of the Method 22 observation period (i.e., more than a cumulative 6 minutes of the 1-hour period), the owner or operator must conduct a Method 9 test as soon as possible, but no later than 15 days after the Method 22 test to demonstrate compliance with the opacity limit.

*Comment:* One commenter stated that the requirement to install and maintain a continuous parameter monitoring system (CPMS) is potentially costly and unnecessary. The commenter suggested that visual checks and manual recording of the operating parameter values once per shift as used in existing title V permits be allowed instead of a CPMS.

*Response:* This commenter objected to CPMS as too costly and unnecessary. As discussed below, other commenters objected to the proposed operating parameters for baghouses, wet scrubbers, and electrostatic precipitators (ESPs) that would be monitored. In response to these comments, we have revised the proposed monitoring provisions for PM control devices. For PM control devices at existing affected sources, the final rule requires the owner or operator to conduct initial and periodic inspections of each PM control device. These inspection requirements are included in many title V permits for PM control devices. We have deleted the proposed inspection and monitoring requirements for fabric filters that required pressure drop monitoring of baghouses. Bag leak detection systems are required for fabric filters used at new affected sources. The owner or operator of an existing affected source may choose to comply with the requirements for bag leak detection systems or the new inspection requirements.

We have also revised the proposed monitoring requirements for wet scrubbers and ESP to apply to new affected sources instead of existing affected sources. The final rule requires CPMS to measure the 3-hour pressure drop and water flow rate for each wet scrubber. For ESP, the owner or operator must maintain the voltage and secondary current (or total power output) to the control device at or above the level established during the initial or subsequent performance test. Table 2 of the final rule requires the operating limit for a wet scrubber to be based on the average pressure drop and average scrubber water flow rate measured during the performance test; for an ESP, the operating limit is to be based on the minimum hourly average measurements.

*Comment:* Four commenters objected to basing the baghouse pressure drop



operating limit on the pressure drop range observed during the performance test. The commenters stated that baghouses can operate effectively over a range of pressure drops and a single test is too short to encounter the full range of pressure drops that are normally encountered. The commenters recommended using manufacturer's recommended operating ranges or historical performance for the baghouse pressure drop operating limits. One commenter suggested volumetric flow rate or static pressure upstream of the baghouse may be more appropriate operating parameters to monitor. Four commenters objected to the baghouse pressure drop operating limit being determined across each baghouse cell. The commenters recommended using the pressure drop across the entire baghouse. One commenter said that baghouse pressure drop varies with overall building ventilation and balancing air flow in the foundry is a balancing act, and varies with the outdoor temperature. The commenter stated that it is impossible to capture these scenarios during a performance test.

*Response:* We agree with the commenters that pressure drop is not a good indicator of baghouse performance. The requirement for pressure drop monitoring originated from baghouse maintenance requirements included in title V permits. As discussed above, we have replaced these provisions in the proposed rule with other inspection and maintenance requirements.

*Comment:* Three commenters objected to basing the wet scrubber pressure drop operating limit on the pressure drop range observed during the performance test for the same reasons as their comments on baghouse pressure drop operating limits. The commenters argued that like baghouses, scrubbers can operate effectively over a range of pressure drops and a single test is too short to encounter the full range of pressure drops that are normally encountered. The commenters recommended using manufacturer's recommendations or operation history for setting the operating limits. One commenter extended these comments to electrostatic precipitators (ESPs).

*Response:* We disagree with the commenters. In performance tests conducted on a cupola wet scrubber, we noted a strong (inverse) correlation between the wet scrubber pressure drop and the PM emissions from the control system. Relatively small changes in the pressure drop altered the emissions by a factor of two. A foundry may always re-test the control system at new (lower)

operating limits if the operating limits determined during the initial test are too restrictive, but the foundry must demonstrate that they can meet the emissions limit at that lower operating limit. That said, we recognize that many existing foundries are not equipped with CPMS. Therefore, we have revised the monitoring requirements for existing sources, but we retain the requirements for CPMS for new sources.

*Comment:* One commenter stated that new sources should not be required to install bag leak detection systems, but should be allowed to monitor their baghouses similar to existing sources. The commenter requested further explanation on EPA's position on this issue.

*Response:* New sources should be able to employ improved monitoring technology. Wherever possible, we request that new sources use automated systems that will measure and record operating parameters (or emissions). Over time, we expect that this approach will improve monitoring technology and reduce costs for existing and new sources.

#### 4. Operation and Maintenance Requirements

*Comment:* Two commenters stated that EPA should eliminate the requirement to have a written operation and maintenance (O&M) plan because writing the plan is an unnecessary burden (in the range of \$2,000 to \$2,500 for a small facility, according to the commenters) with little environmental benefit. According to the commenters, monitoring and recording operating parameters are sufficient to demonstrate compliance and this can be done without a written plan.

*Response:* We have reduced the burden associated with preparation of the O&M plan by revising the monitoring requirements. Several portions of the O&M plan requirements are related to the operation and maintenance of bag leak detection systems and CPMS. The final rule requires these monitoring systems only for new sources. We continue to believe that an O&M plan provides EPA and foundry representatives with a single source of information on monitoring and maintenance responsibilities. In the development of the proposed requirements for the O&M plan, we included many of the industry comments and recommendations for requirements that were reasonable for area source facilities.

*Comment:* One commenter requested that EPA expand the O&M plan to include actions to be taken in the event of an opacity exceedance. If after a

specified time with no opacity exceedances, the facility could be allowed to make weekly observations with a non-certified individual instead of Method 9 readings twice a year.

*Response:* If the foundry exceeds the opacity limit, then that foundry is out of compliance with the emissions limit and could be subject to enforcement actions. Although we considered more frequent visible emission observations, the visible emission observations could not be tied to the opacity limit. Therefore, if visible emissions were observed, an opacity observation would be needed to verify that the visible emissions did not exceed the opacity limit. This would greatly increase the burden associated with the opacity requirements, which many commenters suggested were already too burdensome. A foundry may use weekly visible emission observations as means to ensure compliance with the opacity limit if they choose, and the foundry may include such observations and corrective actions to be taken within their O&M plan if they choose.

*Comment:* Three commenters stated that the daily check of the compressed air supply for a pulse-jet baghouse was not necessary. The commenters argued that static pressure exceeding allowable ranges would be a better indicator of a problem and the need for corrective action measures. Three commenters stated that the monthly visual bag inspections are not necessary, and suggested that semi-annual inspections would be sufficient. Similarly, the commenters recommended that the quarterly inspection of baghouse physical integrity and fans is unnecessary and that semi-annual inspections would be sufficient.

*Response:* The commenters' concerns have been addressed because we have removed the baghouse inspection and maintenance requirements from the proposed rule. These requirements have been replaced with more general inspection and maintenance requirements for PM control devices (baghouses, scrubbers, and electrostatic precipitators).

*Comment:* One commenter requested guidance on what an acceptable alarm set point is when using a continuous bag leak detection system.

*Response:* The alarm set point will vary according to the design of the equipment. For additional information on bag leak detection systems that operate on the triboelectric effect, we encourage the commenter to review "Fabric Filter Bag Leak Detection Guidance", Environmental Protection Agency, Office of Air Quality Planning and Standards, September 1997, EPA-

454/R-98-015, National Technical Information Service (NTIS) publication PM98164676. This document is available from the NTIS, 5385 Port Royal Road, Springfield, VA 22161. This document also may be available on the TTN at <http://www.epa.gov/ttn/emc/cem.html>.

*Comment:* One commenter stated that, while 30 days may be sufficient time to implement minor repairs (i.e., time between inspections), some repairs may require more time (e.g., to solicit contract bids, perform engineering analysis, and install equipment). The commenter requested that the rule allow additional time for foundries to complete necessary repairs.

*Response:* In response to the commenter's concern, we have added additional time to implement repairs to capture systems. The final rule requires that repairs be completed as soon as practicable, but no later than 90 days.

*Comment:* One commenter stated that capture system requirements should be included in the O&M plan because PM build-up in capture systems, particularly for batch processes such as EIFs, could significantly reduce capture efficiency. The commenter recommended that EPA include capture system in the inspections required for control systems. Specifically, § 63.10985(a) be revised to require “\* \* \* Each capture and collection system must meet and maintain \* \* \*”; § 63.10896(a) be revised to require an O&M plan “\* \* \* for each capture and control device \* \* \*”; add a paragraph § 63.10896(a)(6) to require “Information on the inspection of the capture system components, including, but not limited to, emission intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans, to assure there is not material build-up impeding flow to the control device.”; and revising § 63.10897(c)(8) to “Inspect emission intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans for wear.”

*Response:* We appreciate the commenter's suggestions. While capture systems have been included in the O&M plans for major source rules, we have not included requirements for capture systems in the area source rule as one way of reducing compliance costs for area source foundries. In addition, the suggested revisions to § 63.10897(c)(8) are not needed as inspection requirements for the capture system are already specified in § 63.10897(e).

##### 5. Testing Requirements

*Comment:* One commenter requested clarification on how 1-hour performance tests are to be conducted on EIFs that

operate in a batch mode for 25 minutes. Additionally, the commenter inquired if there were operating condition requirements, such as operating within 10 percent of the stated melt capacity, for the performance test or if the operating conditions were not relevant because the emission limit is normalized by the melt rate. Another commenter requested guidance on methods for measuring emissions per ton charges for line frequency furnace shops, and noted concern on how a 1-hour emission test would provide a representative estimate of the emissions from a series of EIFs all cycling differently.

*Response:* In this final rule, we have clarified that “For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: charging, melting, alloying, refining, slagging, and tapping.” For the 25-minute batch time cited by the first commenter, approximately two batches would be completed during the 1-hour run. If multiple EIFs are all cycling differently, the 1-hour run would capture different cycles for the different furnaces. In the course of three 1-hour runs, data for several complete cycles will be collected. We do not specify operation within 10 percent of the stated melt capacity of the furnace because, as noted by the commenter, emission limits are normalized by the tons of metal charged. However, the melting rates are required to be indicative of normal production conditions.

*Comment:* One commenter said that when there are many furnaces and other unregulated sources exhausting to a baghouse, the performance test will be problematic because it will be difficult to identify suitable test ports that are not influenced by other disturbances. The cost of duct rework, according to the commenter, is approximately \$100,000.

*Response:* First, we have included provisions for determining compliance with the emissions limit in situations where regulated and non-regulated emission streams are mixed. We recognize that these provisions may not be suitable for all duct conditions. However, one can always demonstrate compliance with the emission limit on the combined stream. Using a baghouse control system, it is likely that the baghouse exhaust can be used to demonstrate compliance with the PM limit, even when other PM sources (such as sand handling) are included. Moreover, we have also provided an alternative metal HAP emission limit. As emission limits were not set for other

PM emission sources at the foundry precisely because these PM sources do not contain appreciable metal HAP, we expect that the baghouse exhaust can be used to demonstrate compliance with the metal HAP emission limit, regardless of what other unregulated streams may also be controlled by the furnaces' baghouse.

*Comment:* One commenter recommended that EPA eliminate the requirement to re-test every 5 years for PM emissions provided that initial results were less than 75 percent of the emission limit and no process changes are made.

*Response:* We considered this alternative, but concluded that elimination of the subsequent tests (every 5 years) was not appropriate. First, we have reduced the monitoring burden for the control systems in this final rule compared to the proposed rule. Therefore, the subsequent tests are necessary to assure ongoing compliance with the emission limits. Second, the subsequent tests do not pose an unreasonable compliance cost to large (greater than 20,000 tpy) area source foundries.

*Comment:* One commenter stated that, in order to perform an emissions test on the EIFs at his facility, the plant would have to install a capture and blower system that costs almost \$1 million just to determine whether or not they are already in compliance.

*Response:* We recognize that testing uncontrolled EIFs is difficult. For this reason, we have added to the final rule special provisions for testing EIFs. For EIFs equipped with emission control devices, this final rule allows existing foundries to use the performance test results for one EIF to demonstrate compliance for other EIFs provided the other furnaces are similar with respect to the type of emission control device used, composition of the scrap charged, furnace size, and melting temperature. For uncontrolled EIFs, the final rule allows the use of test results from another furnace to demonstrate compliance if the test results are prior to any control device, and the furnaces are similar with respect to the composition of scrap charged, furnace size, and melting temperature. In addition, for EIFs without emission capture systems, we have clarified in the final rule that existing foundries may install a temporary enclosure for the purpose of sampling emissions. A permanent enclosure and capture system is not required for the purpose of testing.

*Comment:* One commenter noted that the preamble stated that performance tests are required within 180 days of

promulgation, and stated that this was inadequate time to install controls and demonstrate compliance since it takes 180 days to get a construction permit.

*Response:* We have revised the preamble to the final rule to state that the owner or operator must conduct the performance test within 180 days of the compliance date, not the effective date.

#### D. Implementation and Enforcement

*Comment:* Seven commenters supported EPA's proposal to exempt area source foundries from title V permit requirements because requiring title V permits would add significantly to the compliance costs with little to no additional environmental benefit. Two commenters stated that the requirements of the mercury switch removal program must be incorporated in air permits and the provisions must be clearly understood and enforceable by air agencies and their counterparts in other media programs. If these provisions are not explicit in the program, the pollution prevention approach will not be effective.

*Response:* We did not receive any adverse comments on our decision to exempt this area source category from title V permitting requirements. As discussed in the preamble to the proposed rule (72 FR 52997, September 17, 2007) we found that the cost of title V permitting would be burdensome and the cost would not be justified because there would be little to no potential gains in compliance if title V permits were required. We also concluded that title V permitting was unnecessary to assure compliance with the NESHAP because the statutory requirements for implementation and enforcement of the NESHAP by EPA and the delegated States are sufficient to assure compliance without title V permits. In addition, we have added provisions to the final rule to improve the enforceability and effectiveness of the mercury switch removal program. The commenters did not provide any new information to change these conclusions. Therefore, we are not revising the final rule to require title V permits for the mercury switch removal requirements. Although the final rule exempts facilities that do not have a title V permit from the requirement to obtain a permit for the purposes of this rule, sources that already have a title V permit generally must include the requirements of this rule through a permit reopening or at renewal according to the requirements of 40 CFR part 70 and the title V permit program.

*Comment:* One commenter questioned the addition of the phrase "in addition to EPA" to the provisions for

implementation and enforcement in § 63.10905. The commenter said this language (which is not in the EAF rule) suggests that two separate entities have equal implementation and enforcement authorities except for nontransferable authorities listed in § 63.10905(a). The commenter stated that this dualism would create legal issues and could create practical problems for stakeholders. The commenter requests that this phrase be removed from the final rule.

*Response:* We agree with the commenter and have removed this phrase from the final rule.

*Comment:* One commenter noted that § 63.10905(c) refers to the authorities which cannot be delegated in paragraphs (c)(1) through (4) of this section, then lists (c)(1) through (5). The commenter also asks why this rule has two extra non-transferable authorities concerning opacity that are not in the EAF rule.

*Response:* We have revised the proposed rule to cite paragraph (c)(5) instead of (c)(4) as the commenter noted. There are five non-transferable authorities in this final rule that cover the emissions limits, opacity limit, monitoring, test methods, and recordkeeping/reporting requirements. We have also revised the proposed rule to specifically reserve EPA's authority for review and approval of local, State, or national mercury switch removal programs. The proposed EAF rule should have cited the emissions limit and opacity limit as well as the monitoring, test methods, and recordkeeping/reporting requirements. We will revise the proposed EAF rule to show five non-transferable authorities instead of three and to reserve authority for approval of local, State, or national mercury switch removal programs.

#### E. Definitions

*Comment:* One commenter recommended that EPA include a definition of "total metal HAP" as provided in the amendments to the major source foundry rule currently under development.

*Response:* We agree with the commenter's suggestion and have revised the proposed rule accordingly.

*Comment:* One commenter said that the rule should define "fugitive emissions" as in the foundry MACT standard, but further clarify that fugitive emissions do not include emissions that stay within the building as follows: "Fugitive emissions is a drifting emission that exits a building in a manner other than through a collected or uncollected, powered exhaust fan/vent."

*Response:* We agree with the commenter that "fugitive emissions" should be defined and we have added a definition of "fugitive emissions" commensurate with the one used in the major source foundry MACT standards. We disagree that fugitive emissions excludes uncollected dust that is exhausted through general building ventilation or roof fans.

*Comment:* One commenter stated that the final rule should include a definition for "scrap provider" that is the same as the definition in the EAF rule with the recommended changes. The commenter recommended that the proposed definition of "scrap provider" in the EAF rule be revised because the definition includes brokers who have no oversight over scrap preparation and delivery. According to the commenter, a revised definition should allow brokers to be considered "scrap providers" as a contractual matter. The commenter suggested that EPA define "scrap provider" to mean "the final preparer of scrap delivered to a steel mill, or a broker when a brokered transaction specifies that the broker provide information to the steel mill from the scrap processors participating in the brokered transaction."

*Response:* We agree that the definition of "scrap provider" in the EAF rule should be included in the final rule. We disagree that the proposed definition in the EAF rule should be revised because the definition as proposed allows a broker to be considered a scrap provider. The foundry owner or operator must ensure that the broker receives scrap only from suppliers participating in an EPA-approved program or for the site-specific option, that the suppliers have removed mercury switches and provide an accounting of the number of switches removed and vehicles processed, along with all of the other requirements in the site-specific plan.

*Comment:* One commenter recommended that the final rule include the definition of "motor vehicle scrap" as revised to refer to shredded scrap that contains shredded end-of-life vehicles. The commenter explained that shredded scrap typically includes shredded end-of-life or obsolete appliances as well as other materials. Alternatively, the commenter suggested replacing the definition of "motor vehicle scrap" with a definition of "shredded scrap", which would contain some fraction of shredded end-of-life vehicles.

*Response:* We agree that the definition of "motor vehicle scrap" should be included in the final rule. We have added the definition in the EAF rule to this final rule. The definition of "motor

vehicle scrap” is specific to vehicles processed in a shredder. We do not see a need to revise the definition as suggested by the commenter.

*Comment:* One commenter requested EPA to add the definition of “nonferrous metal” in 40 CFR 471.02 of the effluent guidelines for nonferrous metals forming and metal powders point source category. Under 40 CFR 471.02(a), “nonferrous metal” is defined as “any pure metal other than iron or any metal alloy for which a metal other than iron is its major constituent in percent by weight.” This definition distinguishes the primary and secondary production of other metals or alloys (which are covered by air emission standards for other source categories) from the ferrous metals iron and steel.

*Response:* We added this definition of “nonferrous metal” to the final rule except that we changed the phrase “a metal other than iron” to “an element other than iron”.

*Comment:* Two commenters recommended that EPA provide State and local agencies with sufficient additional grants so that they may participate in the implementation of additional area source rules. According to the commenters, Federal grants currently fall far short of what is needed to support State and local agencies in carrying out their existing responsibilities, and budget requests for the last 2 years have called for additional cuts. The commenters claimed that, without additional funding, some State and local air agencies may not be able to adopt and enforce additional area source rules. One commenter further stated that, even for permitting authorities that do not adopt these area source rules, it is possible that these rules will increase their work loads and resource needs. The commenter stated that, for example, synthetic minor permits (or Federally Enforceable State Operating Permits) will need to incorporate all applicable requirements, including area source standards. Noting that the title V permit fee funds are not available for these efforts, the commenter asserted that many State and local air agencies do not have sufficient resources for these responsibilities.

*Response:* State and local air programs are an important and integral part of the regulatory scheme under the CAA. As always, EPA recognizes the efforts of State and local agencies in taking delegations to implement and enforce CAA requirements, including the area source standards under section 112. We understand the importance of adequate resources for State and local

agencies to run these programs; however, we do not believe that this issue can be addressed through this rulemaking.

In this rulemaking, EPA is promulgating standards for the Iron Foundries and Steel Foundries area source categories that reflect the practices currently in use by sources in these area source categories, and these standards represent what constitutes GACT for these categories under section 112(d)(5). GACT standards are technology-based standards. The level of State and local resources needed to implement this rule is not a factor that we consider in determining what constitutes GACT under section 112(d)(5). Moreover, we note that the commenters did not challenge our proposed determination to exempt from title V the Iron Foundries and Steel Foundries area source categories, although they did recommend that the pollution prevention standard for mercury be incorporated in title V permits.

Although the resource issue cannot be resolved through this rulemaking for the reason stated above, EPA remains committed to working with State and local agencies to implement this rule. State and local agencies that receive grants for continuing air programs under CAA section 105 should work with their project officer to determine what resources are necessary to implement and enforce the area source standards. EPA will continue to provide the resources appropriated for section 105 grants consistent with the statute and the allotment formula developed pursuant to the statute.

#### F. Impact Estimates

##### 1. Environmental Impacts

*Comment:* Fifteen commenters stated that the emission reductions that can be achieved from uncontrolled EIFs are overestimated because EPA used an unrepresentative emission factor. Twelve commenters stated that EPA should use “an already well-referenced PM emission factor that is representative and technically defensible”. One commenter recommended that EPA use the current emission factor in AP-42 (0.9 lb/ton). Another commenter recommended basing the emission factor on data reported by Shaw (1982). Twelve of the commenters described the dataset as limited and problematic as much of the data are not verifiable and one commenter said that the baghouse catch data were suspect.

*Response:* First, the impact assessment performed was to assess the

impacts of the EIFs that could not meet the PM or metal HAP emission limit without a control device. To develop an assessment of the worst-case economic impacts, we assumed all EIFs would have to add a control device. In actuality, we do believe that a significant portion (approximately one-half) of EIFs will be able to demonstrate compliance with the 0.8 lb/ton PM emission limit or the alternative 0.06 lb/ton metal HAP limit without installing additional controls. We agree that the EIFs that do meet this limit are “clean burning.” However, available data indicate that many EIFs may have PM emissions that significantly exceed this limit. The PM emission factor used previously was developed to model the emission reductions and cost-effectiveness of these reductions of the EIFs that could not meet the PM emission limit as proposed.

In response to these comments, we reevaluated the data used to assess the PM emission factor for EIFs. We did identify a few “baghouse catch” data that included operations other than EIF melting operations, such as inoculation. While we do expect that capture and control systems will likely help to reduce PM emissions from inoculation, inoculation emissions are primarily magnesium which is not a HAP metal. As such, we do not expect that these PM will contribute significantly to the total metal HAP emissions. Therefore, we did exclude these data although these PM emissions could be considered a co-benefit of the proposed furnace emission controls. We also included the data from Shaw, as requested by one commenter, although these data are provided only as secondary references, all of which are 30 years old or more. We also considered more recent Casting Emissions Reduction Program (CERP) data. The augmented data set supports the average emission factor reported in AP-42, but also indicates that those EIFs not able to meet the 0.8 lb/ton emission limit have an average emission factor of 1.6 lb/ton. The augmented data set and basic statistics for the data set are provided in a memorandum to the docket.

Although this PM emission factor is 20 percent lower than the emission factor used in developing the nationwide impacts for the proposed rule, as stated previously, the second and major reason the PM reductions (as well as the total control costs) were overstated in the impacts as estimated for the proposed rule is that many EIF will be able to meet the proposed rule without additional control requirements (or with the installation of suppression controls only). To develop a more

realistic assessment of the nationwide impacts, we performed a Monte Carlo assessment. Based on the emission data compiled as described previously, a log-normal distribution was used with a mean of  $-0.25$  and standard deviation of  $0.7$ . This distribution leads to a median emission factor of  $0.8$  lb/ton and an arithmetic average emission factor of  $1.0$  lb/ton, which agrees well with the AP-42 emission factor of  $0.9$  lb/ton. By using the Monte Carlo analysis, we address both reasons the PM emission reductions were overestimated at proposal.

*Comment:* One commenter stated that EPA should use the default average emissions factor for uncontrolled EIFs used in developing the impact estimates. Furthermore, the commenter suggested that the default factor used by EPA in the impacts analysis is too high and lower average emission factors should be used for both the impacts analysis and the default factor for emissions averaging.

*Response:* We disagree with the commenter that the average emissions factor for uncontrolled EIFs should be used as a default factor. If we allowed foundries to use the average emissions factor, then many of the uncontrolled EIFs would have actual emissions higher than the assumed emissions. A default factor of  $3$  lb/ton of PM was selected at proposal as an upper end estimate of the emissions factor for uncontrolled EIFs. Based on the expanded PM data set, a  $3$  lb/ton emissions factor represents the 98th percentile of the distribution. Using a  $3$  lb/ton PM default emissions factor for uncontrolled EIFs provides a very high degree of assurance that an emissions averaging group meets the  $0.8$  lb/ton emission limit when not measuring the emissions from all uncontrolled furnaces. EPA believes that it is appropriate to use a conservative figure for the default emissions factor, in part because foundries have the option to establish an actual emissions rate by testing. However, EPA recognizes that using a  $3$  lb/ton emission factor overestimates emissions from 98 percent of uncontrolled furnaces, and believes that using an emissions factor based on a somewhat lower percentile would reduce the burden of initial testing and still provide adequate assurance that the  $0.8$  lb/ton emission limit is met for multiple furnaces using emissions averaging. Therefore, we have revised the proposed rule to allow uncontrolled EIFs that are not equipped with a capture system and have not been previously tested to assume an uncontrolled emission factor of  $2$  lb/ton, which is approximately the 75th

percentile. If a lower emissions rate is needed for an uncontrolled EIF in order for the emissions averaging group to meet the emissions limit, the foundry has the option to test any uncontrolled EIF and establish a measured emissions rate for use in the emissions averaging equation.

*Comment:* One commenter stated that EPA overstated HAP emission reductions and did not fully take into consideration the different types of melting furnaces and the variety of control equipment available.

*Response:* Metal HAP emission reductions were overstated for the same reasons that the PM emission reductions were overstated. However, we respectfully disagree with the commenter with respect to the types of furnaces and controls. The emission and cost impacts were performed on a furnace specific basis, considering the type of control device installed for each furnace. We also evaluated certain design aspects of the control system to assess which controls could or could not meet the  $0.8$  lb/ton PM emissions limit.

*Comment:* One commenter noted that some induction furnaces only tap about one-third of the molten metal, and are never fully emptied except to work on the EIF refractory. The commenter said that these furnaces can be sources of small quantities of emissions even when the unit is not melting so that the control system would need to operate continuously, even when the plant is not actively melting and that this makes it difficult to know what the actual emissions are in terms of tons of metal melted as some of the emissions are not directly related to production.

*Response:* We disagree with the commenter. For periods when the furnace is idling, a suppression cover is all that is necessary to ensure emissions are not released from the furnace. The cover will also reduce heat losses from the furnace, reducing overall electricity costs (especially as compared to running the control system continuously). We acknowledge the difficulty in assessing the true emissions from these sources, which is why the long-term baghouse data were considered to be highly relevant in assessing the emission potential of EIFs.

## 2. Cost Impacts

*Comment:* Sixteen commenters stated that EPA underestimated the costs of the capture and control equipment needed to retrofit an existing uncontrolled EIF with a control device. One commenter noted that some retrofits may require substantial furnace modifications, site preparation, and business interruption,

the costs of which were not included in EPA's estimates. A third commenter stated that EPA had previously concluded that a retrofit cost factor of  $2.8$  was appropriate for an existing EIF. Another commenter explained that business interruption costs associated with a control system retrofit would directly impact the economic viability of the foundry.

Ten of the commenters stated that EPA's cost estimates were understated because more EIFs than those identified by EPA will need to install controls to meet the proposed emission limits.

One commenter stated that operating cost factors were supplied by individual companies and that the labor included overhead and bags were changed every 2 years. This commenter also stated that the current cost of capital equipment loans range from  $7.5$  to  $9$  percent, so annualizing costs using  $7$  percent understates the annual cost for the capital equipment.

One commenter stated that the capital cost formula used by EPA is reasonably accurate if their furnaces can be modified to use a close capture system. If not, the commenter estimated that  $250,000$  actual cubic feet per meter (acfm) of gas would need to be collected (versus  $40,000$  acfm), which would increase the size of the cost of the baghouse control system by nearly a factor of five. The commenter also stated that the operating cost formula used by EPA appeared to significantly underestimate the on-going costs. The commenter stated that EPA's estimate for melting  $17,000$  tpy production rate, operating costs of  $\$72,600$  per year would be estimated while the commenter estimates the cost for electricity and compressed air alone to be approximately  $\$103,000$  per year for the  $40,000$  acfm system. The commenter also noted that additional costs of heating make-up air (to keep from drawing cold air into the building) could increase operating costs by another  $\$100,000$  per year and maintenance costs were estimated to be  $\$15,000$  per year. The commenter also noted that, based on the types of EIFs used at their foundry, the emission controls would have to run 24 hours a day, 365 days per year because the furnaces always have molten metal in them.

*Response:* First, while we have revised the cost impacts, we consider that the control costs estimated for EIFs are likely to be biased high because we assume the EIFs that cannot meet the  $0.8$  lb/ton PM emission limit will install baghouse control devices. Other control systems, such as wet scrubbers or ESPs are expected to be able to meet the metal

melting furnace emission limit for existing sources and typically at less total cost compared to baghouse control systems. For example, in reviewing the costs submitted by one of the commenters, the design performance of the baghouses was far greater than needed to comply with the proposed rule (designed to meet 0.0035 gr/dscf). Based on other commenters, EPA's estimate of the capital equipment cost for the baghouse system is not understated. Consequently, we did not revise the capital cost estimate for the baghouse system itself as we expect these capital cost estimates to already be conservatively high.

We do note that there may be additional retrofit costs for those induction furnaces that do not have existing capture and control system, although we do not agree that a retrofit factor of 2.8 is warranted or appropriate. We increased the capital costs needed to install a capture system when one is not in place. At proposal, we estimated the cost of the capture system as 15 percent of the cost of the baghouse system. For this final rule, we estimated the cost of the capture system/furnace modification as 40 percent of the cost of the baghouse system. That is, for a baghouse system projected to cost \$1 million, capture system/furnace modifications were estimated to cost an additional \$400,000. We also substantially increased the projected cost of testing the EIFs when no capture system is in place. For furnaces that already have a capture system (but no controls), then just costs of the baghouse system were attributed to the furnace.

In addition, based on our review of the comments, we adjusted and increased the overall pressure drop through the system, which significantly increased the projected electricity costs. We also changed the frequency of bag replacement from 4 years to 2 years. Together with the additional capital costs, the control costs for EIFs increased compared to the estimates at proposal. However, we did not include the higher costs reported by some of the commenters, such as assuming bag replacement requiring a full-time person over a year to replace the bags or utilizing labor rates reported to include overhead, but then multiplying those rates by an overhead factor.

We disagree with the commenter that the control costs were under-estimated because more EIFs would need to be controlled than were estimated. Although the database used does not include every area source foundry in the country, we expect the existing database to include a very high majority of the larger area source foundries.

Additionally, as noted in developing the emission impacts, we assumed that every EIF that was in the database required controls. As such, we believe that we overestimated the nationwide control costs because many existing EIFs are expected to meet the 0.8 lb/ton emission limit without installing additional controls. Furthermore, "missing" EIF from the database impact both emission reductions and costs, so that the overall cost-effectiveness projected for the rule will not be significantly impacted if some EIFs are "missing" from the database.

Finally, we acknowledge that interest rates vary, but the 7 percent annual interest rate is our best estimate for long-term cost of capital.

### 3. Cost Effectiveness Impacts

*Comment:* Several commenters stated that the emission limits for metal melting furnaces, and specifically for EIF, are not cost-effective. One commenter stated that the cost per ton of PM or metal HAP emissions reduced is about four times higher than the EPA estimates due to the combination of EPA's overestimate of emission reductions and underestimate of emission control costs. Five commenters stated that EPA did not propose controls for pouring because the cost to control pouring ranged from \$30,000 to \$110,000 per ton of PM removed. The commenters said that because the commenters' cost-effectiveness for EIF controls are in this range, EPA should conclude that melting furnace controls are also not cost-effective. Another commenter recommended that EPA re-evaluate the need to control area source melting furnaces.

Two commenters stated that, if the appropriate emission factors and compliance costs are used, the proposed rule is even less cost-effective. One commenter compared the cost effectiveness of the proposed rule to the MACT standard for Industrial and Institutional Boilers and Process Heaters, which was approximately \$33,000 per ton of HAP removed as further rationale demonstrating that the proposed rule is not cost-effective. Another commenter stated that, based on the cost estimate, the rule is not cost-effective. Using EPA's emission factor of 2 lbs/ton and assuming a PM emissions limit of 0.8 lbs/ton, the cost of controlling EIFs at his facility is approximately \$30,000 to \$50,000 per ton of PM reduced, and these costs increase significantly if one uses the emission factor reported in AP-42. The commenter said that the requirement for EIF controls for new units appeared to

be reasonable, but that the cost to control existing EIFs was unreasonable.

*Response:* The commenters are mistaken—we did not reject emission controls for pouring on the basis of cost effectiveness. We stated clearly at proposal (72 FR 52987) that we were not regulating pouring at area source foundries for two reasons, and neither reason was cost effectiveness. We noted that the quantity of metal HAP in pouring emissions is very small relative to the emissions from melting furnaces. Further, we explained there are technical difficulties in the capture and control of pouring emissions because of the need to access the molten metal during the pouring process.

We also disagree with the commenter's estimate of cost effectiveness of \$30,000 to \$50,000 per ton of PM for EIFs. We have re-evaluated our cost estimates, and based on our revised analysis for the final rule, we estimate the cost effectiveness for PM as \$13,000 per ton.

*Comment:* One commenter stated that the GACT standard for EIFs was not as cost-effective and was more stringent than the MACT standard for EIFs. The commenter also noted that the MACT standard reduced metal HAP by 102 tpy compared to only 19 tpy for the GACT standard.

*Response:* We developed the GACT standard for large area source foundries (including EIFs) by assessing the technologies and management practices that are generally available for large area source foundries. We selected a format of "lb/ton" as the most appropriate format for measuring emission control performance, and we concluded that 0.8 lb PM/ton of metal charged (or 0.06 lb total metal HAP/ton of metal charged), together with the pollution prevention management practices of the rule, represent GACT for this subcategory. In contrast, the MACT standard of 0.005 grains per dry standard cubic feet (gr/dscf) was based on the emissions level achieved by the average of the top 12 percent of major sources. We disagree that the GACT standard for EIFs (0.8 lb/ton) is more stringent than the MACT standard (0.005 gr/dscf). For example, for an EIF operating at 5 tons per hour (tph) and 14,600 actual cubic feet per minute (acfm) of gas flow, the MACT standard is six times more stringent. For larger EIFs operating at 20 tph and 36,800 acfm, the MACT standard is 10 times more stringent.

In addition, one of the reasons the cost effectiveness estimates differ between the major source MACT standard and this rule is that the major source rule applies to larger foundries with greater economies of scale. That

said, the HAP emission reductions achieved by the GACT standard that we are finalizing today are significant.

Moreover, the commenter's comparisons of cost effectiveness and emission reductions between the major source MACT standard and the GACT standard at issue in this rule are not relevant. As we have explained previously, Congress expressly authorized EPA to issue alternative emission standards for area sources. Under section 112(d)(5), EPA can promulgate standards that provide for the use of generally available control technologies or management practices (GACT) for area sources listed pursuant to section 112(c)(3). EPA has done precisely that in this case. The fundamental issue here is whether the GACT standard described above complies with the requirements of section 112(d)(5), and for all of the reasons described in this preamble and the docket in support of this final rule, the standard described above for large foundries represents GACT.

Determining what constitutes GACT involves considering the control technologies and management practices that are generally available to the area sources in the source category. There are approximately 83 large area source foundries, and approximately two thirds of these foundries achieve the GACT level of control (0.8 lb/ton). We also examined options more stringent than 0.8 lb/ton and concluded the more stringent options were not GACT because of the increased cost, due primarily to the fact that a significant percentage of the foundries would have to retrofit or replace their existing emission control systems. (See 72 FR 52993, September 17, 2007.) As we explained in an earlier comment response, we re-evaluated the economic impacts of the rule as proposed and made appropriate changes to improve our cost estimates and reduce adverse economic impacts. For example, we estimated that three of the large area source foundries that might have to install additional controls under the rule as proposed would incur costs that were greater than 3 percent of revenues based on our revised analysis of impacts. To minimize economic impacts, we evaluated an alternative foundry size threshold of 20,000 tpy instead of 10,000 tpy and found that none of the 30 large area source foundries that might have to install controls would incur costs greater than 3 percent of revenues. We also concluded that a threshold of 20,000 tpy still resulted in significant emission reductions for metal HAP. In addition, only nine plants were estimated to incur

costs that were over 1 percent of sales. Consequently, we revised the proposed rule to reduce economic impacts while maintaining significant emission reductions of HAP metals.

The final GACT standard for large foundries will provide reductions of 13.2 tpy of compounds of chromium, lead, manganese, and nickel, which are all "Urban HAP" for which this category was listed pursuant to sections 112(c)(3) and 112(k). EPA listed these metal compounds as Urban HAP because of their significant adverse health effects. A large portion of the reductions of these Urban HAP will occur in the urban areas that EPA identified in the Integrated Urban Air Toxics Strategy. See CAA 112(k)(3)(C).

The primary HAP emitted from melting iron and steel scrap are manganese and lead with smaller levels of chromium and nickel. These metals (especially manganese) are inherent components of the scrap that is melted, and at the high temperatures used in the melting furnaces, the HAP metals are unavoidably vaporized and emitted. These metal HAP are present in the particulate matter emissions from the furnace, and because they are in particulate form, they can be captured and removed from the gas stream at high efficiency by control devices designed to capture PM (such as baghouses). The nature of these emissions and the HAP composition are unique to iron and steel melting furnaces and are quite different from the emissions from other processes and operations that do not involve melting metal scrap at high temperatures.

There are adverse health effects associated with the metal HAP emitted from melting furnaces such as EIF. Hexavalent chromium and certain forms of nickel are known human carcinogens. Lead is toxic at low concentrations, and children are particularly sensitive to the chronic effects of lead. Chronic exposure to manganese affects the central nervous system. Additional details on the health and environmental effects of these HAP can be found at <http://www.epa.gov/ttn/atw/hlthef/hapindex.html>. In addition, 75 percent of the emissions are in the form of fine particulate matter, and EPA studies have found that fine particles continue to be a significant source of health risks in many urban areas.

In summary, the GACT standard for EIFs will reduce the emissions of urban metal HAP from area source foundries in urban areas, which will reduce the adverse health effects associated with these pollutants. As discussed earlier, these reductions will be achieved by technology and management practices

that are generally available at large area source foundries. Furthermore, we have incorporated into this final rule certain provisions of the General Provisions (40 CFR part 63, subpart A) that afford sources additional flexibility. For example, existing sources can request an additional year to comply with the standard if they can demonstrate to the permitting authority that such additional time is needed to install controls. See 40 CFR 63.6(i)(4)(1)(A). In addition, EPA's regulations implementing CAA section 112(l) provide further flexibility. Specifically, 40 CFR part 63, subpart E provides that a State may seek approval of permit terms and conditions that differ from those specified in a section 112 rule, if the State can demonstrate that the terms and conditions of the permit are equivalent to the requirements of this rule. The procedures for seeking approval of such a permit are set forth in detail in 40 CFR 63.94.

#### 4. Economic Impacts

*Comment:* One commenter stated that EPA's economic impact assessment is deficient. The commenter stated that EPA defined this rule as a "significant regulatory action" under Executive Order 12866, a definition that triggers specific requirements to provide economic impact analyses that include a statement of need for the proposed rule, examination of alternative approaches and analysis of social benefits and costs. The commenter stated that EPA has not met these requirements in a clear and comprehensive manner that allows for the evaluation of the regulatory costs and impacts. The commenter recommended that EPA provide a direct listing of the projected revenue and compliance costs for each foundry.

*Response:* The proposed rule (and this final rule) was declared a "significant regulatory action" by the Office of Management and Budget because it raised novel legal or policy issues. In the preamble to the proposed rule and supporting material in the docket, EPA met its obligations under section 6(a)(3)(B) of Executive Order 12866 to provide "a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need" as well as "an assessment of the potential costs and benefits of the regulatory action". Section 6(a)(3)(C) of Executive Order 12866 imposes additional obligations on agencies for economically significant rules, but these additional obligations do not apply to this rule because it is not economically significant.

We consider that the level of analysis provided for the proposed and final rule is appropriate for this rulemaking. We relied on nationwide impact estimates for the proposed rule (instead of uncertain facility-specific analyses) and included the relevant analyses in the docket for public review at proposal (Docket Item No. EPA-HQ-OAR-2006-0359-0007).

A Monte Carlo analysis was used to assess the impacts for this final rule. This type of analysis provides an excellent means of determining the average nationwide impacts including average control cost estimates, average emission reductions, average number of foundries exceeding a set cost-to-revenue ratio, etc. The Monte Carlo analysis also provides a means to assess the uncertainty associated with these impacts. Although the Monte Carlo analysis provides meaningful nationwide impacts, it does not provide facility-specific impacts. We have included in the docket all relevant economic impacts analyses conducted for this final rule.

*Comment:* One commenter stated that EPA underestimated the economic impact because the compliance costs were underestimated. One commenter stated that his facility was a small foundry that exceeded the 10,000 tpy threshold. The commenter stated that their revenue was approximately \$5 to 6 million and the control equipment costs would exceed \$1 million for their foundry, which would cause the facility to declare bankruptcy. Another commenter stated that the rule, as proposed, would likely cause their facility to close, resulting in a loss of jobs and exporting the business to countries that have little or no environmental regulations. Another commenter stated that the proposed rule would have a significant negative financial impact on their business and disagreed with the proposed rule requirements.

*Response:* As described previously, after reviewing and revising both the emission and cost impact estimates, the impacts of the rule were re-evaluated. The number of existing foundries potentially impacted greater than 3 percent of revenues increased to three based on the revised analysis. Therefore, based on the revised impact analysis, we concluded that the proposed rule using a 10,000 tpy threshold for existing large foundries was not appropriate. We evaluated alternative standards using the revised impacts methodology and selected a 20,000 tpy threshold for existing large foundries for this final rule. We estimate no foundries will be impacted greater than 3 percent of

revenues at this higher production threshold.

*Comment:* Six commenters recommended that the economic impacts be evaluated on the furnace level rather than on the foundry level. The commenters requested that EPA include only the revenue based on the portion of the metal produced from a particular furnace that is in need of additional controls. The commenters stated that this approach will reduce the revenue for many foundries and make it more likely that the cost-to-revenue ratio exceeds benchmark thresholds.

*Response:* We disagree with the commenters. The cost-to-revenue benchmark is typically evaluated at the entity level. For this analysis, we evaluated the impacts on the foundry level. It is possible that some entities operate several foundries. As such, we may have already overestimated the number of entities impacted greater than a given cost-to-revenue benchmark.

*Comment:* One commenter stated that the cost-to-revenue ratio benchmark thresholds that EPA used are inappropriate for the foundry industry. The commenter provided data of the "pre-tax profitability" (defined by the commenter as income subject to tax divided by total business receipts) for foundries with assets less than \$10 million averages only 1.02 percent, which is much less than the manufacturing industry as a whole. The commenter also stated that roughly 70 percent of foundries did not show a profit at all in 2002 and 2003. The commenter warned that recent reports indicating that profit margins of 5.4 percent were realized by foundries in 2005 and 2006 were not statistically designed and were therefore biased toward more profitable firms. If EPA does consider these recent reports, the commenter urged EPA to use an average profitability over the past 5 years as a better indicator of the affordability of compliance costs. The commenter also stated that U.S. foundries cannot pass on price increases to the consumer due to international competition, citing a 2005 U.S. International Trade Commission (ITC) report.

Eleven commenters stated that the rule would have an adverse economic impact on a significant number of foundries due to the industry's low profit margins and foreign competition. Six of these commenters also stated that the foundry industry has a common profit margin of approximately 2 percent so that impacts of 1 percent are significant to this industry.

*Response:* First, most foundries with 10,000 tpy or more of metal charged have assets of \$10 million so the 1

percent profit margin quoted by one of the commenters for these smaller foundries is really immaterial. It is the profit margin for the larger foundries that are relevant to the foundries that are materially impacted by this final rule. Profit margins generally increase with revenue, therefore, the profit margin for foundries greater than 20,000 tpy are likely well above the 2 percent values suggested by the commenters, so that impacts of 1 percent would not impose a significant adverse economic impact. Based on our revised analysis and the 20,000 tpy threshold, we expect there will be no foundries impacted greater than 3 percent of revenues, at most only one foundry may be impacted greater than 2 percent, and an average of nine foundries would be impacted greater than 1 percent. As such, we estimate that there will not be a significant adverse economic impact for a substantial number of iron and steel foundry area sources subject to this final rule.

*Comment:* Six commenters stated that the capital investment costs of roughly \$1 million will be incurred by many foundries, and that it will be difficult to secure financing for such a significant investment for a non-revenue-generating project. One of the commenters stated that the high capital investment that would be required by this rule is nearly three times the capital investment made in the plant (for income producing equipment) for all of 2007. The commenters recommended that EPA reassess the economic impacts in light of their comments.

*Response:* We appreciate the difficulty making investment in non-income generating equipment, especially for small facilities. This was part of the consideration in selecting the higher 20,000 tpy threshold. However, we are required to establish area source standards based on our assessment of the industry and, for the reasons discussed in this preamble, we believe the control technologies and management practices described above represent GACT for the subcategories at issue in this final rule.

#### G. Miscellaneous

*Comment:* One commenter stated that some of the references in § 63.10890 need correction. In § 63.10892(c)(2), references are made to § 63.10892(b)(2) and (3) which do not exist and in § 63.10890(d)(4), there is a reference to (b)(2) which does not exist.

*Response:* We have revised the proposed rule to correct these citations.

*Comment:* One commenter requested that EPA specify the document retention



time for information not submitted to the agency.

*Response:* We have revised the proposed recordkeeping requirements for small and large foundries to specify a 5-year period for record retention.

## V. Summary of Impacts of the Final Rule

We estimate that the final rule (using 20,000 tpy as the production capacity threshold for existing affected sources) will reduce emissions of HAP metal compounds by 13.7 tpy and will reduce PM emissions by 380 tpy from the baseline. Additionally, the final standard is expected to reduce emissions of organic HAP by 32 tpy. The total capital cost of the final standard is estimated at \$17 million. The annual operating, maintenance, monitoring, recordkeeping, and reporting costs of the final standard are estimated at \$3.2 million per year. The total annualized cost of the final standard, including the annualized cost of capital equipment, is estimated at \$4.8 million. Additional information on our impact estimates on the sources is available in the docket. (See Docket Number EPA-HQ-OAR-2006-0359.)

The final standard is estimated to impact a total of 427 area source iron and steel foundries. When subcategorizing foundries by production thresholds, we estimate that 83 of these foundries are large iron and steel foundries and 344 foundries are small iron and steel foundries. Approximately 35 percent of the large iron and steel foundries are owned by small entities whereas 85 percent of the small iron and steel foundries are owned by small entities.

The secondary impacts include solid waste generated as a result of the PM emissions collected and energy impacts associated with operation of control devices. At a 20,000 tpy production capacity threshold, we estimate that 440 tpy of solid waste will be generated and an additional 4,400 megawatts per hour (MW-hr) of electrical energy will be consumed each year as a result of the final standard.

## VI. Statutory and Executive Order Reviews

### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it may "raise novel legal or policy issues." Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes

made in response to OMB recommendations have been documented in the docket for this action.

### B. Paperwork Reduction Act

The information requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* The information collection request (ICR) document prepared by EPA has been assigned EPA ICR number 2267.02. The information collection requirements are not enforceable until OMB approves them.

The recordkeeping and reporting requirements in this final rule are based on the requirements in EPA's National Program for Mercury Switch Removal (a voluntary agreement with participating industries) and the NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping and reporting requirements in the General Provisions are mandatory pursuant to section 114 of the CAA (42 U.S.C. 7414). All information (other than emissions data) submitted to EPA pursuant to the information collection requirements for which a claim of confidentiality is made is safeguarded according to CAA section 114(c) and the Agency's implementing regulations at 40 CFR part 2, subpart B.

All foundries are required to submit an initial notification that classifies their facility as a small or large foundry and a subsequent notification for any change in classification. All foundries also are required to maintain monthly production data to support their classification as a large or small foundry.

The final NESHAP requires small area source foundries to submit an initial notification of applicability and a notification of compliance status according to the requirements in the General Provisions (40 CFR part 63, subpart A). Small area source foundries also must report any deviation from the pollution prevention management standards in the semiannual report required by 40 CFR 63.10 of the general provisions. Large area source foundries are required to prepare and follow an O&M plan, conduct initial performance tests and follow-up tests every 5 years, conduct control device inspections or monitor control device operating parameters, conduct opacity tests every 6 months for fugitive emissions, inspect and repair capture systems, and keep records to document compliance with the rule requirements. The owner or operator of an existing affected source is allowed to certify compliance with the emissions limits based on the results of

prior performance tests that meet the rule requirements; the owner or operator must provide advance notification of the intent to use a prior performance test instead of conducting a new test. If compliance with the emissions limits for metal melting furnaces is demonstrated through emissions averaging, the owner or operator is required to demonstrate compliance for each calendar month using a calculation procedure in the rule. The owner or operator of a large foundry is subject to all requirements in the General Provisions (40 CFR part 63, subpart A), including the requirements in 40 CFR 63.6(e) for startup, shutdown, and malfunction records and reports and the recordkeeping and reporting requirements in 40 CFR 63.10. The semiannual report must include summary information on excursions or exceedances, monitor downtime incidents, and deviations from management practices and operation and maintenance requirements.

The annual burden for this information collection averaged over the first 3 years of this ICR is estimated to total 6,064 labor hours per year at a cost of \$420,718 for the 427 area sources, with annualized capital costs of \$8,490 and no O&M costs. No new area sources are estimated during the next 3 years. These estimates represent the maximum burden that would be imposed by the final standards (based on a subcategorization using an annual metal melt production threshold of 20,000 tons for an existing affected source classified as a small foundry).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the

Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule would not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

For the purposes of assessing the impacts of the final rule on small entities, small entity is defined as: (1) A small business that meets the Small Business Administration size standards for small businesses found at 13 CFR 121.201 (less than 500 employees for NAICS codes 331511, 331512, and 331513); (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of the final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this final rule are iron and steel foundries that are area sources. We estimate that this rule will impact a total of 427 area source iron and steel foundries; 319 of these foundries are small entities based on employment. We estimate that 83 of these foundries are large iron and steel foundries (metal melt production greater than 20,000 tpy), and 344 foundries are small iron and steel foundries (metal melt production of 20,000 tpy or less). Approximately 45 percent of the large iron and steel foundries are owned by small entities whereas 85 percent of the small iron and steel foundries are owned by small entities. Our analysis shows that small entity compliance costs, as assessed by the foundry's cost-to-sales ratio, are expected to range from 0.01 to 2.3 percent. The analysis also shows that of the 30 existing foundries owned by small entities subject to the requirements for large foundries (i.e., exceeding 20,000 tpy melt production),

no small entity will incur economic impacts exceeding 3 percent of its revenue and only one small entity will incur economic impacts exceeding 2 percent of its revenue.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has nonetheless tried to reduce the impact of this rule on small entities. This final rule minimizes the impact on small entities by applying special provisions for small foundries that melt low quantities of metal (less than 20,000 tpy). Small iron and steel foundries are required to prepare and follow pollution prevention management practices for metallic scrap and binder formulations, submit one-time notifications, monitor their metal melting rate on a monthly basis, report deviations if they occur, and keep certain records. Although this final rule contains requirements for new area sources, we are not specifically aware of any new area sources being constructed now or planned in the next 3 years, and consequently, we did not estimate any impacts for new sources.

### D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must

provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. This final rule is not expected to impact State, local, or tribal governments. Thus, this final rule is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has determined that this final rule contains no regulatory requirements that might significantly or uniquely affect small governments. This final rule contains no requirements that apply to such governments, and imposes no obligations upon them.

### E. Executive Order 13132: Federalism

Executive Order 13132 entitled "Federalism" (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final rule does not impose any requirements on State and local governments. Thus, Executive Order 13132 does not apply to this final rule.

### F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175 entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of

regulatory policies that have tribal implications.” This final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. This final rule imposes no requirements on tribal governments. Thus, Executive Order 13175 does not apply to this rule.

#### G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045, “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be “economically significant” as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to the Executive Order because it is based on technology performance and not on health or safety risks.

#### H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This final rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this final rule is not likely to have any adverse energy effects because energy requirements will not be significantly impacted by the additional pollution controls or other equipment that are required by this final rule.

#### I. National Technology Transfer Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113, Section 12(d), 15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency does not use available and applicable VCS.

This final rule involves technical standards. The EPA cites the following standards: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 5, 5B, 5D, 5F, 5I, 9, 22, and 29 in 40 CFR part 60, appendix A; and EPA Method 9095B, “Paint Filter Liquids Test,” (revision 2, November 1994) (incorporated by reference—see § 63.14).

Consistent with the NTTAA, EPA conducted searches to identify VCS in addition to the EPA methods. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 5B, 5D, 5F, 9, 22, 29, or 9095B. The search and review results are in the docket for this rule.

One VCS was identified as applicable to this final rule. The standard ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see § 63.14) is cited in this final rule for its manual method for measuring the oxygen, carbon dioxide, and CO content of the exhaust gas. This part of ASME PTC 19.10–1981 is an acceptable alternative to EPA Method 3B.

The search for emissions measurement procedures identified 13 other VCS. EPA determined that these 13 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in this final rule were impractical alternatives to EPA test methods for the purposes of this final rule. Therefore, EPA is not adopting these standards for this purpose. The reasons for the determinations for the 13 methods are discussed in a memorandum in the docket for this final rule.

For the methods required or referenced by this final rule, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures under 40

CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions.

#### J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. The nationwide standards will reduce HAP emissions and thus decrease the amount of emissions to which all affected populations are exposed.

#### K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2). This final rule will be effective on January 2, 2008.

#### List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Incorporations by reference, Reporting and recordkeeping requirements.

Dated: December 14, 2007.

**Stephen L. Johnson,**  
Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

#### **PART 63—[AMENDED]**

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

#### **Subpart A—[AMENDED]**

■ 2. Section 63.14 is amended by revising paragraphs (i)(1) and (k)(1)(i) through (iv) to read as follows:

##### **§ 63.14 Incorporations by reference.**

\* \* \* \* \*

(i) \* \* \*

(1) ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],” IBR approved for §§ 63.309(k)(1)(iii), 63.865(b), 63.3166(a)(3), 63.3360(e)(1)(iii), 63.3545(a)(3), 63.3555(a)(3), 63.4166(a)(3), 63.4362(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), 63.9323(a)(3), 63.11148(e)(3)(iii), 63.11155(e)(3), 63.11162(f)(3)(iii) and (f)(4), 63.11163(g)(1)(iii) and (g)(2), 63.11410(j)(1)(iii), Table 5 to subpart DDDDD of this part, and Table 1 to subpart ZZZZZ of this part.

\* \* \* \* \*

(k) \* \* \*

(1) \* \* \*

(i) Method 0023A, “Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofuran Emissions from Stationary Sources,” dated December 1996, IBR approved for § 63.1208(b)(1) of Subpart EEE of this part.

(ii) Method 9071B, “n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples,” dated April 1998, IBR approved for § 63.7824(e) of Subpart FFFFF of this part.

(iii) Method 9095A, “Paint Filter Liquids Test,” dated December 1996, IBR approved for §§ 63.7700(b) and 63.7765 of Subpart EEEEE of this part.

(iv) Method 9095B, “Paint Filter Liquids Test,” (revision 2), dated November 2004, IBR approved for the definition of “Free organic liquids” in § 63.10692, § 63.10885(a)(1), and the definition of “Free liquids” in § 63.10906.

\* \* \* \* \*

■ 3. Part 63 is amended by adding subpart ZZZZZ to read as follows:

#### **Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources**

Sec.

##### **Applicability and Compliance Dates**

63.10880 Am I subject to this subpart?

63.10881 What are my compliance dates?

##### **Pollution Prevention Management Practices for New and Existing Affected Sources**

63.10885 What are my management practices for metallic scrap and mercury switches?

63.10886 What are my management practices for binder formulations?

##### **Requirements for New and Existing Affected Sources Classified as Small Foundries**

63.10890 What are my management practices and compliance requirements?

##### **Requirements for New and Existing Affected Sources Classified as Large Foundries**

63.10895 What are my standards and management practices?

63.10896 What are my operation and maintenance requirements?

63.10897 What are my monitoring requirements?

63.10898 What are my performance test requirements?

63.10899 What are my recordkeeping and reporting requirements?

63.10900 What parts of the General Provisions apply to my large foundry?

##### **Other Requirements and Information**

63.10905 Who implements and enforces this subpart?

63.10906 What definitions apply to this subpart?

##### **Tables to Subpart ZZZZZ of Part 63**

Table 1 to Subpart ZZZZZ of Part 63—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries

Table 2 to Subpart ZZZZZ of Part 63—Establishment of Operating Limits for New Affected Sources Classified as Large Foundries

Table 3 to Subpart ZZZZZ of Part 63—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries

Table 4 to Subpart ZZZZZ of Part 63—Compliance Certifications for New and Existing Affected Sources Classified as Large Foundries

#### **Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources**

##### **Applicability and Compliance Dates**

##### **§ 63.10880 Am I subject to this subpart?**

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of

hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to § 63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in § 63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

(d) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility’s metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility’s annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than 120 days after startup.

**§ 63.10881 What are my compliance dates?**

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by the dates in paragraphs (a)(1) through (3) of this section.

(1) Not later than January 2, 2009 for the pollution prevention management practices for metallic scrap in § 63.10885(a) and binder formulations in § 63.10886.

(2) Not later than January 4, 2010 for the pollution prevention management practices for mercury in § 63.10885(b).

(3) Except as provided in paragraph (d) of this section, not later than 2 years after the date of your large foundry's notification of the initial determination required in § 63.10880(f) for the standards and management practices in § 63.10895.

(b) If you have a new affected source for which the initial startup date is on or before January 2, 2008, you must achieve compliance with the provisions of this subpart not later than January 2, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after January 2, 2008, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) Following the initial determination for an existing affected source required in § 63.10880(f),

(1) Beginning January 1, 2010, if the annual metal melt production of your small foundry exceeds 20,000 tons during the preceding calendar year, you must submit a notification of foundry reclassification to the Administrator within 30 days and comply with the requirements in paragraphs (d)(1)(i) or (ii) of this section, as applicable.

(i) If your small foundry has never been classified as a large foundry, you must comply with the requirements for a large foundry no later than 2 years after the date of your foundry's notification that the annual metal melt production exceeded 20,000 tons.

(ii) If your small foundry had previously been classified as a large foundry, you must comply with the requirements for a large foundry no later than the date of your foundry's most recent notification that the annual metal melt production exceeded 20,000 tons.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry, even if your annual metal melt production falls

below 20,000 tons. After 3 years, you may reclassify your facility as a small foundry provided your annual metal melt production for the preceding calendar year was 20,000 tons or less. If you reclassify your large foundry as a small foundry, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a small foundry no later than the date you notify the Administrator of the reclassification. If the annual metal melt production exceeds 20,000 tons during a subsequent year, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the date you notify the Administrator of the reclassification.

(e) Following the initial determination for a new affected source required in § 63.10880(g),

(1) If you increase the annual metal melt capacity of your small foundry to exceed 10,000 tons, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the startup date for the new equipment, if applicable, or the date of issuance for your revised State or Federal operating permit.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry. After 3 years, you may reclassify your facility as a small foundry provided your most recent annual metal melt capacity is 10,000 tons or less. If you reclassify your large foundry as a small foundry, you must notify the Administrator within 30 days and comply with the requirements for a small foundry no later than the date your melting equipment was removed or taken out of service, if applicable, or the date of issuance for your revised State or Federal operating permit.

**Pollution Prevention Management Practices for New and Existing Affected Sources****§ 63.10885 What are my management practices for metallic scrap and mercury switches?**

(a) *Metallic scrap management program.* For each segregated metallic scrap storage area, bin or pile, you must comply with the materials acquisition requirements in paragraph (a)(1) or (2) of this section. You must keep a copy of the material specifications onsite and

readily available to all personnel with material acquisition duties, and provide a copy to each of your scrap providers. You may have certain scrap subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section at your facility provided the metallic scrap remains segregated until charge make-up.

(1) *Restricted metallic scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. For the purpose of this subpart, "free liquids" is defined as material that fails the paint filter test by EPA Method 9095B, "Paint Filter Liquids Test" (revision 2), November 2004 (incorporated by reference—see § 63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

(2) *General iron and steel scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum the information specified in paragraph (a)(2)(i) or (ii) of this section.

(i) Except as provided in paragraph (a)(2)(ii) of this section, specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(ii) For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, specifications for metallic scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastics, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment.

For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the Administrator for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. The Administrator or delegated authority may change the approval status of the plan upon 90-days written notice based upon the semiannual report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from the scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers motor vehicle

scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section.

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap supplier to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the Administrator that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregate form and does not have to be submitted for each shipment. The Administrator may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that

you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Mercury Switch Recovery Program and the State of Maine Mercury Switch Removal Program are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status and maintain records of documentation that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

**§ 63.10886 What are my management practices for binder formulations?**

For each furfuryl alcohol warm box mold or core making line at a new or existing iron and steel foundry, you must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system.

**Requirements for New and Existing Affected Sources Classified as Small Foundries**

**§ 63.10890 What are my management practices and compliance requirements?**

(a) You must comply with the pollution prevention management practices for metallic scrap and mercury switches in § 63.10885 and binder formulations in § 63.10886.

(b) You must submit an initial notification of applicability according to § 63.9(b)(2).

(c) You must submit a notification of compliance status according to § 63.9(h)(1)(i). You must send the notification of compliance status before the close of business on the 30th day after the applicable compliance date specified in § 63.10881. The notification must include the following compliance certifications, as applicable:

(1) "This facility has prepared, and will operate by, written material specifications for metallic scrap according to § 63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to § 63.10885(a)(2)."

(2) "This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to § 63.10885(b)(1) and/or "This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator according to § 63.10885(b)(2) and has prepared a plan for participation in the EPA-approved program according to § 63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with § 63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with § 63.10885(b)(4)."

(3) "This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to § 63.10886."

(d) As required by § 63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement,

maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(e) You must maintain records of the information specified in paragraphs (e)(1) through (7) of this section according to the requirements in § 63.10(b)(1).

(1) Records supporting your initial notification of applicability and your notification of compliance status according to § 63.10(b)(2)(xiv).

(2) Records of your written materials specifications according to § 63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in § 63.10885(a)(1) and/or for the use of general scrap in § 63.10885(a)(2) and for mercury in § 63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with § 63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(3) If you are subject to the requirements for a site-specific plan for mercury switch removal under § 63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under § 63.10885(b)(1)(ii)(C). You must identify which option in paragraph § 63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (f) of this section.

(4) If you are subject to the option for approved mercury programs under § 63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records

identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(5) Records to document use of binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by § 63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(6) Records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provides information on the binder or coating materials used.

(7) Records of metal melt production for each calendar year.

(f) You must submit semiannual compliance reports to the Administrator according to the requirements in § 63.10(e). The report must clearly identify any deviation from the pollution prevention management practices in §§ 63.10885 or 63.10886 and the corrective action taken.

(g) You must submit a written notification to the Administrator of the initial classification of your facility as a small foundry as required in § 63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in § 63.10881(d)(1) or (e), as applicable.

(h) Following the initial determination for an existing affected source as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, you must comply with the requirements for large foundries by the applicable dates in § 63.10881(d)(1)(i) or (d)(1)(ii). Following the initial determination for a new affected source as a small foundry, if you increase the annual metal melt capacity to exceed 10,000 tons, you must comply with the requirements for a large foundry by the applicable dates in § 63.10881(e)(1).

(i) You must comply with the following requirements of the General Provisions (40 CFR part 63, subpart A): §§ 63.1 through 63.5; § 63.6(a), (b), (c), and (e)(1); § 63.9; § 63.10(a), (b)(1), (b)(2)(xiv), (b)(3), (d)(1), (d)(4), and (f); and §§ 63.13 through 63.16. Requirements of the General Provisions not cited in the preceding sentence do

not apply to the owner or operator of a new or existing affected source that is classified as a small foundry.

### **Requirements for New and Existing Affected Sources Classified as Large Iron and Steel Foundries**

#### **§ 63.10895 What are my standards and management practices?**

(a) If you own or operate an affected source that is a large foundry as defined in § 63.10906, you must comply with the pollution prevention management practices in §§ 63.10885 and 63.10886, the requirements in paragraphs (b) through (e) of this section, and the requirements in §§ 63.10896 through 63.10900.

(b) You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(c) You must not discharge to the atmosphere emissions from any metal melting furnace or group of all metal melting furnaces that exceed the applicable limit in paragraph (c)(1) or (2) of this section. When an alternative emissions limit is provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limit is used to demonstrate compliance.

(1) For an existing iron and steel foundry, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged.

(2) For a new iron and steel foundry, 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged.

(d) If you own or operate a new affected source, you must comply with each control device parameter operating limit in paragraphs (d)(1) and (2) of this section that applies to you.

(1) For each wet scrubber applied to emissions from a metal melting furnace, you must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) For each electrostatic precipitator applied to emissions from a metal melting furnace, you must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test.

(e) If you own or operate a new or existing iron and steel foundry, you must not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent.

#### **§ 63.10896 What are my operation and maintenance requirements?**

(a) You must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in § 63.10895. You must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information:

(1) General facility and contact information;

(2) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;

(3) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in § 63.10897(d)(2).

(4) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and

(5) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.

(b) You may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph (a)(1) through (5) of this section to demonstrate compliance with the requirements for an O&M plan.

#### **§ 63.10897 What are my monitoring requirements?**

(a) You must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. You must conduct each initial inspection no later than 60 days after your applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, you must conduct an initial inspection prior to startup of the control device. Following the initial inspections, you must perform periodic inspections and maintenance of each PM control device



for a metal melting furnace at an existing affected source. You must perform the initial and periodic inspections according to the requirements in paragraphs (a)(1) through (4) of this section. You must record the results of each initial and periodic inspection and any maintenance action in the logbook required in § 63.10899(b)(13).

(1) For the initial inspection of each baghouse, you must visually inspect the system ductwork and baghouse units for leaks. You must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, you must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) You must conduct monthly visual inspections of the system ductwork for leaks.

(ii) You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. You must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) You must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and

that water flow is present. You must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) You must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, you must verify the presence of water flow to the scrubber. You must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, you must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the presence of water flow to the scrubber.

(ii) You must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.

(iii) You must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

(b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, you must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.

(c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, you must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If you own or operate an existing affected source, you may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If you own or operate a new affected source, you must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. You must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

(i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

(iii) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, you also must adjust the alarm delay time.

(v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.

(vi) For negative pressure baghouses, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(vii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) You must prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in your O&M plan. You must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. You must record the date and time of each valid alarm, the time you initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse department.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(e) You must make monthly inspections of the equipment that is important to the performance of the

total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). You must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) You must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements.

(g) In the event of an exceedance of an established emissions limitation (including an operating limit), you must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the exceedance. You must record the date and time correction action was initiated, the correction action taken, and the date corrective action was completed.

(h) If you choose to comply with an emissions limit in § 63.10895(c) using emissions averaging, you must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of metal melted from the group of all metal melting furnaces at your foundry. You must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in § 63.10898(d) and (e).

#### **§ 63.10898 What are my performance test requirements?**

(a) You must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in § 63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in § 63.10895(e). You must conduct the test within 180 days of your compliance date and report the results

in your notification of compliance status.

(1) If you own or operate an existing iron and steel foundry, you may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If you own or operate an existing iron and steel foundry and you choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, you must submit a written notification to the Administrator of your intent to use the previous test data no later than 60 days after your compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If you have an electric induction furnace equipped with an emissions control device at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If you have an uncontrolled electric induction furnace at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, you may install a temporary enclosure for the purpose of representative sampling of emissions. A

permanent enclosure and capture system is not required for the purpose of the performance test.

(b) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in § 63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) You must conduct each performance test according to the requirements in § 63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions ( $E_p$ ) for each test run using Equation 1 of this section:

$$E_p = \frac{C \times Q \times T}{P \times K} \quad (\text{Eq. 1})$$

Where:

$E_p$  = Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

$C$  = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

$Q$  = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

$T$  = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

$P$  = Total amount of metal charged during the test run, tons; and

$K$  = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in § 63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at your iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_c = \frac{\sum_{i=1}^n (E_{pi} \times T_{ii})}{\sum_{i=1}^n T_{ii}} \quad (\text{Eq. 2})$$

Where:

$E_c$  = The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

$E_{pi}$  = Process-weighted mass emissions of PM or total metal HAP for individual emission unit  $i$  as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

$T_{ii}$  = Total tons of metal charged for individual emission unit  $i$  for the

$$\% \text{ reduction} = \frac{E_i - E_o}{E_i} \times 100\% \quad (\text{Eq. 3})$$

Where:

$E_i$  = Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

$E_o$  = Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total

calendar month prior to the performance test, tons; and

$n$  = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, you may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, you must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in § 63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, you may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p1\text{released}} = E_{p1i} \times \left( 1 - \frac{\% \text{ reduction}}{100} \right) \quad (\text{Eq. 4})$$

Where:

$E_{p1\text{released}}$  = Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

$E_{p1i}$  = Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, you must submit a site-specific test plan to the Administrator

for approval according to the requirements in § 63.7(c)(2) and (3).

(h) You must conduct each opacity test for fugitive emissions according to the requirements in § 63.6(h)(5) and Table 1 to this subpart.

(i) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in § 63.10895(e) no less frequently than every 6 months and each time you make

a process change likely to increase fugitive emissions.

(j) In your performance test report, you must certify that the capture system operated normally during the performance test.

(k) You must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) You may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if you meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in § 63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

**§ 63.10899 What are my recordkeeping and reporting requirements?**

(a) As required by § 63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(b) In addition to the records required by 40 CFR 63.10, you must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) You must keep records of your written materials specifications according to § 63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in § 63.10885(a)(1) and/or for the use of general scrap in § 63.10885(a)(2) and for mercury in § 63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with § 63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If you are subject to the requirements for a site-specific plan for mercury under § 63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed,

and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under § 63.10885(b)(1)(ii)(C). You must identify which option in § 63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If you are subject to the option for approved mercury programs under § 63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program.

(4) You must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by § 63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(5) You must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.

(6) You must keep records of monthly metal melt production for each calendar year.

(7) You must keep a copy of the operation and maintenance plan as required by § 63.10896(a) and records that demonstrate compliance with plan requirements.

(8) If you use emissions averaging, you must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total

metal HAP per ton of metal melted for the group of all metal melting furnaces required by § 63.10897(h).

(9) If applicable, you must keep records for bag leak detection systems as follows:

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(10) You must keep records of capture system inspections and repairs as required by § 63.10897(e).

(11) You must keep records demonstrating conformance with your specifications for the operation of CPMS as required by § 63.10897(f).

(12) You must keep records of corrective action(s) for exceedances and excursions as required by § 63.10897(g).

(13) You must record the results of each inspection and maintenance required by § 63.10897(a) for PM control devices in a logbook (written or electronic format). You must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.

(i) The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.

(ii) The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed on the electrostatic precipitator.

(iii) The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.

(c) You must submit semiannual compliance reports to the Administrator according to the requirements in § 63.10(e). The reports must include, at a minimum, the following information as applicable:

(1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as

applicable, and the corrective action taken;

(2) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

(3) Summary information on any deviation from the pollution prevention management practices in §§ 63.10885 and 63.10886 and the operation and maintenance requirements § 63.10896 and the corrective action taken.

(d) You must submit written notification to the Administrator of the initial classification of your new or existing affected source as a large iron and steel facility as required in § 63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in § 63.10881(d) or (e), as applicable.

**§ 63.10900 What parts of the General Provisions apply to my large foundry?**

(a) If you own or operate a new or existing affected source that is classified as a large foundry, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 of this subpart.

(b) If you own or operator a new or existing affected source that is classified as a large foundry, your notification of compliance status required by § 63.9(h) must include each applicable certification of compliance, signed by a responsible official, in Table 4 of this subpart.

**Other Requirements and Information**

**§ 63.10905 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9).

(3) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f). A "major change to test method" is defined in § 63.90.

(4) Approval of a major change to monitoring under § 63.8(f). A "major change to monitoring" under is defined in § 63.90.

(5) Approval of a major change to recordkeeping and reporting under § 63.10(f). A "major change to recordkeeping/reporting" is defined in § 63.90.

(6) Approval of a local, State, or national mercury switch removal program under § 63.10885(b)(2).

**§ 63.10906 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section.

*Annual metal melt capacity* means the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

*Annual metal melt production* means the quantity of metal melted in a metal melting furnace or group of all metal melting furnaces at the iron and steel foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis on the quantity of metal charged to each metal melting furnace; the sum of the metal melt production for each furnace in a given calendar year is the annual metal melt production of the foundry.

*Bag leak detection system* means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other

effect to continuously monitor relative particulate matter loadings.

*Binder chemical* means a component of a system of chemicals used to bind sand together into molds, mold sections, and cores through chemical reaction as opposed to pressure.

*Capture system* means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: Duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

*Chlorinated plastics* means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

*Control device* means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by a metal melting furnace.

*Cupola* means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

*Deviation* means any instance in which an affected source or an owner or operator of such an affected source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), management practice, or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or

(3) Fails to meet any emissions limitation (including operating limits) or management standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Electric arc furnace* means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

*Electric induction furnace* means a vessel in which forms of iron and steel

such as scrap and foundry returns are melted through resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

*Exhaust stream* means gases emitted from a process through a conveyance as defined in this subpart.

*Foundry operations* mean all process equipment and practices used to produce metal castings for shipment. *Foundry operations* include: Mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding, and other metal finishing operations; and sand handling.

*Free liquids* means material that fails the paint filter liquids test by EPA Method 9095B, Revision 2, November 1994 (incorporated by reference—see § 63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free liquids*.

*Fugitive emissions* means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. *Fugitive emissions* include pollutants released to the atmosphere through windows, doors, vents, or other building openings. *Fugitive emissions* also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source.

*Furfuryl alcohol warm box mold or core making line* means a mold or core making line in which the binder chemical system used is that system commonly designated as a furfuryl alcohol warm box system by the foundry industry.

*Iron and steel foundry* means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with

nonferrous metal production are not included in this definition.

*Large foundry* means, for an existing affected source, an iron and steel foundry with an annual metal melt production greater than 20,000 tons. For a new affected source, *large foundry* means an iron and steel foundry with an annual metal melt capacity greater than 10,000 tons.

*Mercury switch* means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

*Metal charged* means the quantity of scrap metal, pig iron, metal returns, alloy materials, and other solid forms of iron and steel placed into a metal melting furnace. Metal charged does not include the quantity of fluxing agents or, in the case of a cupola, the quantity of coke that is placed into the metal melting furnace.

*Metal melting furnace* means a cupola, electric arc furnace, electric induction furnace, or similar device that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

*Mold or core making line* means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making greensand molds or cores.

*Motor vehicle* means an automotive vehicle not operated on rails and usually is operated with rubber tires for use on highways.

*Motor vehicle scrap* means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers, or other components that do not contain mercury switches.

*Nonferrous metal* means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent in percent by weight.

*On blast* means those periods of cupola operation when combustion

(blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

*Responsible official* means responsible official as defined in § 63.2.

*Scrap preheater* means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

*Scrap provider* means the person (including a broker) who contracts directly with an iron and steel foundry to provide motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a foundry are not *scrap providers*.

*Scrubber blowdown* means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH.

*Small foundry* means, for an existing affected source, an iron and steel foundry that has an annual metal melt production of 20,000 tons or less. For a new affected source, *small foundry* means an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less.

*Total metal HAP* means, for the purposes of this subpart, the sum of the concentrations of compounds of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A-8). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

**Tables to Subpart ZZZZZ of Part 63**

TABLE 1 TO SUBPART ZZZZZ OF PART 63.—PERFORMANCE TEST REQUIREMENTS FOR NEW AND EXISTING AFFECTED SOURCES CLASSIFIED AS LARGE FOUNDRIES

[As required in § 63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table]

For . . .	You must . . .	According to the following requirements. . .
<p>1. Each metal melting furnace subject to a PM or total metal HAP limit in § 63.10895(c).</p>	<p>a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A).</p> <p>b. Determine volumetric flow rate of the stack gas using Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A).</p> <p>c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40 CFR part 60, appendix A).<sup>1</sup></p> <p>d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, appendix A).</p> <p>e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A).</p>	<p>Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.</p> <p>i. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.</p> <p>ii. For Method 29, only the measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP.</p> <p>iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test.</p> <p>iv. For cupola metal melting furnaces, sample PM or total metal HAP only during times when the cupola is on blast.</p> <p>v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping.</p> <p>vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. You must compute the process-weighted mass emissions of PM according to Equation 1 of § 63.10898(d) for an individual furnace or Equation 2 of § 63.10898(e) for the group of all metal melting furnaces at the foundry.</p>
<p>2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in § 63.10895(e).</p>	<p>a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A-4) and 40 CFR 63.6(h)(5).</p>	<p>i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.</p> <p>ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.</p>

TABLE 1 TO SUBPART ZZZZZ OF PART 63.—PERFORMANCE TEST REQUIREMENTS FOR NEW AND EXISTING AFFECTED SOURCES CLASSIFIED AS LARGE FOUNDRIES—Continued

[As required in § 63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table]

For . . .	You must . . .	According to the following requirements. . .
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A–7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A–4).	i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.

<sup>1</sup> You may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see § 63.14).

TABLE 2 TO SUBPART ZZZZZ OF PART 63.—PROCEDURES FOR ESTABLISHING OPERATING LIMITS FOR NEW AFFECTED SOURCES CLASSIFIED AS LARGE FOUNDRIES

[As required in § 63.10898(k), you must establish operating limits using the procedures in the following table]

For . . .	You must . . .
1. Each wet scrubber subject to the operating limits in § 63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in § 63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in § 63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in § 63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

TABLE 3 TO SUBPART ZZZZZ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO NEW AND EXISTING AFFECTED SOURCES CLASSIFIED AS LARGE FOUNDRIES

[As required in § 63.10900(a), you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes.	Subpart ZZZZZ specifies applicability and performance test dates.
63.2	Definitions	Yes.	
63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities	Yes.	
63.5	Construction/reconstruction	Yes.	
63.6(a)–(g)	Compliance with standards and maintenance requirements.	Yes.	
63.6(h)	Opacity and visible emissions standards	Yes.	
63.6(i)(i)–(j)	Compliance extension and Presidential compliance exemption.	Yes.	
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes.	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4).	Monitoring requirements	Yes.	
63.8(a)(4)	Additional monitoring requirements for control devices in § 63.11.	No.	
63.8(c)(4)	Continuous monitoring system (CMS) requirements.	No.	
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures.	No.	
63.8(g)(5)	Data reduction	No.	



TABLE 3 TO SUBPART ZZZZZ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO NEW AND EXISTING AFFECTED SOURCES CLASSIFIED AS LARGE FOUNDRIES—Continued

[As required in § 63.10900(a), you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to large foundry?	Explanation
63.9	Notification requirements	Yes.	
63.10(a), (b)(1)–(b)(2)(xii) –(b)(2)(xiv), (b)(3), (d)(1)–(2), (e)(1)–(2), (f).	Recordkeeping and reporting requirements.	Yes.	
63.10(c)(1)–(6), (c)(9)–(15)	Additional records for continuous monitoring systems.	No.	
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS.	Yes.	
63.10(d)(3)	Reporting opacity or visible emissions observations.	Yes.	
63.10(e)(3)	Excess emissions reports	Yes.	
63.10(e)(4)	Reporting COMS data	No.	
63.11	Control device requirements	No.	
63.12	State authority and delegations	Yes.	
63.13–63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions.	Yes.	

TABLE 4 TO SUBPART ZZZZZ OF PART 63.—COMPLIANCE CERTIFICATIONS FOR NEW AND EXISTING AFFECTED SOURCES CLASSIFIED AS LARGE IRON AND STEEL FOUNDRIES

[As required by § 63.10900(b), your notification of compliance status must include certifications of compliance according to the following table.]

For . . .	Your notification of compliance status required by § 63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in § 63.10885(a)(1) and/or (2).	“This facility has prepared, and will operate by, written material specifications for metallic scrap according to § 63.10885(a)(1)” and/or “This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to § 63.10885(a)(2).”
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in § 63.10885(b).	“This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to § 63.10885(b)(1)” and/or “This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to § 63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to § 63.10885(b)(2)(iv)” and/or “The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with § 63.10885(b)(3) which are not reasonably expected to contain mercury switches” and/or “This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with § 63.10885(b)(4).”
Each new or existing affected source classified as a large foundry and subject to § 63.10886.	“This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to § 63.10886.”
Each new or existing affected source classified as a large foundry and subject to § 63.10895(b).	“This facility operates a capture and collection system for each emissions source subject to this subpart according to § 63.10895(b).”
Each existing affected source classified as a large foundry and subject to § 63.10895(c)(1).	“This facility complies with the PM or total metal HAP emissions limit in § 63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with § 63.10898(a)(1).”
Each new or existing affected source classified as a large foundry and subject to § 63.10896(a).	“This facility has prepared and will operate by an operation and maintenance plan according to § 63.10896(a).”
Each new or existing (if applicable) affected source classified as a large foundry and subject to § 63.10897(d).	“This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to § 63.10897(d)(2).”