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National Emissions Standards for Hazardous Air Pollutants From Secondary Lead Smelting; Final Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2011–0344; FRL–9610–9]

RIN 2060–AQ68

National Emissions Standards for Hazardous Air Pollutants From Secondary Lead Smelting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes the residual risk and technology review conducted for the secondary lead smelting source category regulated under national emission standards for hazardous air pollutants. These final amendments include revisions to the emissions limits for lead compounds; revisions to the standards for fugitive emissions; the addition of total hydrocarbon and dioxin and furan emissions limits for reverberatory and electric furnaces; the addition of a work practice standard for mercury emissions; the modification and addition of testing and monitoring, recordkeeping, and reporting requirements; related notifications; and revisions to the regulatory provisions related to emissions during periods of startup, shutdown, and malfunction.

DATES: This final action is effective on January 5, 2012. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of January 5, 2012.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2011–0344. All documents in the docket are listed on the *http://www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet, and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov,* or in hard copy at the EPA Docket Center, EPA West Building, Room Number 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Mr. Nathan Topham, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–0483; fax number: (919) 541–3207; and email address: *topham.nathan@epa.gov.* For additional contact information, see the following **SUPPLEMENTARY INFORMATION** section.

SUPPLEMENTARY INFORMATION: For specific information regarding the risk assessment and exposure modeling methodology, contact Dr. Michael Stewart, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Air Toxics Assessment Group (C504–06), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number: (919) 541–7524; fax number: (919) 541–0840; and email address: *stewart.michael@epa.gov.* For information about the applicability of this NESHAP to a particular entity, contact the appropriate person listed in Table 1 to this preamble.

TABLE 1—LIST OF EPA CONTACTS FOR THE NESHAP ADDRESSED IN THIS ACTION

NESHAP for	OECA contact [a]	OAQPS contact [b]
Secondary Lead Smelting	Maria Malave, (202) 564–7027, *malave.maria@epa.gov.*	Nathan Topham, (919) 541–0483, *topham.nathan@epa.gov.*

[a] EPA's Office of Enforcement and Compliance Assurance.
[b] EPA's Office of Air Quality Planning and Standards.

Acronyms and Abbreviations. The following acronyms and abbreviations are used in this document.

CAA Clean Air Act
CBI confidential business information
CDX Central Data Exchange
CEMS continuous emission monitoring system
CPMS continuous parameter monitoring system
D/F dioxins and furans
ERT Electronic Reporting Tool
HAP hazardous air pollutants
HQ hazard quotient
ICR information collection request
lbs/yr pounds per year
MACT maximum achievable control technology
MIR maximum individual risk
NAAQS National Ambient Air Quality Standards
NESHAP National Emission Standards for Hazardous Air Pollutants
ng/dscm nanograms per dry standard cubic meter
NTTAA National Technology Transfer and Advancement Act
OP Office of Policy
ppbv parts per billion by volume
ppbw parts per billion by weight
ppmv parts per million by volume
ppmw parts per million by weight
REL recommended exposure limit
RFA Regulatory Flexibility Act
RIA Regulatory Impact Analysis
RIN Regulatory Information Number
RTR Risk and Technology Review
SRF short rotary furnace
TEF toxic equivalency factor
TEQ toxic equivalency quotient
THC total hydrocarbons
TTN Technology Transfer Network
UMRA Unfunded Mandates Reform Act
UPL upper prediction limit
WWW World Wide Web

Background Information Document. On May 19, 2011 (76 FR 29032), the EPA proposed revisions to the Secondary Lead Smelting NESHAP based on evaluations performed by the EPA in order to conduct our risk and technology review. In this action, we are finalizing decisions and revisions for the rule. Some of the significant comments and our responses are summarized in this preamble. A summary of the public comments on the proposal not presented in the preamble, and the EPA's responses to those comments, is available in Docket ID No. EPA–HQ–OAR–2011–0344. A tracked changes version of the regulatory language that incorporates the changes in this action is available in the docket.

Organization of This Document. The following outline is provided to aid in locating information in the preamble.

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I. General Information

A. Does this action apply to me?

Regulated Entities. Categories and entities potentially regulated by this action are shown in Table 2 of this preamble.

TABLE 2—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and source category	NAICS [a] Code	MACT [b] Code
Secondary Lead Smelting	331492	0205

[a] North American Industry Classification System.
[b] Maximum Achievable Control Technology.

Table 2 of this preamble is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility would be affected, you should examine the applicability criteria in the appropriate NESHAP. As defined in the source category listing report published by the EPA in 1992, the Secondary Lead Smelting source category is defined as any facility at which lead-bearing scrap materials (including, but not limited to lead acid batteries) are recycled by smelting into elemental lead or lead alloys.[1] For clarification purposes, all reference to lead emissions in this preamble means ''lead compounds'' (which is a hazardous air pollutant) and all reference to lead production means elemental lead (which is not a hazardous air pollutant) as provided under CAA section 112(b)(7).

If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in Table 1 of this preamble in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What is the affected source?

The final rule applies to owners and operators of secondary lead smelters. The affected source for this subpart is any of the following sources at a secondary lead smelter: Blast, reverberatory, rotary, and electric furnaces; refining kettles; agglomerating furnaces; dryers; process fugitive emissions sources; buildings containing lead bearing materials; and fugitive dust sources. A new affected source is any affected source at a secondary lead smelting facility of which the construction or reconstruction commenced after May 19, 2011. If components of an existing affected source are replaced such that the replacement meets the definition of reconstruction in 40 CFR 63.2 and the reconstruction commenced on or after May 19, 2011, then the existing source becomes a reconstructed source and is subject to the relevant standards for a new affected source. The reconstructed source must comply with the requirements for a new affected source upon initial startup of the reconstructed source, or by March 5, 2012, whichever is later.

C. 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 World Wide Web through the Technology Transfer Network (TTN). Following signature, a copy of the final action will be posted on the TTN's policy and guidance page for newly proposed and promulgated rules at the following address: *http://www.epa.gov/ttn/caaa/new.html.* The TTN provides information and technology exchange in various areas of air pollution control.

Additional information is available on the residual risk and technology review (RTR) web page at *http://www.epa.gov/ttn/atw/rrisk/rtrpg.html.* This information includes source category descriptions and detailed emissions and other data that were used as inputs to the risk assessments.

D. Judicial Review

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by March 5, 2012. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that ''[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review.'' This section 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, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania

[1] USEPA. Documentation for Developing the Initial Source Category List—Final Report, USEPA/OAQPS, EPA–450/3–91–030, July, 1992.

Ave. NW., Washington, DC 20460, with a copy to both the person(s) 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), U.S. EPA, 1200 Pennsylvania Ave. NW., Washington, DC 20460.

II. Background

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of hazardous air pollutants (HAP) from stationary sources. In the first stage, after the EPA has identified categories of sources emitting one or more of the HAP listed in CAA section 112(b), section 112(d) calls for us to promulgate NESHAP for those sources. ''Major sources'' are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any combination of HAP. For major sources, these technology-based standards must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts) and are commonly referred to as maximum achievable control technology (MACT) standards.

For MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as floor requirements and may not be based on cost considerations. See CAA section 112(d)(3). For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT, we must also consider control options that are more stringent than the floor, under CAA section 112(d)(2). We may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements. In promulgating MACT standards, CAA section 112(d)(2) directs us to consider the application of measures, processes, methods, systems, or techniques that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; and/or are design, equipment, work practice, or operational standards.

In the second stage of the regulatory process, we undertake two different analyses, as required by the CAA: section 112(d)(6) of the CAA calls for us to review these technology-based standards and to revise them ''as necessary (taking into account developments in practices, processes, and control technologies)'' no less frequently than every 8 years; and within 8 years after promulgation of the technology standards, CAA section 112(f) calls for us to evaluate the risk to public health remaining after application of the technology-based standards and to revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. In doing so, the EPA may adopt standards equal to existing MACT standards if the EPA determines that the existing standards are sufficiently protective. *NRDC* v. *EPA,* 529 F.3d 1077, 1083 (DC Cir. 2008).

On May 19, 2011, the EPA published a proposed rule in the **Federal Register** for the Secondary Lead Smelting NESHAP, 40 CFR part 63, subpart X that took into consideration the residual risk and technology review (RTR) analyses. Today's action provides the EPA's final determinations pursuant to the RTR provisions of CAA section 112 for the Secondary Lead Smelting source category, and also promulgates first-time standards under section 112 (d)(2) (MACT) for certain hazardous air pollutants emitted by secondary lead smelters. Specifically, we are taking the following actions:

- Revising some requirements of the NESHAP related to control of metal HAP emissions based on our risk assessment and technology reviews.
- Finalizing first-time total hydrocarbon (THC) and dioxin and furan (D/F) emissions limits and a plastic separation work practice standard to prevent dioxin formation.
- Finalizing work practice standards for mercury.
- Revising the requirements in the NESHAP related to emissions during periods of startup, shutdown, and malfunction (SSM).
- Incorporating the use of plain language into the rule.
- Addressing technical and editorial corrections in the rule.

III. Summary of the Final Rule

A. What are the final rule amendments for the Secondary Lead Smelting source category?

EPA promulgated the National Emission Standards for Hazardous Air Pollutant Emissions: Secondary Lead Smelting on June 13, 1997 (62 FR 32216). The standards are codified at 40 CFR part 63, subpart X. The secondary lead smelting industry consists of facilities that recycle lead-bearing scrap material, typically lead acid batteries, into elemental lead or lead alloys. The source category covered by this MACT standard currently includes 16 facilities, including one facility that is not currently operating and one facility that is in the process of being constructed.

This section describes the final amendments to the secondary lead smelting NESHAP.[2] These revisions include changes to the stack and fugitive metal HAP emission standards, the addition of new THC and D/F emission limits, the addition of a work practice standard to separate plastics from automotive batteries to prevent dioxin emissions, the addition of work practice standards to minimize mercury emissions, and changes to the requirements that apply during periods of startup, shutdown, and malfunction. In addition to these changes described below, we are making minor changes to the regulatory text to correct editorial errors and to make plain language revisions. We have evaluated the cost, emissions reductions, energy implications and cost effectiveness of all of the standards being promulgated in this final rule and have determined that these measures are cost effective, technically feasible and will provide the public with an ample margin of safety from exposure to emissions from the secondary lead smelter source category. See *Cost Impacts of the Revised NESHAP for the Secondary Lead Smelting Source Category,* which is available in the docket, for information on the costs and cost effectiveness of each of the standards being promulgated in this final rule.

1. Stack and Fugitive Metal HAP Emission Standards

For the reasons provided in Section IV.A of this preamble and in the support documents in the docket, we have determined that the risks associated with emissions from this source

[2] Note that the EPA is reprinting portions of the language from the 1997 NESHAP here so the entire rule appears in one place, for readers' convenience. The EPA is not amending, reopening or otherwise reconsidering these reprinted portions of the 1997 rule.

category are unacceptable primarily due to fugitive emissions of lead. We have further determined that there have been developments in practices, processes, and control technologies that warrant revisions to the MACT standard (*i.e.,* the standards promulgated pursuant to section 112(d)(2) and (3)) for this source category. Therefore, to satisfy the requirements of CAA sections 112(d)(6) and 112(f), we are revising the MACT standard to include:

• A facility wide, flow weighted average lead [3] emissions limit from stacks of 0.20 mg/dscm and an individual stack lead emissions limit of 1.0 mg/dscm for each stack at existing sources. For new sources, a lead emissions limit of 0.20 mg/dscm applies to each individual stack at a modified or ''greenfield'' new facility.

• A requirement for the facility to operate sources of fugitive lead emissions within total enclosures that are maintained under negative pressure and vented to a control device. These sources of fugitive emissions include the smelting furnaces, smelting furnace charging areas, lead taps, slag taps, molds during tapping, battery breakers, refining kettles, casting areas, dryers, material handling areas, and areas where dust from fabric filters, sweepings or used fabric filters are processed. The facilities are also required to adopt a list of specified work practice standards to minimize fugitive emissions.

2. Organic HAP Emissions Standards

To satisfy CAA sections 112(d)(2) and 112(d)(3), we are also revising the MACT standard to include first-time D/F and THC emission limits (with THC serving as a surrogate for non-dioxin organic HAP). These emission limits are summarized in Table 3 of this preamble.

TABLE 3—SUMMARY OF NEW THC AND D/F EMISSION LIMITS

Source type	D/F Emission limit [a]	THC Emission Limit [b]
New and Existing Collocated Blast and Reverberatory Furnaces	0.50	[c] 20
Existing Blast Furnaces	170	[c] 360
New Blast Furnaces	10	[c] 70
New and Existing Reverberatory and Electric Furnaces	1.0	12

[a] ng/dscm on a TEQ basis, corrected to 7 percent O_2.
[b] ppmv as propane, corrected to 4 percent CO_2.
[c] Emission limit is unchanged from 1997 NESHAP.

3. Startup, Shutdown, and Malfunction

The United States Court of Appeals for the District of Columbia Circuit vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of startup, shutdown, and malfunction (SSM). *Sierra Club* v. *EPA,* 551 F.3d 1019 (DC Cir. 2008), cert. denied, 130 S. Ct. 1735 (2010). Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), that was part of a regulation, commonly referred to as the ''General Provisions Rule'', that the EPA promulgated under CAA section 112. When incorporated into CAA section 112(d) regulations for specific source categories, these two provisions exempted sources from the requirement to comply with the otherwise applicable CAA section 112(d) emission standard during periods of SSM.

We have eliminated the SSM exemption for secondary lead smelting facilities in this rule. Consistent with *Sierra Club* v. *EPA,* the EPA has established standards in this rule for all periods of operation. We have also revised Table 1 to subpart X (the General Provisions table) in several respects. For example, we have eliminated that incorporation of the General Provisions' requirement that the source develop an SSM plan. We have also eliminated or revised certain recordkeeping and reporting that related to the SSM exemption. The EPA has attempted to ensure that we have not included in the regulatory language any provisions that are inappropriate, unnecessary, or redundant in the absence of the SSM exemption.

In establishing the standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has established different standards for non-dioxin organic HAP during those periods.

Information on periods of startup and shutdown in the industry indicate that lead emissions during these periods do not increase (consistent with our engineering judgment that lead emissions would not increase during these periods because lead-bearing feed is not being smelted during these periods). Furthermore, all lead-emitting processes are controlled by either control devices or work practices and these controls would not typically be affected by startup or shutdown. Therefore, the EPA is not adopting separate lead-emission standards for periods of startup and shutdown.[4]

The EPA has revised this final rule to require sources to meet a work practice standard that requires the development of standard operating procedures designed to minimize emissions of THC for each start-up and shutdown scenario anticipated for all units subject to THC limits. Temperature monitoring is the metric used to determine continuous compliance with emission standards for THC. This metric is inappropriate as a measure of the destruction efficiency of these organic pollutants during periods of startup and shutdown.

The EPA is not including a standard for dioxins and furans during periods of startup and shutdown. This is because dioxins and furans will not be emitted during those periods. During startup and shutdown, scrap feed materials (including chlorinated plastics and flame retardants) that contain the precursors needed for dioxin formation are not introduced into the smelter [5] so there are no conditions that could give rise to dioxin and furan emissions.

The EPA determined that it is not technically and economically feasible for units subject to THC limits to perform stack testing for this pollutant during periods of startup and shutdown due to technical and economic

[3] Throughout this preamble, all references to lead emissions means lead compounds as listed by Congress at section 112(b)(1) of the Act.

[4] Since startup and shutdown refers to the smelting process, and not to ancillary management activities, there are no startup and shutdown standards for process fugitive emissions since startup and shutdown do not occur for the activities generating such emissions.

[5] ''Shutdown'' is defined as a period ''when no lead bearing materials are being fed to the furnace and smelting operations have ceased * * *''. Section 63.542 (definition of ''shutdown'').

impracticality associated with testing secondary lead smelting furnaces during these periods. The furnaces are heated during periods of startup through slow feeding of natural gas and small amounts of coke, with no lead acid batteries fed to the furnace during these periods. Test crews would have to be on-site prior to a period of startup or shutdown occurring and may need to break up a single test over multiple startups or shutdowns, the length of which could vary depending on the type of secondary lead smelting furnace being tested, that would happen infrequently to gather enough data to complete a three-run test. See also section V.G of this preamble discussing these standards further.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a ''sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * *'' (40 CFR 63.2). The EPA has determined that CAA section 112 does not require that emissions that occur during periods of malfunction be factored into development of CAA section 112 standards. Under section 112, emissions standards for new sources must be no less stringent than the level ''achieved'' by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation ''achieved'' by the best performing 12 percent of sources in the category. There is nothing in section 112 that directs the agency to consider malfunctions in determining the level ''achieved'' by the best performing or best controlled sources when setting emission standards. Moreover, while the EPA accounts for variability in setting emissions standards consistent with the section 112 case law, nothing in that case law requires the agency to consider malfunctions as part of that analysis. Section 112 uses the concept of ''best controlled'' and ''best performing'' unit in defining the level of stringency that section 112 performance standards must meet. Applying the concept of ''best controlled'' or ''best performing'' to a unit that is malfunctioning presents significant difficulties, as malfunctions are sudden and unexpected events.

Further, accounting for malfunctions would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. As such, the performance of units that are malfunctioning is not ''reasonably'' foreseeable. See, *e.g., Sierra Club* v. *EPA,* 167 F. 3d 658, 662 (DC Cir. 1999) (EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem.) We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to ''invest the resources to conduct the perfect study''. See also, *Weyerhaeuser* v. *Costle,* 590 F.2d 1011, 1058 (DC Cir. 1978) (''In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties', such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation.''). In addition, the goal of a best-controlled or best-performing source is to operate in such a way as to avoid malfunctions of the source and accounting for malfunctions could lead to standards that are significantly less stringent than levels that are achieved by a well-performing non-malfunctioning source. The EPA's approach to malfunctions is consistent with CAA section 112 and is a reasonable interpretation of the statute. In section 3.2.1 of the separate response to comment document, we respond to comments that emissions during malfunctions should be accounted for in assessing risk pursuant to CAA section 112(f)(2).

In the event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, ''sudden, infrequent, not reasonably preventable'' and was not instead ''caused in part by poor maintenance or careless operation.'' 40 CFR 63.2 (definition of malfunction).

Finally, the EPA recognizes that even equipment that is properly designed and maintained can sometimes fail and that such failure can sometimes cause an exceedance of the relevant emission standard. (*See, e.g., State Implementation Plans: Policy Regarding Excessive Emissions During Malfunctions, Startup, and Shutdown (September 20, 1999); Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions* (February 15, 1983).) The EPA is therefore adding to the final rule an affirmative defense to civil penalties for exceedances of emission limits that are caused by malfunctions. See 40 CFR 63.542 (defining ''affirmative defense'' to mean, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding). We also have added other regulatory provisions to specify the elements that are necessary to establish this affirmative defense; the source must prove by a preponderance of the evidence that it has met all of the elements set forth in 63.552 (see 40 CFR 22.24). The criteria ensure that the affirmative defense is available only where the event that causes an exceedance of the emission limit meets the narrow definition of malfunction in 40 CFR 63.2 (sudden, infrequent, not reasonable preventable and not caused by poor maintenance and or careless operation). For example, to successfully assert the affirmative defense, the source must prove by a preponderance of the evidence that excess emissions ''[w]ere caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner * * *.'' The criteria also are designed to ensure that steps are taken to correct the malfunction, to minimize emissions in accordance with 40 CFR 63.552 and to prevent future malfunctions. For example, the source must prove by a preponderance of the evidence that ''[r]epairs were made as expeditiously as possible when the applicable emission limitations were being exceeded * * *'' and that ''[a]ll possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health * * *.'' In any judicial or administrative proceeding, the Administrator may challenge the assertion of the affirmative defense and, if the respondent has not met its burden of proving all of the requirements in the affirmative defense, appropriate penalties may be assessed in accordance with CAA section 113 (see also 40 CFR 22.27).

The EPA is including an affirmative defense in the final rule in an attempt to balance a tension, inherent in many types of air regulations, to ensure adequate compliance while simultaneously recognizing that despite the most diligent of efforts, emission limits may be exceeded under circumstances beyond the control of the source. The EPA must establish emission standards that ''limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis'' 42 U.S.C. 7602(k) (defining ''emission limitation and emission standard''). See generally *Sierra Club* v. *EPA,* 551 F.3d 1019, 1021 (DC Cir. 2008). Thus, the EPA is required to ensure that section 112 emissions limitations are continuous. The affirmative defense for malfunction events meets this requirement by ensuring that even where there is a malfunction, the emission limitation is still enforceable through injunctive relief. While ''continuous'' limitations, on the one hand, are required, there is also case law indicating that in many situations it is appropriate for the EPA to account for the practical realities of technology. For example, in *Essex Chemical* v. *Ruckelshaus,* 486 F.2d 427, 433 (DC Cir. 1973), the DC Circuit acknowledged that in setting standards under CAA section 111 ''variant provisions'' such as provisions allowing for upsets during startup, shutdown and equipment malfunction ''appear necessary to preserve the reasonableness of the standards as a whole and that the record does not support the 'never to be exceeded' standard currently in force.'' See also, *Portland Cement Association* v. *Ruckelshaus,* 486 F.2d 375 (DC Cir. 1973). Though intervening case law such as *Sierra Club* v. *EPA* and the CAA 1977 amendments undermine the relevance of these cases today, they support the EPA's view that a system that incorporates some level of flexibility is reasonable. The affirmative defense simply provides for a defense to civil penalties for excess emissions that are proven to be beyond the control of the source. By incorporating an affirmative defense, the EPA has formalized its approach to upset events. In a Clean Water Act setting, the Ninth Circuit required this type of formalized approach when regulating ''upsets beyond the control of the permit holder.'' *Marathon Oil Co.* v. *EPA,* 564 F.2d 1253, 1272–73 (9th Cir. 1977). But see *Weyerhaeuser Co.* v. *Costle,* 590 F.2d 1011, 1057–58 (DC Cir. 1978) (holding that an informal approach is adequate). The affirmative defense provisions give the EPA the flexibility to both ensure that its emission limitations are ''continuous'' as required by 42 U.S.C. 7602(k) and account for unplanned upsets and thus support the reasonableness of the standard as a whole.

B. What are the effective and compliance dates of the standards?

The revisions to the MACT standards being promulgated in this action are effective on January 5, 2012. For the MACT standards being addressed in this action, the compliance date for the revised SSM requirements is the effective date of the standards, January 5, 2012. The compliance date for existing sources for the revised stack lead emission limit and the revised fugitive emission standard including the requirement to adopt work practice standards and install total enclosures for specified process fugitive emission sources, and for the new D/F and THC emission limits, is 2 years from the effective date of the standard, January 6, 2014. New sources must comply with the all of the standards immediately upon the effective date of the standard, January 5, 2012, or upon startup, whichever is later.

C. What are the requirements for submission of performance test data to the EPA?

In this action, as a step to increase the ease and efficiency of data submittal and improve data accessibility, the EPA is requiring the electronic submittal of select performance test data. Specifically, the EPA is requiring owners and operators of secondary lead smelting facilities to submit electronic copies of performance test reports required under 40 CFR 63.543 to the EPA's WebFIRE database. The WebFIRE database was constructed to store performance test data for use in developing emission factors. A description of the WebFIRE database is available at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main.*

The EPA must have performance test data to conduct effective reviews of CAA sections 112 and 129 standards, as well as for many other purposes including compliance determinations, emission factor development, and annual emission rate determinations. In conducting these required reviews, the EPA has found it ineffective and time consuming, not only for us, but also for other regulatory agencies and for source owners and operators, to locate, collect, and submit performance test data because of varied locations for data storage and varied data storage methods. In recent years, though, stack testing firms have typically collected performance test data in electronic format, making it possible to move to an electronic data submittal system that would increase the ease and efficiency of data submittal and improve data accessibility.

One major advantage of submitting performance test data through the Electronic Reporting Tool (ERT) is a standardized method to compile and store much of the documentation required to be reported by this rule. Another advantage is that the ERT clearly states what testing information would be required. Another important benefit of submitting these data to the EPA at the time the source test is conducted is that it should substantially reduce the effort involved in data collection activities in the future. When the EPA has performance test data in hand, there will likely be fewer or less substantial data collection requests in conjunction with prospective required residual risk assessments or technology reviews. This results in a reduced burden on both affected facilities (in terms of reduced labor to respond to data collection requests) and the EPA (in terms of preparing and distributing data collection requests and assessing the results).

State, local, and tribal agencies can also benefit from a more streamlined and accurate review of electronic data submitted to them. The ERT allows for an electronic review process rather than a manual data assessment making review and evaluation of the data and calculations easier and more efficient.

As mentioned above, data entry will be through an electronic emissions test report structure called the Electronic Reporting Tool or ERT. The ERT will generate an electronic report which will be submitted using the Compliance and Emissions Data Reporting Interface (CEDRI). The submitted report is transmitted through the EPA's Central Data Exchange (CDX) network for storage in the WebFIRE database making submittal of data very straightforward and easy. A description of the ERT can be found at *http://www.epa.gov/ttn/chief/ert/index.html* and CEDRI can be accessed through the CDX Web site (*www.epa.gov/cdx*).

The requirement to submit performance test data electronically to the EPA does not create any additional performance testing and would apply only to those performance tests conducted using test methods that are supported by the ERT. The ERT contains a specific electronic data entry form for most of the commonly used EPA reference methods. A listing of the pollutants and test methods supported by the ERT is available at *http://*

www.epa.gov/ttn/chief/ert/index.html. We believe that industry will benefit from this new electronic data submittal requirement. Having these data, the EPA will be able to develop improved emission factors, make fewer information requests, and promulgate better regulations. The information to be reported is already required for the existing test methods and is necessary to evaluate the conformance to the test method.

Finally, another benefit of submitting data to WebFIRE electronically is that these data will greatly improve the overall quality of the existing and new emission factors by supplementing the pool of emissions test data for establishing emissions factors and by ensuring that the factors are more representative of current industry operational procedures. A common complaint heard from industry and regulators is that emission factors are outdated or not representative of a particular source category. With timely receipt and incorporation of data from most performance tests, the EPA will be able to ensure that emission factors, when updated, represent the most current range of operational practices. In summary, in addition to supporting regulation development, control strategy development, and other air pollution control activities, having an electronic database populated with performance test data will save industry, state, local, tribal agencies, and the EPA significant time, money, and effort while improving the quality of emission inventories and, as a result, air quality regulations.

IV. Summary of Significant Changes Since Proposal

A. Changes to the Risk Assessment Performed Under CAA Section 112(f)

In the proposed rulemaking, the EPA presented a number of options for additional controls on the Secondary Lead Smelting source category. In that notice, the EPA solicited comment on the proposed options as well as on all of the analyses and data upon which the options were based, including the risk methods and results presented in the draft document: *Residual Risk Assessment for the Secondary Lead Smelting Source Category.*

During the public comment period for the proposed rule, several parties submitted comments and suggested revisions regarding the emissions used for the risk assessment, and also submitted other information relevant to the risk assessment (see docket ID EPA–HQ–OAR–2011–0344 for all public comments). After considering these submissions, the EPA revised its analyses. Revised methods, model inputs, and risk results are presented in the report: *Residual Risk Assessment for the Secondary Lead Smelting Source Category,* which is available in the docket for this rulemaking. In addition, a discussion of the updated emissions information used in the final risk assessment can be found in the memorandum titled: *Development of the RTR Emissions Dataset for the Secondary Lead Smelting Source Category,* which can also be found in the docket for this rulemaking.

Considering the updated emissions information received during the public comment period for the proposed rule, our final risk analysis estimates that the primary NAAQS for lead, used in this rule as a measure of acceptable risk from air-borne lead emissions, could be exceeded at 9 of 15 facilities based on actual emissions, largely due to fugitive dust emissions (see Table 4). At these 9 facilities, fugitive dust emissions account for about 94 to 99 percent of the estimated 3-month maximum lead concentrations.[6] Our analysis also estimates that approximately 200 people live in areas around three of these facilities where 3-month maximum lead concentrations are estimated to be between one and three times above the lead NAAQS. Allowable stack emissions of lead also resulted in modeled concentrations exceeding the NAAQS, with modeled lead ambient air levels as high as 8 and 10 times above the NAAQS. This analysis also estimates that 3-month maximum lead concentrations from a secondary lead smelter could be up to about 20 times the NAAQS for lead based on actual emissions. The maximum lead exceedances at populated census block centroids were between one and three times the NAAQS. There is some uncertainty associated with the fugitive emissions estimates that is derived from the uncertainty involved in determining the housekeeping and enclosure factors. This uncertainty could have important impacts on the estimated fugitive emissions and the resulting modeled ambient concentration. For example, if the level of control assumed through the use of full enclosure and robust housekeeping were both increased from 75 percent to 85 percent, the estimated fugitive emissions at the RSR facility would be about 43 pounds (roughly three times lower than those estimated in this rule). If the level of control assumed through the use of full enclosure and robust housekeeping were both decreased from 75 percent to 65 percent, the estimated fugitive emissions at the RSR facility would be about 240 pounds (roughly two times higher than those estimated in this rule). As shown in this example, changing the estimates of control efficiency achieved with full enclosure and robust housekeeping practices by 10 percent each could impact the resulting fugitive emission estimates for facilities employing that level of control by two to three times. These estimates could significantly impact the resulting risk estimates since most of the impact of lead emissions was due to fugitive dust emissions. While there are uncertainties associated with estimating fugitive emissions, we conclude that the methodology used in this rulemaking provided reasonable estimates of fugitive emissions for these sources. For further details, see *Development of the RTR Emissions Dataset for the Secondary Lead Smelting Source Category,* available in docket ID EPA–HQ–OAR–2011–0344, which describes how we developed these fugitive emissions estimates and provides a presentation of our estimates compared to estimates submitted via the ICR and estimates reported to the TRI.

[6] For all facilities, the percent contribution of fugitive and stack emissions to modeled ambient lead concentrations has only been estimated for the model receptor representing the site of maximum lead impact.

TABLE 4—SECONDARY LEAD SMELTING FACILITY MODELED MAXIMUM AMBIENT LEAD CONCENTRATIONS CONSIDERING ACTUAL EMISSIONS [a]

[Rolling 3-month average values]

Facility name	City	State	Highest modeled lead concentration (μg/m³)	Concentration is X times the NAAQS
Doe Run Company-Buick Mill	Boss	MO	2.36	20
Sanders Lead Co	Troy	AL	2.16	10
Exide Corporation	Vernon	CA	1.14	8
Battery Recycling Co	Arecibo	PR	0.76	5
Gulf Coast Recycling, Inc	Tampa	FL	0.38	3
Exide Technologies–Canon Hollow Plant	Forest City	MO	0.47	3
Gopher Resource Corp	Eagan	MN	0.35	2
Frisco Battery Recycling	Frisco	TX	0.23	2
Exide Tech/Reading Smelter	Reading	PA	0.25	2
Quemetco, Inc	Industry	CA	0.17	1
Exide Technologies	Muncie	IN	0.15	1
Exide Technologies/B R Smelter	Baton Rouge	LA	0.14	1
Revere Smelting & Refining Corp	Middletown	NY	0.10	0.7
Quemetco, Inc	Indianapolis	IN	0.07	0.5
East Penn Mfg. Co Inc/Smelter Plt	Lyon Station	PA	0.02	0.1

[a] Values of 1 or less in the last column indicate that modeled lead concentrations are at or below the NAAQS for lead.

We also note that there were changes to our cancer, acute, and PB–HAP multipathway case study analyses (see section 3.4 of the risk assessment document) for non-lead HAP as a result of the updated risk assessment performed for the final rule. With respect to our updated cancer risk assessment, we estimate that the maximum individual risk (MIR) of cancer due to actual emissions is 50 in a million predominantly due to fugitive dust emissions of arsenic and cadmium as compared to the analysis at proposal of risk of 50 in a million but based on a different secondary lead facility. Moreover, approximately 700 people were estimated to have cancer risks above 10 in a million and approximately 80,000 people were estimated to have cancer risks above 1 in a million considering all facilities in this source category (as compared to the analysis at proposal of 1,500 above 10 in a million and 128,000 above 1 in a million). In addition, the MIR due to MACT allowable emissions remains 200 in a million predominantly from stack emissions of arsenic. The updated worst-case acute hazard quotient (HQ) value is 20 at two facilities (based on the REL for arsenic; the REL is the only available acute health benchmark value for arsenic and all other pollutants had HQ values less than or equal to 1), driven by both stack and fugitive dust emissions of arsenic (as compared to analysis at proposal of an acute HQ value of 30 based on the REL for arsenic at one facility driven by emissions from stacks). Finally, the risk assessment supporting the final rulemaking estimates that the cancer MIR values from both multipathway case study analyses (*i.e.,* in Frisco, TX and Middletown, NY; see section 3.2 of the final risk assessment document) are less than 1 in a million (as compared to an estimated multipathway MIR of 30 in a million and less than 1 in a million in the Frisco, TX and Middletown, NY multipathway case study analyses for the proposed rule). Notably, the reduction in multipathway risks resulted from updated emissions information received during the public comment period with respect to these facilities.

Taking into account all the results of the final risk assessment, and similar to the proposed rulemaking, we conclude that risks to public health due to emissions from this source category are unacceptable. Our conclusion is primarily based on risk from exposure to air-borne lead emissions but also considers other risk metrics such as cancer and non-cancer risks associated with actual and allowable stack emissions of non-lead HAPs, especially arsenic and cadmium. As mentioned above, actual lead emissions resulted in modeled concentrations of lead above the lead NAAQS at 9 of 15 facilities. Thus, we note that allowable stack emissions of lead and other HAP metals and fugitive emissions of lead must be reduced to assure that lead concentrations in ambient air beyond the facility fenceline are acceptable—that is, do not exceed the lead NAAQS (the measure of risk acceptability for exposure to air-borne lead in this rule). The fact that maximum individual cancer risks due to actual emissions are above 1 in a million also contributes to our determination of unacceptability, but to a lesser extent. While the estimated maximum individual cancer risks due to actual emissions would, by themselves, not generally lead us to a determination that risks are unacceptable, the fact that they occur along with the exceedences of the lead primary NAAQS adds to our concern about these exposures, and further supports our proposed determination that risks are unacceptable. To provide acceptable levels of risk with an ample margin of safety, we are finalizing the requirement that secondary lead smelting facilities must operate the following fugitive dust emissions sources within total enclosures that must be maintained at negative pressure at all times and vented to a control device designed to capture lead particulate: Smelting furnaces, smelting furnace charging areas, lead taps, slag taps, molds during tapping, battery breakers, refining kettles, casting areas, dryers, material handling areas managing lead bearing materials, and areas where dust from fabric filters, sweepings, or used fabric filters are processed. As further described in Section IV.C of this preamble, based on public comments, we are not adopting the proposed alternative to demonstrate compliance by monitoring lead at or near the property boundary based on a 3-month rolling average in lieu of constructing total enclosures. (See 76 FR 29056.) We are finalizing the proposed requirement for facilities to conduct fugitive emission work practices as well

as to enclose fugitive emission sources. As further described in Section IV.C of this preamble, we are also promulgating a revised list of required work practices based on a number of comments received regarding the necessity, efficacy, and safety of the work practices which the EPA proposed.

We are also finalizing the proposed requirement limiting stack lead emissions to 0.2 mg/dscm as a facility-wide emissions average and limiting stack lead emissions from any single stack to 1.0 mg/dscm.

After implementation of the controls required in this final rule, we estimate that there will be no one living at a census block centroid exposed to ambient concentrations above the NAAQS due to these facilities and the cancer MIR due to actual emissions will decrease from 50 in a million to 7 in a million.

B. Changes to the Technology Review Performed Under CAA Section 112(d)(6)

Based on the technology review under CAA section 112(d)(6), the EPA proposed to change the stack lead emission limits from 2.0 mg/dscm for any individual stack to a facility-wide, flow-weighted average emission limit of 0.20 mg/dscm with a limit of 1.0 mg/dscm applicable to any individual stack. The proposed limit was based on emissions data collected from industry, which indicated that well-performing baghouses currently used by much of the industry are capable of achieving outlet lead concentrations significantly lower than the limit of 2.0 mg/dscm adopted in the 1997 MACT standard. We have considered the public comments on this issue and are adopting the limits as proposed.

Under CAA section 112(d)(6), we also proposed a fugitive emission standard requiring operation of the following process fugitive emission sources in total enclosures that are maintained under negative pressure at all times and vented to a control device: Smelting furnaces, smelting furnace charging areas, lead taps, slag taps, and molds during charging, battery breakers, refining kettles, casting areas, dryers, agglomerating furnaces and agglomerating furnace product taps, material handling areas for any lead bearing materials, and areas where dust from fabric filters, sweepings, or used fabric filters are processed. This proposed requirement was based on information collected from the industry that indicated that several operating facilities currently enclose most or all of their process fugitive emission sources, and that the ambient lead concentrations near these facilities are significantly lower than those facilities that do not have enclosures. We have considered the public comments on this issue, and have decided to adopt the requirements largely as proposed. This requirement is identical to that adopted to eliminate unacceptable risk for fugitive emissions pursuant to CAA section 112 (f)(2). However, as described in Section IV.C of this preamble, based on public comments, we are not adopting the proposed alternative to demonstrate compliance by monitoring lead at or near their property boundary based on a 3-month rolling average in lieu of constructing total enclosures. (See 76 FR 29056.) We are finalizing the proposed requirement for facilities to conduct fugitive emission work practices as well as to enclose fugitive emission sources. As further described in Section IV.C of this preamble, we are also promulgating a revised list of required work practices based on a number of comments received regarding the necessity, efficacy, and safety of the work practices which the EPA proposed.

We are also finalizing the requirement limiting stack lead emissions to 0.2 mg/dscm as a facility-wide emissions average and limiting stack lead emissions from any single stack to 1.0 mg/dscm as proposed.

We note that although we have adopted the same standards under both CAA sections 112(f)(2) and 112(d)(6), these standards rest on independent statutory authorities and independent rationales. Consequently, these standards remain independent and legally severable.

C. Other Changes Since Proposal

We received over 30 public comments on the proposed rule. After considering these comments, we are making the following additional changes to the proposal. The rationale for these and any other significant changes can be found in this preamble and in the comment response document available in the docket.

1. Stack Emission Limits

- The EPA is not adopting numerical limits for THC and D/F emissions from rotary furnaces pending further data-gathering and analysis for this furnace type.
- For units constructed after June 9, 1994, the EPA is adding a limit for THC and D/F for collocated blast and reverberatory furnaces when the reverberatory furnace is not operating, and is amending the D/F limits for blast furnaces for units that commenced construction after June 9, 1994. We also added a THC and D/F new source limit for blast furnaces that commence construction or reconstruction after May 19, 2011.

2. Definitions

- Definitions have been added for ''affected source'' and ''new source'' to clarify when the standards for new sources would apply.
- A definition of ''lead-bearing material'' has been added to the rule to clarify requirements for material handling area enclosures and work practices for fugitive emissions.
- The definition of ''material storage and handling'' has been revised to exclude transfer of raw materials in enclosed containers.
- The definition of ''plant roadway'' has been revised to exclude roadways inside total enclosures.
- The definition of ''process vent'' has been revised to specify that it includes only vents from lead processing equipment and from buildings containing lead bearing material.
- Definitions for ''leeward,'' ''windward,'' and ''natural draft opening'' have been added to the rule to clarify the differential pressure and monitoring requirements and the requirement to maintain an inward flow of air through enclosure openings.
- The definition of ''total enclosure'' was modified by specifically including modified text from 40 CFR 265.1101 and EPA method 204 ''Criteria for and Verification of a Permanent or Temporary Total Enclosure'' rather than citing the reference to the requirements for a hazardous waste containment area. We also clarified the requirement for total enclosures to be vented to a control device designed to capture lead particulates.

3. Enclosure Requirements

- The proposed requirement to maintain an in-draft velocity of 300 feet per minute at enclosure openings (see 76 FR 29072) was replaced with a requirement to maintain an inward flow of air through all natural draft openings.
- The proposed requirement for a back-up power source for the differential pressure monitors required for the total enclosures (see 76 FR 29077) was eliminated, and a reporting requirement was added to identify periods when the power was lost to the monitoring system.
- The proposed rule (see 76 FR 29072) has been modified to clarify that activities required for inspection of fabric filters and maintenance of filters that are in need of removal and replacement are not required to be conducted inside of total enclosures.

• Lead ingot product handling, storm water and wastewater treatment, intact battery storage areas, and clean battery casing plastic handling activities are not subject to the total enclosure requirement.

4. Fugitive Emission Work Practice Requirements

• The proposed maintenance requirements (see 76 FR 29073) have been modified to allow emergency repairs of ductwork or structure leaks to occur outside of enclosures if the time to construct a temporary enclosure would exceed the time to make a temporary or permanent repair. The proposed rule has been modified to extend the deadline for required maintenance and repair on total enclosures to one week after identification of any gaps, breaks, separations, leak points or other possible routes for emissions of lead to the atmosphere. The final rule also clarifies that once an item that is not otherwise subject to total enclosure requirements has been cleaned, its maintenance is no longer subject to the enclosure requirement.

• The proposed rule has been edited to allow for existing control devices to treat the ventilation from temporary enclosures constructed for maintenance purposes if the device and its permit account for increased airflow and emissions for this activity.

• The roof washing proposed work practice (see 76 FR 29073) has been removed from the list of required fugitive emission work practices.

• The specific proposed water application rate of 0.48 gallons per square yard (see 76 FR 29073) has been removed from the road washing requirement.

• The proposed battery storage area inspection frequency (see 76 FR 29073) has been changed from twice per day to once per week to maintain consistency with inspection frequency required under other regulatory programs.

• The proposed requirement to collect wash water in a container that is not open to the atmosphere (see 76 FR 29073) has been removed.

• The proposed rule (see 76 FR 29073) has been revised to clarify that lead-bearing dust must be collected and transported within closed conveyor systems or in sealed, lead-proof containers while other lead bearing material must be contained and covered in a manner that prevents spillage or dust formation.

• The proposed requirement for cleaning after an accidental release (see 76 FR 29073) has been clarified to include only those releases that exceed the CERCLA reportable quantity for lead (*e.g.,* 10 pounds).

5. Testing and Monitoring Requirements

• The performance testing requirements (see 76 FR 29074) have been modified to allow facilities to use EPA Method 12 or Method 29 for lead compounds.

• A provision was added allowing for biannual testing of lead compounds and THC for sources that demonstrate concentrations that are less than 50 percent of the applicable limit.

• An exemption was provided for THC testing if a facility has installed and is using a THC CEMS.

• The time between D/F testing (see 76 FR 29072) was changed from once every 5 years to once every 6 years, in anticipation that most facilities would be on a biannual testing schedule for lead and THC, and this schedule would allow coordination of the two required tests.

• The conditions for the performance tests (see 76 FR 29072) were changed from ''under such conditions as the Administrator specifies * * *'' to ''maximum representative operating conditions for the process''.

• The EPA also added a provision stating that sources which operate a HEPA filter or WESP system downstream of a primary particulate (lead) control device are not subject to a bag leak detection system (BLDS) requirement.

6. Other Changes

• A provision was added for sources to develop procedures to minimize emissions of THC limits during periods of startup and shutdown.

• We modified the proposed plastic separation work practice requirement (see 76 FR 29072) to include only plastic battery casing materials from automotive batteries (which comprise the vast majority of input plastics).

• The proposed recordkeeping and reporting requirements were revised to be consistent with the other changes made to the rule.

A tracked changes version of the regulatory language incorporating the changes in this action is available in the docket. Additionally, a summary of the public comments that are not in the preamble can be found in the comment response document available in the docket.

V. Summary of Significant Comments and Responses

A. Use of Lead Primary NAAQS as a Measure of Acceptability of Risk for Public Health

Commenters from both the environmental and industry sectors challenged the EPA's use of the lead primary NAAQS as a measure of acceptability of risk in this rule. The EPA disagrees with these comments. The EPA has reasonably applied the lead primary NAAQS as a measure of evaluating acceptability or unacceptability of risk from exposure to lead emissions from sources in this category. The lead primary NAAQS targets protection to children living near sources, such as secondary lead smelters, who are exposed at the level of the standard—the population most sensitive to the health impacts of these emissions. Moreover, using the lead primary NAAQS to assess acceptability of risk does not amount to an impermissible implementation of the lead primary NAAQS as industry commenters would have it. Full responses to these comments are found in the Response to Comment Document for this rulemaking, available in docket ID EPA–HQ–OAR–2011–0344.

B. Total Enclosure Requirements

Comment: Several commenters supported a requirement for total enclosures of enumerated sources of fugitive emissions. Some of those commenters did not support the alternative that would have allowed ambient monitoring in lieu of total enclosures.

According to one commenter, ''The purpose of establishing emission standards and control technology regulations is to reduce, by empirically proven technical means, the release of hazardous air pollutants into the atmosphere.'' The commenter therefore recommended that the EPA require enclosures in all instances to limit fugitive emissions.

According to another commenter, ''The non-cancer and cancer risk reductions associated with total enclosures of all lead bearing processes to reduce fugitive emissions are clearly demonstrated for all facilities in the post control scenario contained in the residual risk assessment. These benefits also have been observed based on our experience with total enclosures that are under negative pressure and vented to air pollution controls. * * * The annual geometric mean of lead measured [in ambient air near the facility] dropped from a high of 0.71 $\mu g/m^3$ (1987) to 0.06 $\mu g/m^3$ (1993) after all of the point source

and fugitive emission controls were in place. The benefits of requiring total enclosures as demonstrated by the ambient monitoring results were clearly apparent to the Department and surrounding community. Based on that experience, we do not support the alternative of allowing partial enclosures with an air monitoring requirement option in this rulemaking.''

Another commenter stated ''We do not support allowing partial enclosures with an air monitoring requirement option, since the total enclosures have been shown to be extremely effective in reducing fugitive emissions of lead and the other metal HAPs from these sources.''

One commenter indicated that neither proposed alternative (total enclosure or the ambient monitoring alternative) complies with CAA section 112(d)(6) but did state that ''additional health risk reductions would occur if a facility used total enclosure.'' This commenter also stated that the EPA should require total enclosures and work practice standards beyond those included in the proposed rule to control fugitive dust emissions of arsenic and cadmium and achieve reductions in cancer and non-cancer risks from these pollutants.

Alternatively, one commenter disagreed that total enclosure is the most effective method to reduce emissions. According to the commenter, ''Capturing emissions from secondary lead smelting sources at the point of emission and controlling such emissions through the use of baghouses equipped with secondary HEPA filtration systems represents a better alternative to constructing and maintaining total enclosures around secondary lead smelting sources.''

Response: As explained at 76 FR 29059 in the proposed rule and below, the EPA is amending the NESHAP for fugitive emissions of lead both because these emissions pose an unacceptable risk under CAA section 112(f) and because it is technically appropriate and necessary to do so pursuant to section 112(d)(6). With respect to what changes to adopt, we agree with those commenters who argued that total enclosures maintained under negative pressure are the most effective means by which to reduce fugitive emissions. Facilities in this source category that implement total enclosures as a means of controlling fugitive emissions are able to achieve significantly lower ambient lead concentrations near the boundaries of their facilities, as clearly demonstrated in the *Summary of Ambient Lead Monitoring Data Around Secondary Lead Smelting Facilities* document available in docket ID EPA–HQ–OAR–2011–0344. About half of the existing facilities currently have such full enclosures, and a few other facilities are currently constructing such enclosures. The prevalence of total enclosures in the secondary lead smelting source category suggests that this measure is cost effective and it is clearly technically feasible. There is more certainty that fugitive emissions are well controlled through the use of total enclosures than would exist with the proposed alternative to use fenceline ambient monitoring. The work practice standards in the final rule have been revised from those proposed to ensure that there are no requirements that pose safety hazards, are unnecessary to achieve emission reductions, or result in duplicative burden on regulated facilities. The work practice standards in the final rule are already implemented at some of the facilities.

Furthermore, we assumed at proposal that total enclosures would be required at all facilities regardless of which option they chose. The facilities that do not operate total enclosures are unlikely to achieve fenceline ambient concentrations at or below the lead primary NAAQS. The monitoring data just mentioned and the ICR responses indicated that the facilities which have totally enclosed their processes are generally achieving ambient concentrations substantially lower than those which have not totally enclosed. Since we based our analysis at proposal on the assumption that all facilities would have to construct total enclosures and assumed that the rule would impose those costs on all sources which have not yet installed total enclosures, our cost analysis has already accounted for the cost of total enclosure. See 76 FR at 29064 and the cost impacts memo that supported the proposed rule (docket ID EPA–HQ–OAR–2011–0344–0040 at page 8). The total enclosure requirements in section 63.544 ensure that process fugitive emissions sources and other fugitive dust emissions sources will not generate fugitive emissions that escape the facility uncontrolled. The work practice standards for process fugitive emissions sources and fugitive dust emissions sources in section 63.545 ensure that fugitive dust is not generated outside of total enclosures and that fugitive dust generated inside total enclosures is not carried outside of those enclosures.

We note that one commenter's statements appear to pertain to process fugitive emissions from secondary lead smelters that are captured by enclosure hoods and vented to a control device. We agree that enclosure hoods near sources of process fugitive emissions (*e.g.,* lead taps, charging hoppers, etc.) can be an effective method to control emissions from these sources. We also recognize that these devices are important to minimize exposure of workers to lead dust. However, we note that the enclosure hoods are not 100 percent effective at controlling these emissions, and that process fugitives that are amenable to control with hoods are not the only source of fugitive emissions from secondary lead processes. We thus disagree that enclosure hoods without total enclosures represent a better alternative for controlling all fugitive emissions.

Comment: Several commenters objected to requiring monitoring of both building pressure differential and the in-draft velocity at building openings for the total enclosures and stated that the duplicate monitoring requirements are redundant and unjustified. The commenters also requested that the EPA abandon its proposed specific minimum velocity requirement at doorway openings or lower the proposed requirement of 300 feet per minute. Two commenters stated that ''A number of the existing total enclosures in this industry do not meet the proposed 300 feet per minute in-draft velocity requirement, and their modification to achieve 300 feet per minute would require substantial expenditures.'' One commenter stated that much larger volumes of air would be exhausted from the smelter buildings and that ''the greater the volume of air exhausted, the greater the emissions of lead. Therefore increasing exhaust volumes above current levels could possibly have negative impacts.'' The commenters requested an exemption from demonstration of compliance with the in-draft requirements for access points that are normally closed. One commenter requested clarification of the use of the terms ''leeward'' and ''windward'' in the context of the differential pressure monitoring.

One commenter stated that they have demonstrated that none of these total enclosure monitoring requirements and continuous monitoring systems are necessary to reduce actual emissions of HAP. The commenter recommended continued compliance with the original 1997 NESHAP, which requires facilities to demonstrate that total enclosures were maintained under constant negative pressure by maintaining process enclosure hoods at the prescribed face velocities. As an alternative, measurements of face velocity at doorways and windows and pressure measurements at prescribed intervals would provide a viable monitoring option.

Response: We agree with the commenters that monitoring of both building differential pressure and in-draft velocity at building openings is unnecessary. However, we disagree that continuous monitoring of differential pressure is overly prescriptive. We believe that monitoring of building differential pressure is the most accurate means by which to ensure that the building is under negative pressure at all times. This method provides direct measurements that the building is indeed maintained at negative pressure. Some commenters stated persuasively that specifying doorway velocities could require substantial additional in-draft, which could cause strain to building structures, wind chill problems for workers, and pilot lights being extinguished. We have therefore not adopted the proposed requirement to measure in-draft velocity at the openings of the total enclosures but have retained the continuous differential pressure monitoring requirement. However, we have altered the differential pressure requirement from 0.02 mm of mercury to 0.013 mm of mercury to be consistent with EPA Method 204's criteria for verification of a permanent or temporary total enclosure. With regard to the comment that increased volumes of air exhausted through control devices would increase overall emissions, it is unclear to us how directing previously uncontrolled fugitive emissions through a fabric filter would increase the overall emissions from a structure.

Comment: Several commenters objected to requiring a back-up power source for the differential pressure monitors. According to the commenters, during a power outage, the ''negative pressure would not be maintained and the pressure drop monitors would simply be measuring and documenting this known and predictable fact * * *. The same information could be obtained by requiring facilities to note periods when power has been lost to the ventilation fans such that negative pressure could not be maintained.'' One commenter recommended requiring an uninterruptible power supply for the control device as well as the total enclosure monitoring system or removing the current requirement.

Response: We agree with the commenters' assessment that a back-up power source for the building differential pressure monitors is not needed. We also agree with the commenters' suggestion to include a recordkeeping provision for power outages that occur for the building ventilation systems. The regulatory text has been edited accordingly.

Comment: Several commenters objected to the enclosure requirement at all areas where fabric filters are handled or processed. One commenter stated that ''This is impractical in that all baghouses are not and cannot be located within enclosures. Therefore, in the replacement of used bag filters, there will always be a point in which the bags must be handled in order to get them into a closed container for transport.'' Two commenters stated that ''The first point at which used fabric filters are 'handled' is upon removal from the baghouse cell, usually on a catwalk running along the side of the baghouse. It is not appropriate to require all such areas to be placed within total enclosures. Best practices in the industry when replacing fabric filters are to place the used filter bags in sealed plastic bags or other closed containers in the cell while the filters are being replaced, but prior to removing the used filters to the catwalk.''

Response: We agree that the proposed requirement to enclose all areas where fabric filters are handled or processed may be impractical at times, the enclosure of a catwalk being an example. We also agree that fabric filters cannot be enclosed under the circumstances described in these comments. We have therefore revised the regulatory text to require used fabric filters to be placed in sealed plastic bags or containers before removal from the baghouse cell.

C. Work Practice Standard Requirements for Fugitive Emissions

Comment: Several industry respondents expressed concern about the proposed requirement to perform all maintenance activities for any equipment potentially contaminated with lead bearing material inside an enclosure.

Two commenters requested clarification that once an item that is not already subject to total enclosure requirements has been cleaned, its maintenance or repair is not subject to the enclosure requirements. Both commenters also gave an example of circumstances where the best course of action would be to make an immediate repair on a leak in an elevated duct rather than wait until a temporary structure was constructed. One commenter expressed concern that inspection and maintenance of filters that are in need of removal and replacement would need to be performed within a total enclosure.

Two commenters stated that 72 hours to make repairs to any gaps or leak points in enclosures or structures was not feasible to implement. One commenter suggested that the rule ''be changed to require initiation of repairs within 24 hours of discovery and completion of repairs as soon as practicable. Rather than seeking and obtaining approval for extensions from the Administrator, the source should be required to file and to keep a record listing when the problem was discovered, when the repair was initiated and when the repair was completed.'' Another commenter stated that ''the presence of leak points is irrelevant to collection as long as the size and location of these leak points does not change over time. Once a facility documents that any total enclosure criteria (for negative pressure) are met, the presence of existing leak points is irrelevant.''

One commenter requested that the EPA allow facilities to route emissions from partial or temporary enclosures to control devices that meet the performance requirements stated in the rule. According to the commenter, ''This compliance option is requested, because as written, the provisions would require manufacturer's specification alone and not allow use of an otherwise compliant control device.''

Response: With regard to the comment that the proposed maintenance practices were overly prescriptive, we have revised the regulatory text to require performance of maintenance ''in a manner that minimizes emissions of fugitive dust'' that includes several options to control fugitive emissions. With regard to the comment pertaining to inspection and maintenance of fabric filters, we have edited the regulatory text such that this enclosure requirement does not apply to inspection and maintenance practices for fabric filters.

We also agree with commenters that making prompt and timely repairs for leaks is often more effective than first constructing a total enclosure around the leak. However, we believe that the formulation to initiate repairs ''as soon as practicable'' is too vague. We have edited the regulatory text to require completion of repairs to enclosures within one week and inserted language allowing facilities to initiate immediate repairs of ductwork or structure leaks without an enclosure provided that the time necessary to construct a temporary enclosure would exceed the time necessary to make a temporary or permanent repair. This change ensures that the requirement is technically practicable and the most cost-effective means for fixing leaks while minimizing the period during which the leak causes emissions.

We disagree with the commenter that the presence of a leak point is irrelevant to collection as long as the size and location of these leak points do not change over time. Total enclosures are designed with openings of specific size and location to provide appropriate airflow into a building and to maintain the negative pressure at all locations. Multiple leak points at different locations of non-uniform size would be difficult to measure and document. It would also be difficult to ensure that the building negative pressure is uniform at all locations.

We agree with the commenter that facilities should be allowed to route emissions from partial temporary enclosures to existing control devices that meet the performance specification stated in the rule provided the control device has the capability to accommodate the additional air flow and that its permit accounts for the additional air flow and emissions. The regulatory text has been edited accordingly.

Comment: Several commenters expressed concerns about the requirement in the proposed rule for cleaning of building rooftops. The commenters stated that the EPA did not provide a basis to demonstrate that roof washing is effective or necessary. One commenter stated that roof cleaning was unnecessary to operate in compliance with the current lead NAAQS, and that current work practices are sufficient to meet the standard. Several commenters also stated that roof cleaning is potentially dangerous to workers and in some cases not possible due to the rooftop construction and weather conditions. Several commenters noted that the requirement unnecessarily applied at all times, even when natural precipitation makes cleaning unnecessary.

Response: We agree that the proposed roof washing requirement may not be feasible and may cause worker safety hazards in some cases, and we have therefore removed this activity from the list of required fugitive emission work practices.

Comment: Several commenters opposed the specific requirement for a mobile vacuum sweeper used for pavement cleaning when a water flush is used. The commenters stated that the EPA provides no justification for the minimum water application rate of 0.48 gallons per square yard of pavement cleaned or evidence that equipment currently used could achieve this rate. The commenters suggested that this specific requirement be replaced with a ''requirement that pavement be periodically cleaned, leaving methods, and minimum water application rates to individual facilities and, as relevant, their permitting authorities.'' According to the commenter, ''EPA should further exempt pavement cleaning on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow.''

Two commenters also expressed concerns that the rule requires pavement cleaning in the battery breaking, furnace, refining and casting areas when a total enclosure is not used. According to the commenters, certain locations within these areas are not capable of being cleaned on a routine basis due to safety, access, or other reasons. The commenters give an example of paved areas under process equipment as being an area that is not safe to access during operation of the equipment. One commenter also stated that roadway cleaning and washing of truck tires and undercarriages are redundant requirements with no incremental benefit.

Response: We agree with the commenters' suggestion to remove the minimum water application rate requirement from the regulatory text. We note that the proposal did include an exemption for cleaning on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow. That exemption remains in the final rule. See 40 CFR 63.545(c)(2).

With regard to the comments regarding pavement cleaning requirements when total enclosures are not used, we note that the final rule requires total enclosures rather than including them as an option. Furthermore, it is our understanding that in the cases where mobile sweeping or wet washing equipment is not feasible (*e.g.,* underneath process equipment), facilities can utilize hand held vacuum equipment to clean these areas. Therefore, we do not believe it is appropriate to exempt these areas from the cleaning requirements since these areas contain fugitive lead which can be emitted and reach human and environmental receptors.

We disagree with the commenter that roadway cleaning and undercarriage washing are redundant requirements. While truck tires may be a significant source of lead bearing material on the roadway, we understand that they are not the only source. Therefore, we have maintained both requirements in the final rule.

Comment: One commenter recommended modifying the requirement to pave ''all areas subject to vehicle traffic'' to ''all areas subject to *routine* vehicle traffic.'' The commenter noted that areas not subject to routine traffic do not have the potential to generate significant quantities of fugitive dust and that paving these areas would increase the amount of storm water generated.

Response: We agree with the commenter that there may be some instances where paving and cleaning a roadway is impractical. We have included an exemption in the rule for limited access and limited use roadways that access remote, infrequently used locations on the facility's property. See 40 CFR 63.545(c)(2).

Comment: Two commenters objected to the proposed frequency of inspection of the unenclosed battery storage areas. One commenter ''finds this requirement to impose an administrative burden of minimal value.'' According to the commenter, ''Spent lead acid batteries, even if accidentally broken and leaking, pose minimal potential for generation of fugitive dust containing HAPs. Inspection of these areas is typically required on a weekly basis as part of the facilities' Resource Conservation and Recovery Act obligations and such frequency is sufficient to satisfy the intent of this proposed rule as well.'' One commenter suggests that identifying and mitigating leaks within 72 hours will prevent generation of fugitive lead emissions. The commenter also states that it is unclear whether batteries stored in partial enclosures are exempted from the twice daily inspection requirement and proposes the following regulatory language incorporating both of these issues.

> You must inspect any batteries that are not stored in a partial or total enclosure once each day and move any broken batteries to a partial or total enclosure within 72 hours of detection. You must also clean residue from broken batteries within 72 hours of identification. Storage of batteries in trucks and railcars consistent with Department of Transportation requirements are specifically exempted from these requirements.

Response: We agree with the commenters that requiring inspection of these areas on a twice daily basis is not necessary. We have modified the regulatory text to require inspection of these areas once per week—consistent with requirements implementing the hazardous waste subtitle of RCRA (see 40 CFR 264.174 and 264.1101(c)(4) (and the EPA sees no reason to deviate from these long-standing requirements here, given that they were adopted to be ''protective of human health and the environment'' from management of hazardous waste)—with removal of

broken batteries within 72 hours of detection. We have also clarified that the inspection requirement does not apply to battery storage areas that are in a total enclosure. We do not believe that an exemption for storage of batteries in trucks and railcars is necessary since the inspection frequency was reduced to once per week.

Comment: One commenter objected to the requirement to collect wash water in a container that is not open to the atmosphere. The commenter stated that ''Covering of these collection tanks is not necessary because lead dissolved and/or suspended in water does not have a pathway for becoming a fugitive emission.''

Response: We agree with the commenter that so long as the contents in the container are wet, there should be no fugitive emissions. We have removed the requirement to collect wash water in a sealed container.

Comment: Two commenters requested changes to the requirement to transport lead bearing materials in sealed leak-proof containers. One commenter proposed that containers be ''covered'' rather than ''sealed leak-proof'' and that an exemption be made for off-road dump trucks. The suggestion was made because ''sealed leak-proof containers * * * cannot be attained, but covers can be for most trucks used in such transport * * *. no approved sealing covers are made for the 30-ton, 6-wheel, off-road dump trucks used at the facility.'' One commenter supported the requirement for transporting lead bearing materials within an enclosure or in a sealed container, but suggested that lead bearing materials with little potential for production of fugitive lead dust from transportation should be excluded, including intact batteries, raw materials with lead content that is not considered recoverable such as iron, caustic, coal, wood, sulfur and other similar materials, and products from the recycling process.

Response: We agree that the proposed requirement for material transport should be modified. The intent of the proposed requirement was to prevent fugitive lead dust formation outside of a total enclosure. We have therefore modified the requirement at 63.545(c)(7) to read as follows:

''You must transport all lead bearing dust within closed conveyor systems or in sealed, leak-proof containers, unless the transport activities are contained within an enclosure. All other lead bearing material must be contained and covered for transport outside of a total enclosure in a manner that prevents spillage or dust formation. Intact batteries and lead ingot product are exempt from the requirement to be covered for transport.''

The definition of lead bearing material in the rule clarifies that lead bearing materials must contain at least 100 ppm of lead (measured via Toxicity Characteristic Leaching Procedure (EPA Method 1311) lead test results <5 mg/l). Intact batteries and lead ingot product are excluded from this requirement.

Comment: Some commenters agreed that the secondary lead facilities operate a separation process at their battery breakers to separate polypropylene battery case material as a valuable recyclable commodity. However, not all spent lead acid batteries are amenable to separation. Certain battery types such as small sealed-lead-acid batteries and certain industrial lead-acid batteries are fed into the blast furnace without ever passing through the facility's battery breaker. These batteries are either too small or too large to be broken by the automated battery breaking equipment. One commenter requested that the EPA estimate the cost of the systems that would be required. Another commenter offered that mandatory separation could be used for facilities that are not meeting TEQ limits as one of several options to reduce emissions. Two commenters stated that the current dioxin emission levels pose no incremental health risk presented by background dioxin and that there is no valid justification for imposing this burden.

Response: Based on these comments, we have revised the proposed plastics separation work practice requirement to be specific to automotive batteries, which should be amenable to separation based on current practices used in the industry. We agree with the commenters that some industrial batteries are not easily processed in battery breakers and that the retrofits or additional equipment required to process such batteries are not justified since automotive batteries make up the vast majority of lead acid batteries processed at these facilities. We believe that plastics separation from automotive batteries is sufficient to minimize emissions of organic HAP. We further note that the use of battery breakers to separate plastics from automotive batteries is clearly a development in practices that limits emissions of organic HAP, including dioxin, and is therefore an appropriate part of a standard under CAA section 112(d)(6).

D. Emission Standards for Organic HAP From Rotary Furnaces

Comment: We received several comments on the proposed D/F and THC MACT floor limits for the rotary furnace subcategory that were based on data (two test runs, see 76 FR at 29049) from the slag-processing rotary furnace at RSR's Middletown, NY facility. One commenter stated that rotary furnace standards should not be based on emissions that are not from stand-alone rotary furnace operations. The commenter stated that the EPA should not derive standards for rotary furnaces from performance of a different source type or subcategory that includes a furnace combination (*i.e.,* reverberatory/short rotary furnace). The commenter also contends that there are insufficient data available to establish limits for D/F and THC from rotary furnaces. The commenter contends that the EPA used one source that is not representative of or similar to true rotary furnace operation to establish the limits for ''rotary furnaces.'' The commenter stated that the emissions limit established in the proposed rule is arbitrary because it is not based on operations of rotary furnaces using lead bearing materials from lead acid batteries as feedstock.

The commenter notes that RSR's Middletown, NY facility, whose test data were used as the basis for the THC and D/F limits, only uses their rotary furnace to process one type of lead bearing material, reverberatory slag, and this furnace is not representative of the full capabilities of rotary furnace operation. The commenter notes that JCI's Florence Recycling Center plans to utilize stand-alone rotary furnaces to process lead paste, battery components, and ''other materials with recoverable quantities of lead.'' The commenter further notes that the emissions from RSR's short rotary furnace (SRF) and drying kiln are combined, and it is unclear from information in the docket whether testing of the SRF occurred at a location prior to the combination of these exhaust streams.

The commenter also stated that JCI and RSR differ in raw materials used in the facilities' operations. RSR's Title V application for its Middletown facility indicates that RSR may process automotive, industrial, and specialty-type lead-acid batteries as well as lead bearing materials received from lead-acid battery manufacturing plants and scrap metal in its reverberatory furnace. JCI's furnace feed is from automotive and marine batteries and from lead bearing materials from other JCI facilities. The commenter contends that, since the EPA considered no data representative of a rotary furnace operation such as that which will be operated at the JCI Florence Recycling Center, a numeric limit for this category cannot be assigned.

One commenter also stated that the stack test for RSR's SRF that was used

to develop D/F and THC emission limits for ''rotary furnaces'' included only two successful test runs and therefore must be considered inadequate for setting emission limits since 40 CFR 63.7(e)(3) requires three test runs for compliance demonstration purposes.

One commenter supports the individual stack emission limits for THC and D/F but provides comment on the EPA's consideration of statistical variability for the rotary furnace subcategory. The commenter stated that the Upper Prediction Limit (UPL) tends to inflate the variability because the statistical procedure attempts to accommodate the highest emission measurement at the same facility and not necessarily the variability between facilities as the MACT floor is intended to achieve. Additionally, the UPL is very dependent on the number of valid samples. The commenter contends that, when a suitable number of samples have been collected, the 99 percent confidence limit (CL) represents a range for which there is 99 percent certainty that the interval contains the true mean. The commenter suggests that caution be used when determining a MACT floor from limited test data and that the 99 percent CL is more appropriate for this particular industry.

One commenter noted that the EPA did not consider a secondary lead smelting facility in Puerto Rico that operates a stand-alone rotary furnace. The commenter contends that even if it were appropriate to set MACT floor emission rates or standards for rotary furnaces, the EPA would have to obtain and consider data from the Puerto Rico facility. According to the commenter, failure to consider data from the facility ''undermines the RTR Proposed Rule and any attempt by EPA to establish emission standards for the rotary furnace subcategory.'' The commenter contends that the EPA should issue a separate ICR for the Puerto Rico facility and publish a supplemental notice of proposed rulemaking that takes into account the emission information for this facility.

Response: The EPA agrees that rotary furnaces fueled by natural gas could be different from rotary furnaces operating using different fuel types, and that rotary furnaces processing slag could be different types of rotary furnaces than those processing lead acid batteries. More basically, the EPA simply has insufficient data on which to promulgate organic HAP standards for rotary furnaces. The proposed standards for THC and D/F were based on less than one single complete test, consisting only of two test runs from the natural gas fueled rotary furnace processing slag. See 76 FR at 29049–29050. (A complete test consists of three test runs.) When calculating variability using a limited dataset (in this case, the two test runs) the effect of variability can be substantial. Id. The proposed THC and D/F standards likewise were based on two test runs and similarly reflected enormous statistical variability due to the limited data. Id. at 29049/1. The EPA does not believe that these data are sufficient to adopt a standard even for the rotary furnace which was tested, much less a rotary furnace which may be different. Accordingly, we are not adopting standards for organic HAP emissions from rotary furnaces at this time and instead we intend to issue CAA section 114 information requests to sources operating rotary furnaces to obtain more representative emission data and plan to propose standards for organic HAP in a future action. However, we note that the lead emission standards included in this action do apply to rotary furnaces processing slag or lead acid batteries.

E. The EPA's Risk Assessment Supporting the Proposed Rule

Comment: Two commenters stated that the EPA's methodology is unreliable and incorrect. The commenters stated that the EPA overestimated the baseline fugitive emissions for the Exide Frisco facility whose (faulty) estimates then became the basis for estimating all other facilities' fugitive emission rates. The commenter stated that the EPA scaled Exide's reported fugitive emissions of 0.296 tpy for the blast and reverberatory furnace fugitive emissions to 0.32 tpy based on the assumption that fugitives would not be on the same operating schedule as process emissions. The commenter contends that this scaling is inappropriate since furnace fugitives can only occur when the associated process furnaces are operating. The commenter further stated that the EPA also double-counted the fugitives of 0.32 tpy by assigning the value to each of the blast and reverberatory furnaces, despite the fact that Exide reported the value as combined emissions for both the reverberatory and blast furnace.

Response: The commenter is correct in both respects. The EPA has accordingly adjusted its calculation of the fugitive emissions from Exide's Frisco facility (thereby reducing the facility's fugitive dust emissions estimate) and adjusted the emissions estimates for each facility to reflect the revised estimate of the Frisco facility. The resulting risk results have also been adjusted. We note that the updated emissions estimates and risk results did not substantively alter our decisions under section 112(f). The modeling showed 9 of 15 facilities above the lead NAAQS, down from 12 of 14 facilities at proposal. The maximum modeled lead concentration in the source category decreased from about 23 times the NAAQS to about 16 times the NAAQS. We still find that risks from this source category are not acceptable and that revisions under section 112(f)(2) are therefore required, and further find that it is necessary under section 112(d)(6) to revise the standards for fugitive emissions considering the developments in cost-effective control technologies for their control.

Comment: Three commenters stated that the EPA's multipathway risk estimates are incorrect because they relied on incorrect dioxin and furan emissions from Exide's Frisco, Texas facility. The commenters contend that a dioxin and furan test conducted in October 2010 at the Frisco facility revealed an emissions rate of 6.2E–08 tons/year on a toxic equivalency quotient (TEQ) basis, 69 times lower than the estimate used by the EPA. One commenter noted that the exact effect that the difference in emissions would have on the calculated risks is unknown since the EPA has not placed the full methodology behind its multipathway risk calculations in the record. However, the commenter noted that assuming the relationship between emissions and risk is approximately linear, the EPA's calculated risk would be approximately 69 times lower than that estimated at proposal and less than 1 in a million. The commenter further requested that the EPA disclose its multipathway risk calculation methodology and allow for public notice-and-comment. Another commenter stated that the EPA's overestimation of dioxin and furan emissions may lead to unwarranted public concern about the Frisco facility. The commenter requested that the EPA include a clarifying explanation regarding the Frisco emissions data and the lower multipathway risk in the final rule as well as in the risk assessment document.

Response: As noted in previous responses, the final risk assessment reflects updated emission information received during the public comment period for the proposed rule. We also note that the updated dioxin/furan test data were not made available to the EPA, despite repeated requests, until June 2011. With respect to the estimated emissions of D/F, the commenter is correct that EPA overestimated these emissions at proposal by a factor of 69 for the reasons stated. Considering this updated emissions information, the EPA

estimates that multipathway risk associated with the Exide Frisco facility is less than 1 in a million (and so contributes very little to the estimates of risk posed by this source category, and is not a driver of the determination that risks from this source category are unacceptable). See *Residual Risk Assessment for the Secondary Lead Smelting Source Category,* available in the docket, at pages 32–33.

This additional information does not warrant any reopening of the proposed rule or comment period, however. First, the EPA fully disclosed its multipathway risk methodology; the commenter's assertions to the contrary are simply mistaken. Thus, the risk assessment document along with its appendices was available in the docket for the proposed rulemaking and describes in detail the methodology used in the assessment. See the *Residual Risk Assessment for the Secondary Lead Smelting Source Category,* at page 10, available in the docket. Also see docket ID EPA–HQ–OAR–2011–0344–0037 for a thorough discussion of the EPA's human health multipathway risk assessment methodology.

Second, the new information reinforces the tentative conclusion the EPA reached at proposal: risks associated with emissions of dioxin and furans from the secondary lead source category are not primary drivers in the unacceptable risks from this source category (*i.e.* dioxin and furan emissions are not the reason that risks from secondary lead smelter emissions are unacceptable). See 76 FR at 29055/2. The new analysis reinforces that risks posed by dioxin and furan emissions are acceptable, since emission levels are 69 times less than estimated at proposal (when risks from CDD and CDFs were already considered to be at an acceptable level). Thus, this already acceptable level of risk is less than estimated and less than one in a million. The EPA does not agree that further comment on this issue is warranted, since further comment would not have a practical effect on the rule.[7]

Comment: One commenter stated that the EPA inappropriately summed risks from the inhalation and multipathway risk assessments at the Exide Frisco facility. The commenter noted that it is impossible for the person with the highest chronic inhalation cancer risk to also be the same person with the highest individual multipathway cancer risk since the two MIR values are location dependent and are at locations that are widely separated. The commenter further noted that the EPA has indicated in other contexts that when populations are exposed via more than one pathway, the combination of exposures across pathways must also represent a reasonable maximum exposure.

Response: The EPA disagrees with the commenter. While highly unlikely (and noted as being highly unlikely in the risk assessment document), it is theoretically possible for the person with the highest chronic inhalation cancer risk to also be the same person with the highest individual multipathway cancer risk. The EPA notes that the multipathway risk assessment does not provide a specific location for the MIR; thus, it is possible (although highly unlikely) that the person with the highest inhalation MIR is also consuming fish (at the fish ingestion rates described in the multipathway report) from the theoretically contaminated lake. That being said, however, we note that considering updated emissions information for this facility, updated multipathway results indicate multipathway risk associated with the Exide Frisco facility are well below one in a million. Considering these updated results, multipathway risk would not appreciable add to any inhalation risk associated with this facility.

Comment: Commenter 94 stated that the EPA improperly calculated the inhalation cancer MIR for the Exide Frisco facility in a vacant field to the north of the facility within the facility's property line. The commenter noted that the lifetime cancer risk of the MEI cannot be at a location within the facility property line.

Response: The commenter is correct and the EPA has corrected the receptor location resulting in a change in the results in the final risk assessment. The MIR for this facility is now located at a populated census block (based on the 2001 census).

F. Miscellaneous Changes to the Regulatory Text

Comment: Three commenters requested that the EPA replace the term ''modified source'' with ''reconstructed source.'' Neither the proposed rule nor the EPA's general Part 63 regulations define the term ''modified source.'' The term is defined in the CAA, but that definition would require a source to install maximum achievable control technology and impose a ''new source'' requirement like CEMS on a modified source, rather than appropriately imposing the existing source provisions that do not require installation of a CEMS.

Response: The term ''modified source'' appeared in the proposed rule at 40 CFR 63.548(l) under the proposed requirement to install a CEMS for measuring lead emissions on all new or modified sources. We agree with the commenter that the terminology of ''reconstructed'' source would be more appropriate for this requirement and have changed the regulatory language accordingly.

Comment: Three commenters requested clarification of the term ''affected source'' as used in the proposed rule. The proposed rule uses the terms ''new sources'', ''existing source'' and ''modified source'' without clarifying whether it is referring to secondary lead smelters generally, or to potential emissions sources within secondary lead smelters. There is a seeming contradiction between the use of the term ''affected source'' in the proposed rule and the definition in 40 CFR Part 63, Subpart A general provisions. One commenter also understands that the terms ''new sources'' and ''existing sources'', as used in the proposed rule, are consistent with the definitions as used in CAA § 112(a). The commenter ''understands EPA intends to address any addition of units to an 'existing source' consistent with the provisions of the CAA'' and understands that the analysis as explained in *Nine Metal Fabrication and Finishing Area Source Categories, 40 CFR Part 63 (6X) NESHAP, Questions and Answers,* April 2011 would apply with respect to implementation of any amendments to subpart X requirements. The Q&A explains that the ''CAA uses the word 'source' to mean the entire facility in terms of the classification of 'new' vs. 'existing' whereas for the Subpart 6X rule, what is referred to as the 'affected source' is actually one of the processes at the facility''.

Response: The EPA has clarified the application of these terms in the final rule. The definition in 40 CFR part 63, subpart A requires each relevant standard to define the ''affected source,'' as the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a CAA section 112(c) source category or subcategory for which a section 112(d) standard or other relevant standard is established pursuant to CAA section 112 unless a different definition is warranted based on a published justification as to why this definition would result in significant administrative, practical, or implementation problems and why the

[7] The comment that EPA's standards for dioxin and furans do not result in significant risk reduction is misplaced given that the EPA is not adopting any risk-based (*i.e.,* section 112(f)(2)) standards based on the need for reduction of emissions of dioxin and furan.

different definition would resolve those problems. We have adopted a definition of ''affected source'' in this rulemaking as any of the listed individual sources at a secondary lead smelter. This application of the term ''affected source'' is the same as was used in the 1997 NESHAP for secondary lead. The term ''affected source'' is used in the final rule primarily in the context of new sources. This definition is appropriate for the secondary lead source category because the chief source of emissions from these facilities are the furnaces, and as these furnaces are replaced or reconstructed, the replacement equipment would be subject to the standard for a new source.

A ''new source'' has also been defined as any affected source at a secondary lead facility that undergoes construction or reconstruction after May 19, 2011, the date of the proposed CAA section 112(f)(2) and 112(d)(6) rules. A building that is constructed for the purpose of controlling fugitive emissions from an existing source is not considered to be a new source because it is effectively a control device for fugitive emissions.

Comment: One commenter noted that the last sentence in the current definition of ''Materials storage and handling area'' has been deleted in the proposed definition. This sentence reads: ''Materials storage and handling area does not include areas used exclusively for storage of blast furnace slag.'' The commenter disagreed with the EPA's assessment that this is a minor change. ''EPA should provide an explanation of what changed circumstances justify a new rule.'' Two other commenters requested that the definition be modified to exclude the transfer of raw materials of any type in enclosed conveyors. The commenter stated that ''as currently worded, the enclosure requirement proposed would apply to handling of fabric filter dust in enclosed conveyors, containers, or in wet slurried form, which is unnecessary.'' The commenter suggested revising the definition to include the following: ''Material storage and handling area shall not include any closed containers or enclosed mechanical conveyors.''

Response: A definition of ''lead bearing material'' has been added to the final rule. Rather than include or exclude any one particular material in the definition of ''materials storage and handling area'' based on the originating process, this definition establishes lead content as the criterion for determining whether materials must be handled in such a manner as to prevent lead dust formation. The definition of ''materials storage and handling area'' remains essentially unchanged from the definition in the proposed rule.

Fugitive dust formation has been identified as the major contributor to ambient lead concentrations near secondary lead smelters. Piles where lead bearing materials are stored were identified as one of the major sources of fugitive lead emissions. However, there was no definition for lead-bearing material in the proposed rule that could be used to make a determination of which materials needed to be handled in a manner that prevents dust formation. By adding a definition of ''lead bearing material'' to the rule, we have clarified and quantified the definition of ''materials storage and handling area.''

The EPA is using the Toxicity Characteristic Leaching Procedure (TCLP), EPA Method 1311 to measure which materials are lead-bearing, and using the characteristic level of 5.0 mg/l (in the extract from the test) as the specific level for being lead-bearing. See 40 CFR 261.24. This assures that only materials with at least 100 ppm total lead will be considered to be 'lead-bearing'. See EPA Method 1311 section 2.2 which describes that the liquid to solid ratio of material tested should be 20:1 (*i.e.* 5 mg/l in the TCLP extract is equal to at least 100 ppm in the material being tested). The specific definition of lead bearing material chosen ensures that materials that contain relatively substantial amounts of lead (0.01 percent) are included while minimizing additional testing burden for facilities who must determine what does or does not meet the definition. Testing burden is minimized because facilities already use the TCLP to determine whether or not the wastes they manage are hazardous, pursuant to subtitle C of the Resource Conservation and Recovery Act. Imposing a different threshold for defining material as ''lead bearing'' could thus impose duplicative or conflicting requirements between subpart X and other regulatory regimes. Furthermore, the TCLP is a test protocol which includes a grinding step, which is a conservative measure of determining whether a material could generate fugitive emissions. See Method 1311 steps 7.1.3 and 7.2.10.

To address the concern that fabric filter dust in enclosed conveyors, containers or wet slurries must be additionally handled only inside an enclosure, we have added an exemption from the enclosure requirement for materials that are ''lead bearing'' but are not expected to generate fugitive lead dust. While these materials do contain lead in amounts that could otherwise meet the definition of lead bearing material, they are either in a stabilized form that will not create fugitive dust or in a container that prevents fugitive dust formation. These materials include: lead ingot products, stormwater and wastewater, intact batteries, lead bearing material that is stored in closed containers or enclosed mechanical conveyors, and clean battery casing material.

Comment: One commenter requested a change to the definition of ''plant roadway'' specifically to exclude finished lead product storage areas and roadways or traffic areas located within enclosed buildings.

Response: We accept the commenter's suggestion to exclude roadways or traffic areas located within enclosed buildings from the definition of ''plant roadway.'' However, we do not believe that it is appropriate to exclude finished lead product storage areas since these areas may be located in close proximity to areas that may require cleaning (*e.g.,* slag storage areas).

Comment: One commenter requested a change to the definition of process vent. As currently drafted, it appears overly broad and could lead to confusion concerning the ventilation systems that must be tested.

Response: We have made revisions to the regulatory text to clarify that the term ''process vent'' includes various process vents and vents from buildings containing lead bearing material. Vents from office or other non-process areas are not considered to be process vents.

Comment: Two comments were received on the terminology used for a lead CEMS. According to the commenter, ''Paragraph 63.548(m) specifies that lead CEMS be 'continuous emission *rate* monitors.' The standard is a concentration standard, not an emission rate standard, so the term ''continuous emission *rate* monitor'' is not appropriate''. Since flow and concentration monitors are needed to calculate compliance with the flow weighted average, one commenter recommended a requirement for flow and concentration monitors rather than citing a type of monitoring system that is not applicable to the standard.

Response: We agree with the commenter that the term continuous emissions *rate* monitor is not appropriate. We have replaced the term ''continuous emissions rate monitor'' with ''continuous emissions monitoring system.''

Comment: Two commenters noted that the term ''accidental release'' is not defined in the rule. The commenters recommended that the EPA use the CERCLA reportable quantity threshold of 10 pounds to define an accidental

release of lead-containing dust. Two commenters recommended that the requirement to initiate cleaning within one hour of a release be changed to require that the facility initiate cleaning activities within one hour *after discovery* of an accidental release.

Response: We accept the commenters' suggestion to use the CERCLA reportable quantity threshold of 10 pounds to define an accidental release of lead-containing dust. We also accept the commenters' suggestion to require initiation of cleaning within one hour of discovery of an accidental release.

Comment: One commenter recommended that the definition of ''maintenance activity'' be changed from ''any of the following routine maintenance and repair activities that generate fugitive lead dust:'' to ''any of the following maintenance and repair activities *when they* generate fugitive lead dust:''

Response: We do not agree with the commenter's proposed change to the definition of ''maintenance activity.'' If this definition was adopted, the facility would be allowed to proceed with a maintenance activity and then, if the activity began generating dust, controls would need to be adopted but otherwise-controllable lead emissions would be released to ambient air. However, we have modified the definition to read ''any of the following routine maintenance and repair activities that could generate fugitive lead dust.'' This definition ensures that proactive, rather than reactive, actions would be taken for activities with the potential to generate lead dust.

Comment: One commenter stated that a definition of lead-bearing material should be added and should include such characteristics as the material should be semi-granular, have a lead content of greater than 10 percent, and produce visible fugitive emissions when handled or transported.

Response: As noted above, we have added a definition of lead-bearing material to the regulatory text. However, we believe that a 10 percent lead content is too high. We have defined lead-bearing material in the rule as material with lead content of 5 mg/l or greater as measured by the TCLP (Method 1311), which means that materials would need to contain at least 100 ppm of lead. This is equivalent to the toxicity characteristic level for a hazardous waste containing lead as defined at 40 CFR 261.24.

Comment: One commenter noted that 40 CFR 63.544(d) of the proposed rule makes reference to the requirements in subsections (d)(1) through (d)(4). However, as the commenter points out, there are eight subsections applicable to 40 CFR 63.544(d) and subsection (d)(2) further refers to meeting requirements through (d)(8).

Response: The EPA agrees with the commenter and has made the suggested change in the regulatory text at 40 CFR 63.544(d).

Comment: One commenter noted that proposed 40 CFR 63.543(i) requires that sources conduct testing for process vents, ''* * * under such conditions as the administrator specifies based on representative performance of the affected source for the period being tested.'' The commenter requested that the EPA replace this ''cumbersome'' language with ''* * * under normal operating conditions.''

Response: We have modified the text to require sources to conduct testing ''under maximum representative operating conditions for the process.'' The term maximum is included to ensure that the testing occurs during a time period of full production at the facility that is representative of normal operation. This language allows sources to develop test conditions which approximate the variability they can reasonably encounter during normal operation. Parametric monitoring requirements, based on parameters measured during the performance test, would then reasonably reflect this operating variability and afford the source flexibility in its day-to-day operation. *Cf. Cement Kiln Recycling Coalition* v. *EPA,* 255 F.855, 866–67 (DC Cir. 2001) (upholding use of such data to set MACT standards under CAA section 112(d)(3)).

Comment: One commenter noted that Table 3 of the proposed rule is improperly labeled, ''table 3 to Subpart X of Part 60—Toxic Equivalency Factors.'' As the commenter points out, the table is included in 40 CFR part 63, not 40 CFR part 60.

Response: The EPA agrees with the commenter and has made the suggested change to Table 3 of the proposed rule.

Comment: Two commenters pointed out that there is a typographical error in Equation 2 of the proposed rule at 40 CFR 63.543(c). The definition of the term C_{ELI} includes the word lead, though the equation is not applicable to lead.

Response: The EPA agrees with the commenter and has adjusted the definition of the term C_{ELI} in Equation 2 of 40 CFR 63.543(c) accordingly.

G. Emission Testing Methods and Frequency

Comment: Two commenters stated their support for biannual testing for well performing facilities. One commenter contends that the East Penn facility currently conducts biannual testing for lead and still maintains compliance with the lead NAAQS and applicable subpart X emission standards. The commenter further argued that the EPA has not demonstrated any environmental benefits associated with annual testing versus biannual testing for well controlled facilities. The commenter contends that the East Penn facility has made strategic decisions to invest capital resources to reduce lead emissions and that the removal of the biannual testing exemption would unnecessarily increase the annual operating costs of the facility.

Response: We agree with the commenter that a biannual testing exemption for well performing facilities can be retained in this NESHAP. We have added an exemption for any stacks that report a lead concentration of 0.1 mg/dscm or lower allowing biannual testing. The concept of decreased testing frequency for well-performing sources was discussed in the proposal as a part of the fenceline monitoring approach (see 76 FR at 29057).

Comment: Two commenters disagreed with the annual testing requirement for total hydrocarbons (THC). One commenter stated that since the risk assessment did not identify significant risks drivers among the organic HAP represented by THC, the THC testing should be conducted concurrently with the dioxin and furan tests every 5 years with continuous compliance demonstrated via afterburner temperature monitoring. Another commenter stated that requiring annual THC tests is redundant and unnecessary if a CEMS is installed and operated per 40 CFR 63.543(k).

Response: We disagree with the commenter that THC testing should be conducted on the same schedule as dioxins and furans. Testing for THC is substantially less expensive than testing for dioxins and furans and we do not believe annual THC testing presents an unnecessary burden. However, we have added an exemption allowing biannual testing of THC for any stack that reports concentrations that are less than half of the applicable emissions limit. Annual stack testing is obviously not required if a THC CEMS is used.

Comment: Three commenters stated that the EPA should allow facilities to use EPA Method 12 for lead compounds to calculate compliance with the process vent limitations in order to be consistent with testing requirements that exist in many facility permits.

Response: We agree that facilities should be given the option of using EPA

Method 12. The regulatory text has been edited accordingly.

Comment: Three commenters stated that the BLDS exemption for baghouses equipped with HEPA filters should be retained. One commenter stated that to install BLDS's on HEPA filtered stacks is excessive and unwarranted. The commenter also believes that annual stack testing for sources equipped with HEPA filtration is not necessary. Another commenter argued that the cost associated with using BLDS is not commensurate with their limited ability. The commenter stated that BLDS's are inherently reactive whereas baghouses equipped with HEPA filtration actually prevent emissions in the event of a bag failure. Further, the commenter argued that HEPA secondary collection pressure differential is an effective method to monitor baghouse performance. The commenter contends that the BLDS requirement will pose an unnecessary and redundant burden on facilities that proactively chose to install HEPA filtration systems and that the proposed revisions are a disincentive for facilities to install HEPA filters. Finally, the commenter stated that the proposed BLDS requirement and the elimination of the BLDS exemption for HEPA filters are arbitrary and not supported by test data.

Response: We agree with the commenters that baghouses equipped with HEPA filters do not need bag leak detection systems as well. The measurement of pressure drop across a HEPA filter provides the indicia of superior performance for determining continuous compliance. However, we disagree that sources should be exempt from annual stack testing based solely on the use of a HEPA filter. The emission standard includes calculation of a facility-wide emission average and testing the process vents subject to that limit is needed to determine compliance. Monitoring pressure drop across HEPA filters is a means for determining continuous compliance, similar to a bag leak detection system in baghouses without HEPA filters. In both cases, periodic stack tests are necessary to ensure that lead emissions are below the applicable emission standard. However, we note that we have included a biannual testing exemption for stacks that report lead concentrations less than 0.1 mg/dscm.

H. Startup, Shutdown, and Malfunction

Comment: One commenter expressed concerns related to the total hydrocarbon (THC) standard during start-up periods. According to the commenter, it will be impossible to meet the minimum temperature at which compliance with the THC standard has been demonstrated during startup of a furnace. The blast furnace crucible must be heated for up to 12 hours before raw materials can be charged. The reverberatory furnace cold startups occur over an extended period also. There is no introduction of feedstock during the warm-up process and, therefore, no emissions of process-related THC emissions. Emissions during this time period will consist entirely of combustion products associated with the fuels natural gas and foundry coke. The afterburner or post combustion system are equipped with rudimentary burners that provide supplementary heat but rely on the excess heat contained within the combined furnace exhaust gases during production operations to achieve an afterburner temperature that assures the efficient combustion of the process off-gases. The afterburner supplementary burners are not sufficient to maintain the required temperature during furnace startup and shutdown sequences. The proposed revisions to subpart X should include definitions of startup and shutdown for collocated blast and reverberatory furnaces that clearly define when alternative THC standards would apply and how compliance with an alternative standard is monitored.

Response: The EPA has revised this final rule to require sources to meet a work practice standard that requires the development of standard operating procedures designed to minimize emissions of THC for each start-up and shutdown scenario anticipated for all units subject to THC emission limits. We considered whether temperature (the metric used to determine continuous compliance for the THC standard in this rule) or performance testing and enforcement of numeric emission limits would be practicable during periods of startup and shutdown. The EPA determined that there are a number of significant technical challenges associated with emissions measurements of THC emissions during periods of startup and shutdown for this industry. These challenges make establishing and complying with numerical emissions limits impracticable.

There are multiple factors informing this decision. Temperature is obviously an inappropriate measure to determine continuous compliances for these furnaces during periods of startup and shutdown when the furnaces are being heated during startup (or cooled during shutdown) from ambient to the steady state operating temperature. The furnaces are heated during periods of startup through slow feeding of natural gas and small amounts of coke with no lead acid batteries fed to the furnace. It is impossible for furnace exhaust to be maintained within the window prescribed by 40 CFR 63.548(h)(4) during periods of startup and shutdown. However, the inability to maintain this temperature in secondary lead smelter furnace exhaust does not indicate high emissions of THC during these periods. In fact, the emissions are likely minimal because there are no plastics being fed to the furnace and minimal fuel use (mostly natural gas). Temperature is thus not the appropriate measure of continuous compliance during these periods and we are unaware of another metric that can be used to determine continuous compliance with a numerical standard for these furnaces during startup and shutdown. In terms of staff scheduling, test crews would have to be on-site and ready to begin THC testing at the beginning of a period of startup or shutdown, have multiple test crews on site for startup or shutdown periods lasting longer than 12 hours, and be prepared to stop and restart measurements to coincide with process trips that can occur during startup and shutdown of secondary lead smelting furnaces. Since startups and shutdowns of these furnaces are not necessarily scheduled long in advance, scheduling such testing to coincide with the beginning of startup or shutdown periods would require having testing crews on-site nearly full time. These staff resource issues would dramatically increase the cost of testing during startup and shutdown periods.

For these technical and economic reasons, we have determined that conducting manual test methods during these secondary lead furnace startup or shutdown periods for THC to be impracticable within the meaning of CAA section 112(h)(2)(B). As a result, we have established a separate work practice standard for emissions of THC during periods of startup and shutdown. This work practice standard requires the development of standard operating procedures designed to minimize emissions of THC for each start-up and shutdown scenario anticipated for all units subject to THC limits.

This startup and shutdown work practice applies only to the THC emission limits. We have no reason to provide startup or shutdown provisions for emissions of lead from any source because the fabric filters used to control particulate and lead emissions are not less effective during startup or shutdown periods (nor would we expect sources to have any difficulty meeting the lead standard since lead-bearing feed is not charged during either startup

or shutdown conditions). Additionally, the metrics for determining continuous compliance with these standards are appropriate for periods of startup and shutdown. Therefore, we have established the separate work practice standard only for THC for periods of startup and shutdown.

During these periods, we do not believe dioxins and furans can form because there are no chlorinated plastics or flame-retardants being fed as these materials are only introduced as impurities with the lead feed material. Therefore, we have not included a standard for dioxins and furans during periods of startup and shutdown because these pollutants are not emitted.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a ''sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * *'' (40 CFR 63.2). The EPA has determined that malfunctions should not be viewed as a distinct operating mode and, therefore, any emissions that occur at such times do not need to be factored into development of CAA section 112(d) standards, which, once promulgated, apply at all times.

VI. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected facilities?

We anticipate that the 15 secondary lead smelting facilities currently or recently operating in the continental United States and Puerto Rico as well as one facility currently under construction in South Carolina will be affected by this final rule.

B. What are the air quality impacts?

The EPA estimated the emissions reductions that are expected to result from these final amendments to the 1997 NESHAP compared to the 2009 baseline emissions estimates calculated based on ICR data. The ICR data and RTR emissions memo are available in the docket to this action. A detailed documentation of the analysis can be found in the document in the docket titled: *Cost Impacts of the Revised NESHAP for the Secondary Lead Smelting Source Category.*

Emissions of lead and arsenic from secondary lead smelters have declined over the last 15 years as a result of federal rules, state rules and on the industry's own initiative. The final rule will cut lead and arsenic emissions by an estimated 68 percent from current actual emission levels based on the ICR data collected for this rulemaking. The final rule will result in estimated annual lead emissions reductions of 7.2 tpy from process and process fugitive sources and annual lead emissions reductions of 6.4 tpy from fugitive dust sources from 2009 baseline emissions (for a total annual reduction of 13.6 tons per year). The expected annual reduction in total metal HAP [8] is 8.2 tpy from process and process fugitive sources and the expected annual reduction is 7.2 tpy from fugitive dust sources (total annual metal HAP reductions are estimated at 15.4 tons). We estimate that these controls will also reduce emissions of particulate matter (PM) (combined total of fine and coarse PM) by 135 tpy.

Based on the emissions data available to the EPA, we believe that all facilities will be able to comply with the final emissions limits for THC and D/F without additional controls. However, we expect that emissions reductions will occur due to increased temperatures of afterburners and from improved work practices. Nevertheless, it is difficult to estimate accurate reductions from these actions and, therefore, we are not providing quantified estimates of reductions for THC and D/F.

C. What are the cost impacts?

As a result of this final rule, certain secondary lead smelting facilities are expected to incur capital costs for the following types of control measures: replacement of existing baghouses with new, higher-performing baghouses, replacement of bags in existing baghouses with better-performing materials, construction of new enclosures for processes not currently enclosed, modification of partially enclosed structures to meet the requirements of total enclosure, and installation of fabric filters on enclosures.

The capital costs for each facility were estimated based on the number and types of upgrades we estimate that facility will require. Each facility was evaluated for its ability to meet the final limits for lead emissions, THC emissions, D/F emissions, and fugitive dust emissions. The memorandum titled: *Cost Impacts of the Revised NESHAP for the Secondary Lead Smelting Source Category* includes a complete description of the cost estimate methods used for this analysis and is available in the docket.

The majority of the capital costs estimated for compliance with this action are for purchasing new enclosures and the associated control devices that would be required for these enclosures. For each facility, we estimated the square footage of new enclosures required based on the size of enclosures currently in place compared to facilities that we considered to be totally enclosed with a similar production capacity. We further assumed that the facilities that required a substantial degree of new enclosure would re-configure their facilities, particularly the storage areas, to reduce the footprint of areas subject to total enclosure requirements.

Based on our analysis of the facility configurations, seven facilities were considered already to be totally enclosed. Two facilities are currently installing enclosure structures and equipment that we anticipate will meet the requirements. Consequently, the capital costs do not include estimates for these nine facilities. We estimate that the remaining six facilities will require new building installations, thereby incurring capital costs. For the one facility currently under construction, we estimated one additional baghouse would be required.

Typical enclosure costs were estimated using information and algorithms from the Permanent Total Enclosures chapter in the EPA Air Pollution Control Cost Manual. New baghouse costs were estimated using a model based primarily on the cost information for recent baghouse installations submitted by facilities in the ICR survey. The total capital cost estimate for the enclosures, the ductwork system, and control devices at the seven facilities is approximately $38 million, at an annualized cost of $6.4 million in 2009 dollars (an average of about $1 million per facility).

We also estimated annual costs for the required work practices in this action. Based on the ICR survey information, we estimated that additional costs would be required to implement the work practices at 12 of the 16 facilities. The total annual costs to implement the fugitive emissions work practices are approximately $3 million per year.

For compliance with the stack lead concentration limit, we compared each stack emission point's lead concentration (reported to the EPA under the ICR) to the requirement of 1.0 mg/dscm of lead for any one stack. If the reported concentration exceeded 0.5 mg/dscm (one half the standard), we assumed that the facility would either

[8] Total metal HAP consists of antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

upgrade the baghouse with new bags and additional maintenance or completely replace the baghouse, depending on the age of the baghouse (as explained further below). This cost estimate presents an upper-end estimate of the cost impacts of the final rule that assumes facilities will strive to operate well below the standard to ensure process variability does not cause emission rates approaching the maximum level allowed by the standard. If the baghouse was less than 10 years old and the lead concentration in the outlet was not appreciably over one half the standard (*i.e.,* 0.5 mg/dscm), we assumed that the baghouse would require maintenance and bag replacement. If the baghouse was more than 10 years old and the lead concentration was appreciably over the standard, we assumed the baghouse would be replaced. We then compared each facility's emissions with the flow-weighted, facility-wide concentration limit of 0.20 mg/dscm using the assumption that baghouses needing replacement based on the 1.0 mg/dscm individual stack limit would be replaced with units that performed at least as well as the average baghouse identified in our data set. These analyses indicate that nine baghouses would need to be replaced, and two baghouses would require additional maintenance. To estimate costs, we used a model based primarily on the cost information submitted in the ICR for recent baghouse installations in this industry. We assumed an increase in maintenance cost based on more frequent bag changes (from once every 5 years to once every 2 years). The total capital cost for nine new baghouses at five facilities is estimated to be approximately $11.5 million, and total annual costs were estimated to be approximately $2.7 million.

New limits are being promulgated for THC and D/F emissions from reverberatory and electric furnaces. We anticipate all operating affected units will be able to meet the limits without installing additional controls; however, we have estimated additional costs of $260,000 per year for facilities to increase the temperature of their existing afterburners to ensure continuous compliance with the standards. (We also considered this additional energy use as part of our analysis of whether the standards are warranted under CAA section 112(d)(6). See *Cost Impacts of the Revised NESHAP for the Secondary Lead Smelting Source Category,* available in docket ID EPA–HQ–OAR–2011–0344, at page 7.)

The capital cost estimated for additional differential pressure monitors for total enclosures is $106,000. The cost for all additional monitoring and recordkeeping requirements, including the baghouse monitoring, is estimated at $791,000.

The total annualized costs for the final rule are estimated at $13.4 million (2009 dollars). Table 5 of this preamble provides a summary of the estimated costs and emissions reductions associated with the final amendments to the Secondary Lead Smelting NESHAP presented in today's action. More detail on the estimated costs of today's final rule can be found in *Cost Impacts of the revised NESHAP for the Secondary Lead Smelting Source Category,* available in the docket ID EPA–HQ–OAR–2011–0344.

TABLE 5—ESTIMATED COSTS AND REDUCTIONS FOR THE PROMULGATED STANDARDS IN THIS ACTION

Final amendment	Estimated capital cost ($MM)	Estimated annual cost ($MM)	Total HAP emissions reductions (tons per year)	Cost effectiveness in $ per ton total HAP reduction ($ per pound)
Revised stack lead emissions limit	11.5	2.7	8.2 of metal HAP[a] (7.2 of which is lead).	$0.33 MM per ton, ($170 per pound).
Total enclosure of fugitive emissions sources.	38	6.4	5.2 of metal HAP[a] (4.6 of which is lead).	$1.0 MM per ton, ($500 per pound).
Fugitive control work practices	0	3.0	2.0 of metal HAP[a] (1.8 of which is lead).	$1.5 MM per ton, ($750 per pound).
THC and D/F concentration limits	0	0.3	29.6[b]	$0.01 MM per ton.
Additional testing and monitoring	0.3	0.79	N/A	N/A.

[a] Metal HAP consisting of antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium.
[b] Based on total organic HAP reductions as a co-benefit of compliance with standards for dioxins and furans.

The EPA notes that the cost effectiveness of the controls for stack emissions of metal HAP are within the range of values the agency has determined to be reasonable in other section 112 rules. Indeed, EPA determined that a value of $175 per pound of metal HAP removed was reasonable when determining standards for the iron and steel foundry source category, an area source standard reflecting the less rigorous Generally Available Control Technology under section 112(d)(5). See 73 FR at 249. Thus, EPA regards the cost effectiveness of the standards for metal HAP here as reasonable, for purposes of the standards adopted pursuant to sections 112(f)(2) (ample margin of safety determination) and 112(d)(6). The measures required to control fugitive emissions are also cost effective, based largely on the fact that much of the industry has implemented some or all of the measures required in this final rule. The cost effectiveness for THC and D/F is presented as a point of information. Since those standards are MACT floor standards adopted pursuant to sections 112(d)(3), considerations of cost and cost-effectiveness played no part in EPA's consideration.

D. What are the economic impacts?

We performed an economic impact analysis for secondary lead consumers and producers nationally. Most secondary lead producers will incur annual compliance costs of much less than 1 percent of their sales, but one firm will incur costs of greater than 1 percent. Both demand and supply in this sector are generally inelastic to price changes as shown in the Economic Impact Analysis at page 4. Thus, if producers could pass through the entire cost of the rule to consumers, we would expect prices to increase by no more than one percent, with no change in output. Conversely, if producers could not pass through any of the cost by increasing the price, we would expect output to decline by less than one percent.

Hence, the overall economic impact of this proposed rule should be low on most of the affected industry and its consumers. For more information, please refer to the Economic Impact Analysis for this rulemaking that is in docket ID EPA–HQ–OAR–2011–0344.

E. What are the benefits?

The estimated reductions in lead emissions that will be achieved by this final rule will provide significant benefits to public health. For example, the EPA's 2008 Regulatory Impact Analysis (RIA) that was completed for the lead NAAQS (which is available in the docket for this action and also on the EPA's Web site) [9] described monetized benefits calculated for that action associated with reduced exposure to lead.

As noted in that RIA, there were also several other lead-related health effects for which the EPA was unable to quantify a monetized benefit—particularly among adults. These potential impacts included hypertension, non-fatal strokes, reproductive effects and premature mortality, among others.

When viewed in this context, the reductions in concentrations of ambient lead that will be achieved with this RTR for secondary lead smelters are expected to provide important benefits to both children and adults. The EPA did not quantify these benefits because this rule did not trigger the requirement for conducting an RIA under Executive Order 12866, in addition to resource and data limitations for this rule. However, as noted at proposal, this rule should result in areas attaining the lead NAAQS where the secondary lead smelting source dominates the areas' ambient lead concentrations. See 76 FR at 29063–64. Although these standards are not adopted to implement the lead NAAQS, and rest on legal and policy justifications that are unrelated to the requirements for adopting, revising, and implementing a NAAQS (*e.g.,* CAA sections 112(d)(2), (3), 6 and CAA section 112(f)(2) as opposed to CAA sections 107–110), nonetheless these rules will aid in the attainment of the lead NAAQS.[10]

In addition to the benefits likely to be achieved for lead reductions, we also estimate that this final RTR rule will achieve about 39 to 63 tons of reductions in $PM_{2.5}$ emissions as a co-benefit of the HAP reductions annually. See *Development of the RTR Emissions Dataset for the Secondary Lead Smelting Source Category* at section 8.3, which is available in the docket for information on how the $PM_{2.5}$ emission reductions were calculated based on total PM reductions. Reducing exposure to $PM_{2.5}$ is associated with significant human health benefits, including avoiding mortality and respiratory morbidity. Researchers have associated $PM_{2.5}$ exposure with adverse health effects in numerous toxicological, clinical and epidemiological studies (U.S. EPA, 2009).[11] When adequate data and resources are available and an RIA is required, the EPA generally quantifies several health effects associated with exposure to $PM_{2.5}$ (*e.g.,* U.S. EPA, 2010) [12]. These health effects include premature mortality for adults and infants, cardiovascular morbidities such as heart attacks, hospital admissions, and respiratory morbidities such as asthma attacks, acute and chronic bronchitis, hospital and emergency department visits, work loss days, restricted activity days, and respiratory symptoms. Although the EPA has not quantified certain outcomes including adverse effects on birth weight, pre-term births, pulmonary function and other cardiovascular and respiratory effects, the scientific literature suggests that exposure to $PM_{2.5}$ is also associated with these impacts (U.S. EPA, 2009).

Finally, the final rule will provide human health benefits through reductions in arsenic and cadmium emissions, as well as reductions in emissions of organic HAP (including dioxins and furans).

VII. Statutory and Executive Order Reviews

A. Executive Orders 12866: Regulatory Planning and Review, and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action.'' This action is a significant regulatory action because it raises novel legal and policy issues. Accordingly, the EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and Executive Order 13563 (76 FR 3821, January 21, 2011), and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

The information collection 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 the EPA has been assigned EPA ICR number 1686.09. The information collection requirements are not enforceable until OMB approves them. The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emissions standards. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to agency policies set forth in 40 CFR part 2, subpart B.

We are promulgating new paperwork requirements to the Secondary Lead Smelting source category in the form of stack testing for THC and D/F as described in 40 CFR 63.543(h)–(k). In conjunction with setting THC limits for reverberatory and electric furnaces, additional monitoring and recordkeeping is required for furnace outlet temperature on these units. We believe temperature monitors currently exist in these locations and that the facilities will not incur a capital cost due to this requirement (and received no comments to indicate otherwise). Additionally, increased monitoring is required for demonstrating negative pressure in all total enclosures. To provide the public with an estimate of the relative magnitude of the burden associated with an assertion of the affirmative defense position adopted by a source, the EPA has provided administrative adjustments to this ICR to show what the notification, recordkeeping and reporting requirements associated with the assertion of the affirmative defense might entail. The EPA's estimate for the required notification, reports and records for any individual incident, including the root cause analysis, totals $3,141 and is based on the time and effort required of a source to review relevant data, interview plant employees, and document the events surrounding a malfunction that has caused an exceedance of an emissions

[9] *http://www.epa.gov/ttn/ecas/regdata/RIAs/finalpbriach5.pdf.*

[10] It is possible that SIPs may require some of the same types of controls on these sources (or may rely on the controls in these rules as part of a control strategy). EPA cannot, of course, pre-judge the SIP process. What is clear is that this rule should contribute significantly to attainment of the lead NAAQS.

[11] U.S. Environmental Protection Agency (U.S. EPA). 2009. *Integrated Science Assessment for Particulate Matter* (Final Report). EPA–600–R–08–139F. National Center for Environmental Assessment—RTP Division. <*http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546*>.

[12] U.S. Environmental Protection Agency (U.S. EPA). 2010. *Regulatory Impact Analysis for the Proposed Federal Transport Rule.* Office of Air Quality Planning and Standards, Research Triangle Park, NC. <*http://www.epa.gov/ttn/ecas/regdata/RIAs/proposaltrria_final.pdf*>.

limit. The estimate also includes time to produce and retain the record and reports for submission to the EPA. The EPA provides this illustrative estimate of this burden because these costs are only incurred if there has been a violation and a source chooses to take advantage of the affirmative defense.

Given the variety of circumstances under which malfunctions could occur, as well as differences among sources' operation and maintenance practices, we cannot reliably predict the severity and frequency of malfunction-related excess emissions events for a particular source. It is important to note that the EPA has no basis currently for estimating the number of malfunctions for which an affirmative defense to penalties might be asserted. Current historical records would be an inappropriate basis, as source owners or operators previously operated their facilities in recognition that they were exempt from the requirement to comply with emissions standards during malfunctions. Of the number of excess emissions events reported by source operators, only a small number would be expected to result from a malfunction (based on the definition above), and only a subset of excess emissions caused by malfunctions would result in the source choosing to assert the affirmative defense. Thus we believe the number of instances in which source operators might be expected to assert the affirmative defense will be extremely small. For this reason, we estimate no more than 2 or 3 such occurrences for all sources subject to subpart X over the 3-year period covered by this ICR. We expect to gather information on such events in the future and will revise this estimate as better information becomes available. We estimate 16 regulated entities are currently subject to subpart X and will be subject to all standards. The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the standards) for these amendments to subpart X (Secondary Lead Smelting) is estimated to be $790,000 per year. This includes 1,600 labor hours per year at a total labor cost of $347,000 per year, and total non-labor capital and operation and maintenance (O&M) costs of $440,000 per year. This estimate includes performance tests, notifications, reporting, and recordkeeping associated with the new requirements for front-end process vents and back-end process operations. The total burden for the federal government (averaged over the first 3 years after the effective date of the standard) is estimated to be 1,150 hours per year at a total labor cost of $52,000 per year. Burden is defined at 5 CFR 1320.3(b).

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 the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When these ICRs are approved by OMB, the agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control numbers for the approved information collection requirements contained in the final rules.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) 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 will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (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 that is independently owned and operated and is not dominant in its field.

For this source category, which has the NAICS code 331419 (*i.e.,* Secondary Smelting and Refining of Nonferrous Metal (except copper and aluminum)), the SBA small business size standard is 750 employees according to the SBA small business standards definitions. We have estimated the cost impacts and have determined that the impacts do not constitute a significant economic impact on a substantial number of small entities (see: *Small Business Analysis for the Secondary Lead Smelting Source Category,* which is available in the docket for this action).

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. Two of the eight parent companies affected are considered a small entity per the definition provided in this section. However, we estimate that this action will not have a significant economic impact on those companies (see: *Small Business Analysis for the Secondary Lead Smelting Source Category).* All other affected parent companies are not small businesses according to the SBA small business size standard for the affected NAICS code (NAICS 331419).

Although this final rule will not have a significant economic impact on a substantial number of small entities, the EPA nonetheless has tried to reduce the impact of this rule on small entities. To reduce the impacts, we are promulgating stack limits for lead that allow sources to meet a standard based on aggregated emissions that are based on a weighted average approach (with each stack required to achieve a specified minimum level of control) and have been established at the least stringent levels that we estimate will still result in acceptable risks to public health with an ample margin of safety. Moreover, the compliance testing requirements were established in a way that minimizes the costs for testing and reporting while still providing the agency the necessary information needed to ensure continuous compliance with the standards. For more information, please refer to *Small Business Analysis for the Secondary Lead Smelting Source Category,* which is available in docket ID EPA–HQ–OAR–2011–0344.

D. Unfunded Mandates Reform Act

This action does not contain a federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local, or tribal governments or the private sector. The action would not result in expenditures of $100 million or more for state, local, and tribal governments, in aggregate, or the private sector in any 1 year. The action imposes no enforceable duties on any state, local or tribal governments or the private sector. Thus, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments nor does it impose obligations upon them.

E. Executive Order 13132: Federalism

This action 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. These final rules primarily affect private industry, and do not impose significant economic costs on state or local governments. Thus, Executive Order 13132 does not apply to this action.

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

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effect 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. Thus, Executive Order 13175 does not apply to this action.

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

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in Executive Order 12866. However, the agency does believe there is a disproportionate risk to children due to current emissions of lead from this source category. Children living near secondary lead smelters are the subpopulation most susceptible to effects of air-borne lead, as explained in detail in Section V.A above. The primary NAAQS for lead targets protection to this population, and is a reasonable measure for evaluating acceptability of risk here, again as explained in Section V.A. Modeled ambient air lead concentrations, based on actual emission levels, from about 9 of the 15 facilities in this source category are in excess of the NAAQS for lead. Also, the results of the demographic analysis indicate that of the 84,000 people exposed to a cancer risk greater than 1-in-1 million, the age 0 to 17 demographic percentage (of 30 percent) is 3 percentage points higher than the corresponding national percentage for this demographic group (of 27 percent). This suggests that children may be at a slightly disproportionate risk of exposure to cancer risks from this source category. However, the control measures promulgated in this notice will result in lead concentration levels at or below the lead NAAQS at all facilities, thereby mitigating the risk of future adverse health effects to children. See Section V.A of this preamble and the *Residual Risk Assessment for the Secondary Lead Smelting Source Category,* which is available in the docket for this action, for discussions of post-control risks.

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

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse energy effect on the supply, distribution, or use of energy. This action will not create any new requirements for sources in the energy supply, distribution, or use sectors. Further, we have concluded that these final rules are not likely to have any adverse energy effects (and indeed, rejected certain types of control options, such as standards based on use of wet electrostatic precipitators, in part because of adverse energy implications).

I. National Technology Transfer and Advancement Act

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

This action involves technical standards. The EPA requires use of ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses'' for its manual methods of measuring the oxygen or carbon dioxide content of the exhaust gas. These parts of ASME PTC 19.10–1981 are acceptable alternatives to EPA Method 3B. This standard is available from the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016–5990.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule.

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.

The 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.

To examine the potential for any environmental justice issues that might be associated with each source category, we evaluated the distributions of HAP related cancer and non-cancer risks across different social, demographic, and economic groups within the populations living near the facilities where these source categories are located. The development of demographic analyses to inform the consideration of environmental justice issues in EPA rulemakings is evolving.

In the case of Secondary Lead Smelting, we focused on populations within 50 km of the 15 facilities in this source category with emissions sources subject to the MACT standard. More specifically, for these populations we evaluated exposures to HAP that could result in cancer risks of 1-in-1 million or greater, or population exposures to ambient air lead concentrations above the level of the NAAQS for lead. We compared the percentages of particular demographic groups within the focused populations to the total percentages of those demographic groups nationwide. The results of this analysis are documented in the technical report: *Risk and Technology Review—Final Analysis of Socio-Economic Factors for Populations Living Near Secondary Lead Smelting Facilities* which can be found in the docket for this rulemaking. The actions in today's final rule will significantly decrease the risks due to HAP emissions from this source

category for all demographic groups and mitigate any disproportionate risks due to those emissions.

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 the 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 United States Senate, the United States 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). The final rules will be effective on January 5, 2012.

List of Subjects for 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: December 16, 2011.

Lisa P. Jackson,

Administrator.

For the reasons stated in the preamble, part 63 of title 40, chapter I, 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.*

■ 2. Section 63.14 is amended by revising paragraph (p)(2) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(p) * * *

(2) Office Of Air Quality Planning And Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, EPA–454/R–98–015, September 1997, IBR approved for §§ 63.548(e)(4), 63.7525(j)(2), and 63.11224(f)(2).

* * * * *

■ 3. Revise subpart X to read as follows:

Subpart X—National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting

Sec.

63.541 Applicability.
63.542 Definitions.
63.543 What are my standards for process vents?
63.544 What are my total enclosure standards?
63.545 What are my standards for fugitive dust sources?
63.546 Compliance dates.
63.547 Test methods.
63.548 Monitoring requirements.
63.549 Notification requirements.
63.550 Recordkeeping and reporting requirements.
63.551 Implementation and enforcement.
63.552 Affirmative defense to civil penalties for exceedance of emissions limit during malfunction.
Table 1 to Subpart X of Part 63—General Provisions Applicability to Subpart X
Table 2 to Subpart X of Part 63—Emissions Limits for Secondary Lead Smelting Furnaces
Table 3 to Subpart X of Part 63—Toxic Equivalency Factors

Subpart X—National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting

§ 63.541 Applicability.

(a) You are subject to this subpart if you own or operate any of the following affected sources at a secondary lead smelter: Blast, reverberatory, rotary, and electric furnaces; refining kettles; agglomerating furnaces; dryers; process fugitive emissions sources; buildings containing lead bearing materials; and fugitive dust sources. The provisions of this subpart do not apply to primary lead processors, lead refiners, or lead remelters.

(b) Table 1 to this subpart specifies the provisions of subpart A of this part that apply to owners and operators of secondary lead smelters subject to this subpart.

(c) If you are subject to the provisions of this subpart, you are also subject to title V permitting requirements under 40 CFR parts 70 or 71, as applicable.

(d) Emissions standards in this subpart apply at all times.

§ 63.542 Definitions.

Terms used in this subpart are defined in the Clean Air Act, in subpart A of this part, or in this section as follows:

Affected source means any of the following sources at a secondary lead smelter: Blast, reverberatory, rotary, and electric furnaces; refining kettles; agglomerating furnaces; dryers; process fugitive emissions sources; buildings containing lead bearing materials; and fugitive dust sources.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Agglomerating furnace means a furnace used to melt into a solid mass flue dust that is collected from a baghouse.

Bag leak detection system means an instrument that is capable of monitoring particulate matter (dust) loadings in the exhaust of a baghouse in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, transmittance or other effect to monitor relative particulate matter loadings.

Battery breaking area means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

Blast furnace means a smelting furnace consisting of a vertical cylinder atop a crucible, into which lead-bearing charge materials are introduced at the top of the furnace and combustion air is introduced through tuyeres at the bottom of the cylinder, and that uses coke as a fuel source and that is operated at such a temperature in the combustion zone (greater than 980 Celsius) that lead compounds are chemically reduced to elemental lead metal.

Blast furnace charging location means the physical opening through which raw materials are introduced into a blast furnace.

Collocated blast furnace and reverberatory furnace means operation at the same location of a blast furnace and a reverberatory furnace where the vent streams of the furnaces are mixed before cooling, with the volumetric flow rate discharged from the blast furnace being equal to or less than that discharged from the reverberatory furnace.

Dryer means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.

Dryer transition equipment means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.

Electric furnace means a smelting furnace consisting of a vessel into which reverberatory furnace slag is introduced and that uses electrical energy to heat the reverberatory furnace slag to such a temperature (greater than 980 Celsius) that lead compounds are reduced to elemental lead metal.

Fugitive dust source means a stationary source of hazardous air pollutant emissions at a secondary lead smelter that is not associated with a specific process or process fugitive vent or stack. Fugitive dust sources include, but are not limited to, roadways, storage piles, lead bearing material handling transfer points, lead bearing material transport areas, lead bearing material storage areas, other lead bearing material process areas, and buildings.

Furnace and refining/casting area means any area of a secondary lead smelter in which:

(1) Smelting furnaces are located;

(2) Refining operations occur; or

(3) Casting operations occur.

Lead alloy means an alloy in which the predominant component is lead.

Lead bearing material means material with a lead content equal to or greater than 5 mg/l as measured by EPA Method 1311 (Under Method 1311, only materials with at least 100 ppm lead will be considered to be lead bearing).

Leeward wall means the furthest exterior wall of a total enclosure that is opposite the windward wall.

Maintenance activity means any of the following routine maintenance and repair activities that could generate fugitive lead dust:

(1) Replacement or repair of refractory, or any internal or external part of equipment used to process, handle or control lead-containing materials.

(2) Replacement of any duct section used to convey lead-containing exhaust.

(3) Metal cutting or welding that penetrates the metal structure of any equipment, and its associated components, used to process lead-containing material such that lead dust within the internal structure or its components can become fugitive lead dust.

(4) Resurfacing, repair or removal of ground, pavement, concrete, or asphalt.

Materials storage and handling area means any area of a secondary lead smelter in which lead-bearing materials (including, but not limited to, broken battery components, reverberatory furnace slag, flue dust, and dross) are stored or handled between process steps including, but not limited to, areas in which materials are stored in open piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace.

Natural draft opening means any permanent opening in an enclosure that remains open during operation of the facility and is not connected to a duct in which a fan is installed.

New source means any affected source at a secondary lead smelting facility the construction or reconstruction of which is commenced after May 19, 2011. A building that is constructed for the purpose of controlling fugitive emissions from an existing source is not considered to be a new source.

Partial enclosure means a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter surrounding stored materials or process equipment to prevent the entrainment of particulate matter into the air.

Pavement cleaning means the use of vacuum equipment, water sprays, or a combination thereof to remove dust or other accumulated material from the paved areas of a secondary lead smelter.

Plant roadway means any area of a secondary lead smelter outside of a total enclosure that is subject to vehicle traffic, including traffic by forklifts, front-end loaders, or vehicles carrying whole batteries or cast lead ingots. Excluded from this definition are employee and visitor parking areas, provided they are not subject to traffic by vehicles carrying lead-bearing materials.

Pressurized dryer breaching seal means a seal system connecting the dryer transition pieces which is maintained at a higher pressure than the inside of the dryer.

Process fugitive emissions source means a source of hazardous air pollutant emissions at a secondary lead smelter that is associated with lead smelting or refining, but is not the primary exhaust stream from a smelting furnace, and is not a fugitive dust source. Process fugitive emissions sources include, but are not limited to, smelting furnace charging points, smelting furnace lead and slag taps, refining kettles, agglomerating furnaces, and drying kiln transition pieces.

Process vent means furnace vents, dryer vents, agglomeration furnace vents, vents from battery breakers, vents from buildings containing lead bearing material, and any ventilation system controlling lead emissions.

Refining kettle means an open-top vessel that is constructed of cast iron or steel and is indirectly heated from below and contains molten lead for the purpose of refining and alloying the lead. Included are pot furnaces, receiving kettles, and holding kettles.

Reverberatory furnace means a refractory-lined furnace that uses one or more flames to heat the walls and roof of the furnace and lead-bearing scrap to such a temperature (greater than 980 Celsius) that lead compounds are chemically reduced to elemental lead metal.

Rotary furnace (also known as a rotary reverberatory furnace) means a furnace consisting of a refractory-lined chamber that rotates about a horizontal axis and that uses one or more flames to heat the walls of the furnace and lead-bearing scrap to such a temperature (greater than 980 Celsius) that lead compounds are chemically reduced to elemental lead metal.

Secondary lead smelter means any facility at which lead-bearing scrap material, primarily, but not limited to, lead-acid batteries, is recycled into elemental lead or lead alloys by smelting.

Shutdown means the period when no lead bearing materials are being fed to the furnace and smelting operations have ceased during which the furnace is cooled from steady-state operating temperature to ambient temperature.

Smelting means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high-temperature (greater than 980 Celsius) furnaces including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

Startup means the period when no led bearing materials have been fed to the furnace and smelting operations have not yet commenced during which the furnace is heated from ambient temperature to steady-state operating temperature.

Total enclosure means a containment building that is completely enclosed with a floor, walls, and a roof to prevent exposure to the elements and to assure containment of lead bearing material with limited openings to allow access and egress for people and vehicles. The total enclosure must provide an effective barrier against fugitive dust emissions such that the direction of air flow through any openings is inward and the enclosure is maintained under constant negative pressure.

Vehicle wash means a device for removing dust and other accumulated material from the wheels, body, and underside of a vehicle to prevent the inadvertent transfer of lead contaminated material to another area of a secondary lead smelter or to public roadways.

Wet suppression means the use of water, water combined with a chemical surfactant, or a chemical binding agent to prevent the entrainment of dust into the air from fugitive dust sources.

Windward wall means the exterior wall of a total enclosure that is most impacted by the wind in its most prevailing direction determined by a wind rose using available data from the

closest representative meteorological station.

§ 63.543 What are my standards for process vents?

(a) For existing sources, you must maintain the concentration of lead compounds in any process vent gas at or below 1.0 milligrams of lead per dry standard cubic meter (0.00043 grains of lead per dry standard cubic foot). You must maintain the flow-weighted average concentration of lead compounds in vent gases from a secondary lead smelting facility at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot).

(1) You must demonstrate compliance with the flow weighted average emissions limit on a 12-month rolling average basis, calculated monthly using the most recent test data available.

(2) Until 12 monthly weighted average emissions rates have been accumulated, calculate only the monthly average weighted emissions rate.

(3) You must use Equation 1 of this section to calculate the flow-weighted average concentration of lead compounds from process vents:

$$C_{FWA} = \frac{\sum_{i=1}^{n} F_i \times C_i}{\sum_{i}^{n} F_i} \qquad \text{(Eq. 1)}$$

Where:

C_{FWA} = Flow-weighted average concentration of all process vents.

n = Number of process vents.

F_i = Flow rate from process vent *i* in dry standard cubic feet per minute, as measured during the most recent compliance test.

C_i = Concentration of lead in process vent *i,* as measured during the most recent compliance test.

(4) Each month, you must use the concentration of lead and flow rate obtained during the most recent compliance test performed prior to or during that month to perform the calculation using Equation 1 of this section.

(5) If a continuous emissions monitoring system (CEMS) is used to measure the concentration of lead in a vent, the monthly average lead concentration and monthly average flow rate must be used rather than the most recent compliance test data.

(b) For new sources that begin construction or reconstruction after May 19, 2011 you must maintain the concentration of lead compounds in any process vent gas at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot).

(c) You must meet the applicable emissions limits for total hydrocarbons and dioxins and furans from furnace sources specified in Table 2 of this subpart. There are no standards for dioxins and furans during periods of startup and shutdown.

(d) If you combine furnace emissions from multiple types of furnaces and these furnaces do not meet the definition of collocated blast and reverberatory furnaces, you must calculate your emissions limit for the combined furnace stream using Equation 2 of this section.

$$C_{EL} = \frac{\sum_{i=1}^{n} F_i \times C_{ELi}}{\sum_{i}^{n} F_i} \qquad \text{(Eq. 2)}$$

Where:

C_{EL} = Flow-weighted average emissions limit (concentration) of combined furnace vents.

n = Number of furnace vents.

F_i = Flow rate from furnace vent i in dry standard cubic feet per minute.

C_{Eli} = Emissions limit (concentration) of pollutant in furnace vent i as specified in Table 2 of this subpart.

(e) If you combine furnace emissions with the furnace charging process fugitive emissions and discharge them to the atmosphere through a common emissions point, you must demonstrate compliance with the applicable total hydrocarbons concentration limit specified in paragraph (c) of this section at a location downstream from the point at which the two emissions streams are combined.

(f) If you do not combine the furnace charging process fugitive emissions with the furnace process emissions, and discharge such emissions to the atmosphere through separate emissions points, you must maintain the total hydrocarbons concentration in the exhaust gas at or below 20 parts per million by volume, expressed as propane and corrected to 4 percent carbon dioxide.

(g) Following the initial performance or compliance test to demonstrate compliance with the lead emissions limits specified in paragraph (a) or (b) of this section, you must conduct performance tests according to the schedule in paragraph (g)(1) or (2) of this section.

(1) Conduct an annual performance test for lead compounds from each process vent (no later than 12 calendar months following the previous compliance test), unless you install and operate a CEMS meeting the requirements of § 63.8.

(2) If an annual compliance test demonstrates that a process vent emitted lead compounds at 0.10 milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, you may submit a written request to the Administrator applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(h) Following the initial performance or compliance test to demonstrate compliance with the total hydrocarbons emissions limits in paragraphs (c) and (f) of this section, you must conduct an annual performance test for total hydrocarbons emissions from each process vent that has established limits for total hydrocarbons (no later than 12 calendar months following the previous compliance test), unless you install and operate a CEMS meeting the requirements of § 63.8. If an annual compliance test demonstrates that a process vent emitted total hydrocarbons at less than 50 percent of the allowable limit during the time of the annual compliance test, you may submit a written request to the Administrator applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for total hydrocarbons.

(i) Following the initial performance or compliance test to demonstrate compliance with the dioxins and furans emissions limits specified in paragraph (c) of this section, you must conduct a performance test for dioxins and furans emissions from each process vent that has established limits for dioxins and furans at least once every 6 years following the previous compliance test.

(j) You must conduct the performance tests specified in paragraphs (g) through (i) of this section under maximum representative operating conditions for the process. During the performance test, you may operate the control device at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(k) At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for

minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(l) If you own or operate a unit subject to emission limits in Table 2 of this subpart, you must minimize the unit's startup and shutdown periods following the manufacturer's recommended procedures, if available. You must develop and follow standard operating procedures designed to minimize emissions of total hydrocarbon for each startup or shutdown scenario anticipated. You must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures, if available, and the standard operating procedures designed to minimize emissions of total hydrocarbons.

(m) In addition to complying with the applicable emissions limits for dioxins and furans listed in Table 2 to this subpart, you must operate a process to separate plastic battery casing materials from all automotive batteries prior to introducing feed into a furnace.

§ 63.544 What are my total enclosure standards?

(a) You must operate the process fugitive emissions sources and fugitive dust sources listed in paragraphs (a)(1) through (9) of this section in a total enclosure that is maintained at negative pressure at all times and vented to a control device designed to capture lead particulate. The total enclosure must meet the requirements specified in paragraph (c) of this section.

(1) Smelting furnaces.

(2) Smelting furnace charging areas.

(3) Lead taps, slag taps, and molds during tapping.

(4) Battery breakers.

(5) Refining kettles, casting areas.

(6) Dryers.

(7) Agglomerating furnaces and agglomerating furnace product taps.

(8) Material handling areas for any lead bearing materials except those listed in paragraph (b) of this section.

(9) Areas where dust from fabric filters, sweepings or used fabric filters are processed.

(b) Total enclosures are not required in the following areas: lead ingot product handling areas, stormwater and wastewater treatment areas, intact battery storage areas, areas where lead bearing material is stored in closed containers or enclosed mechanical conveyors, and areas where clean battery casing material is handled.

(c) You must construct and operate total enclosures for the sources listed in paragraph (a) of this section as specified in paragraphs (c)(1) and (2) of this section. The total enclosure must be free of significant cracks, gaps, corrosion or other deterioration that could cause lead bearing material to be released from the primary barrier. Measures must be in place to prevent the tracking of lead bearing material out of the unit by personnel or by equipment used in handling the material. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed.

(1) You must ventilate the total enclosure continuously to ensure negative pressure values of at least 0.013 mm of mercury (0.007 inches of water).

(2) You must maintain an inward flow of air through all natural draft openings.

(d) You must inspect enclosures and facility structures that contain any lead-bearing materials at least once per month. You must repair any gaps, breaks, separations, leak points or other possible routes for emissions of lead to the atmosphere within one week of identification unless you obtain approval for an extension from the Administrator before the repair period is exceeded.

§ 63.545 What are my standards for fugitive dust sources?

(a) You must prepare, and at all times operate according to, a standard operating procedures manual that describes in detail the measures that will be put in place and implemented to control the fugitive dust emissions from the sources listed in paragraphs (a)(1) through (7) of this section.

(1) Plant roadways.

(2) Plant buildings.

(3) Accidental releases.

(4) Battery storage area.

(5) Equipment maintenance.

(6) Material storage areas.

(7) Material handling areas.

(b) You must submit the standard operating procedures manual to the Administrator or delegated authority for review and approval when initially developed and any time changes are made.

(c) The controls specified in the standard operating procedures manual must at a minimum include the requirements specified in paragraphs (c)(1) through (7) of this section.

(1) *Cleaning.* Where a cleaning practice is specified, you must clean by wet wash or a vacuum equipped with a filter rated by the manufacturer to achieve 99.97 percent capture efficiency for 0.3 micron particles in a manner that does not generate fugitive lead dust.

(2) *Plant roadways and paved areas.* You must pave all areas subject to vehicle traffic and you must clean the pavement twice per day, except on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow. Limited access and limited use roadways such as unpaved roads to remote locations on the property may be exempt from this requirement if they are used infrequently (no more than one round trip per day).

(3) *Accidental releases.* You must initiate cleaning of all affected areas within one hour after detection of any accidental release of lead dust that exceeds 10 pounds (the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) reportable quantity for lead at 40 CFR 302.4).

(4) *Battery storage areas.* You must inspect any batteries that are not stored in a total enclosure once each week and move any broken batteries to an enclosure within 72 hours of identification. You must clean residue from broken batteries within 72 hours of identification.

(5) *Materials storage and handling areas.* You must wash each vehicle at each exit of the material storage and handling areas. The vehicle wash must include washing of tires, undercarriage and exterior surface of the vehicle followed by vehicle inspection.

(6) *Equipment maintenance.* You must perform all maintenance activities that could generate lead dust in a manner that minimizes emissions of fugitive dust. This must include one or more of the following:

(i) Performing maintenance inside a total permanent enclosure maintained at negative pressure.

(ii) Performing maintenance inside a temporary enclosure and use a vacuum system either equipped with a filter rated by the manufacturer to achieve a capture efficiency of 99.97 percent for 0.3 micron particles or routed to an existing control device permitted for this activity.

(iii) Performing maintenance inside a partial enclosure and use of wet suppression sufficient to prevent dust formation.

(iv) Decontamination of equipment prior to removal from an enclosure.

(v) Immediate repair of ductwork or structure leaks without an enclosure if the time to construct a temporary

enclosure would exceed the time to make a temporary or permanent repair, or if construction of an enclosure would cause a higher level of emissions than if an enclosure were not constructed.

(vi) Activities required for inspection of fabric filters and maintenance of filters that are in need of removal and replacement are not required to be conducted inside of total enclosures. Used fabric filters must be placed in sealed plastic bags or containers prior to removal from a baghouse.

(7) *Material transport.* You must collect and transport all lead bearing dust (*i.e.* lead bearing material which is a dust) within closed conveyor systems or in sealed, leak-proof containers unless the collection and transport activities are contained within a total enclosure. All other lead bearing material must be contained and covered for transport outside of a total enclosure in a manner that prevents spillage or dust formation. Intact batteries and lead ingot product are exempt from the requirement to be covered for transport.

(d) Your standard operating procedures manual must specify that records be maintained of all pavement cleaning, vehicle washing, and battery storage inspection activities performed to control fugitive dust emissions.

(e) You must pave all grounds on the facility or plant groundcover sufficient to prevent wind-blown dust. You may use dust suppressants on unpaved areas that will not support a groundcover (*e.g.,* roadway shoulders, steep slopes, limited access and limited use roadways).

(f) As provided in § 63.6(g), as an alternative to the requirements specified in this section, you can demonstrate to the Administrator (or delegated State, local, or Tribal authority) that an alternative measure(s) is equivalent or better than a practice(s) described in this section.

§ 63.546 Compliance dates.

(a) For affected sources that commenced construction or reconstruction on or before May 19, 2011, you must demonstrate compliance with the requirements of this subpart no later than January 6, 2014.

(b) For affected sources that commenced construction or reconstruction after May 19, 2011, you must demonstrate compliance with the requirements of this subpart by January 5, 2012 or upon startup of operations, whichever is later.

§ 63.547 Test methods.

(a) You must use the test methods from appendix A of part 60 as listed in paragraphs (a)(1) through (5) of this section to determine compliance with the emissions standards for lead compounds specified in § 63.543(a) and (b).

(1) EPA Method 1 at 40 CFR part 60, appendix A–1 to select the sampling port location and the number of traverse points.

(2) EPA Method 2 at 40 CFR part 60, appendix A–1 or EPA Method 5D at 40 CFR part 60, appendix A–3, section 8.3 for positive pressure fabric filters, to measure volumetric flow rate.

(3) EPA Method 3, 3A, or 3B at 40 CFR part 60, appendix A–2 to determine the dry molecular weight of the stack gas.

(4) EPA Method 4 at 40 CFR part 60, appendix A–3 to determine moisture content of the stack gas.

(5) EPA Method 12 or Method 29 at 40 CFR part 60, appendix A–8 to determine compliance with the lead compound emissions standards. The minimum sample volume must be 2.0 dry standard cubic meters (70 dry standard cubic feet) for each run. You must perform three test runs and you must determine compliance using the average of the three runs.

(b) You must use the following test methods in appendix A of part 60 listed in paragraphs (b)(1) through (4) of this section, as specified, to determine compliance with the emissions standards for total hydrocarbons specified in § 63.543(c) through (f).

(1) EPA Method 1 at 40 CFR part 60, appendix A–1 to select the sampling port location and number of traverse points.

(2) The Single Point Integrated Sampling and Analytical Procedure of Method 3B to measure the carbon dioxide content of the stack gases when using either EPA Method 3A or 3B at 40 CFR part 60, appendix A–2.

(3) EPA Method 4 at 40 CFR part 60, appendix A–3 to measure moisture content of the stack gases.

(4) EPA Method 25A at 40 CFR part 60, appendix A–7 to measure total hydrocarbons emissions. The minimum sampling time must be 1 hour for each run. You must perform a minimum of three test runs. You must calculate a 1-hour average total hydrocarbons concentration for each run and use the average of the three 1-hour averages to determine compliance.

(c) You must correct the measured total hydrocarbons concentrations to 4 percent carbon dioxide as specified in paragraphs (c)(1) through (3) of this section.

(1) If the measured percent carbon dioxide is greater than 0.4 percent in each compliance test, you must determine the correction factor using Equation 2 of this section.

$$F = \frac{4.0}{CO_2} \qquad \text{(Eq. 2)}$$

Where:

F = Correction factor (no units).

CO_2 = Percent carbon dioxide measured using EPA Method 3A or 3B at 40 CFR part 60, appendix A–2, where the measured carbon dioxide is greater than 0.4 percent.

(2) If the measured percent carbon dioxide is equal to or less than 0.4 percent, you must use a correction factor (F) of 10.

(3) You must determine the corrected total hydrocarbons concentration by multiplying the measured total hydrocarbons concentration by the correction factor (F) determined for each compliance test.

(d) You must use the following test methods in appendix A of part 60 listed in paragraphs (d)(1) through (5) of this section, as specified, to determine compliance with the emissions standards for dioxins and furans specified in § 63.543(c).

(1) EPA Method 1 at 40 CFR part 60, appendix A–1 to select the sampling port location and the number of traverse points.

(2) EPA Method 2 at 40 CFR part 60, appendix A–1 or EPA Method 5D at 40 CFR part 60, appendix A–3, section 8.3 for positive pressure fabric filters to measure volumetric flow rate.

(3) EPA Method 3A or 3B at 40 CFR part 60, appendix A–2 to determine the oxygen and carbon dioxide concentrations of the stack gas.

(4) EPA Method 4 at 40 CFR part 60, appendix A–3 to determine moisture content of the stack gas.

(5) EPA Method 23 at 40 CFR part 60, appendix A–7 to determine the dioxins and furans concentration.

(e) You must determine the dioxins and furans toxic equivalency by following the procedures in paragraphs (e)(1) through (3) of this section.

(1) Measure the concentration of each dioxins and furans congener shown in Table 3 of this subpart using EPA Method 23 at 40 CFR part 60, appendix A–7. You must correct the concentration of dioxins and furans in terms of toxic equivalency to 7 percent O_2 using Equation 3 of this section.

$$Cadj = \frac{Cmeas(20.9-7)}{(20.9-\%O2)} \qquad \text{(Eq. 3)}$$

Where:

C_{adj} = Dioxins and furans concentration adjusted to 7 percent oxygen.

C_{meas} = Dioxins and furans concentration measured in nanograms per dry standard cubic meter.

(20.9–7) = 20.9 percent oxygen—7 percent oxygen (defined oxygen correction basis).

20.9 = Oxygen concentration in air, percent.

$\%O_2$ = Oxygen concentration measured on a dry basis, percent.

(2) For each dioxins and furans congener measured as specified in paragraph (e)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 to this subpart.

(3) Sum the values calculated as specified in paragraph (e)(2) of this section to obtain the total concentration of dioxins and furans emitted in terms of toxic equivalency.

§ 63.548 Monitoring requirements.

(a) You must prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters or cartridge filters) that are used to control process vents, process fugitive, or fugitive dust emissions from any source subject to the lead emissions standards in §§ 63.543, 63.544, and 63.545, including those used to control emissions from building ventilation.

(b) You must submit the standard operating procedures manual for baghouses required by paragraph (a) of this section to the Administrator or delegated authority for review and approval.

(c) The procedures that you specify in the standard operating procedures manual for inspections and routine maintenance must, at a minimum, include the requirements of paragraphs (c)(1) through (9) of this section.

(1) Daily monitoring of pressure drop across each baghouse cell.

(2) Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms.

(3) Daily check of compressed air supply for pulse-jet baghouses.

(4) An appropriate methodology for monitoring cleaning cycles to ensure proper operation.

(5) Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.

(6) Monthly check of bag tension on reverse air and shaker-type baghouses. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.

(7) Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks.

(8) Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means.

(9) Except as provided in paragraphs (g) and (h) of this section, continuous operation of a bag leak detection system, unless a system meeting the requirements of paragraph (m) of this section for a continuous emissions monitoring system is installed for monitoring the concentration of lead.

(d) The procedures you specify in the standard operating procedures manual for baghouse maintenance must include, at a minimum, a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance.

(e) The bag leak detection system required by paragraph (c)(9) of this section, must meet the specification and requirements of paragraphs (e)(1) through (8) of this section.

(1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative particulate matter loadings.

(3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level.

(4) You must install and operate the bag leak detection system in a manner consistent with the guidance provided in ''Office of Air quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance'' EPA–454/R–98–015, September 1997 (incorporated by reference, see § 63.14) and the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.

(5) The initial adjustment of the system must, at a 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 and the alarm delay time.

(6) Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved standard operating procedures manual required under paragraph (a) of this section. You cannot increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection that demonstrates that the baghouse is in good operating condition.

(7) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, you must install the bag leak detector downstream of the baghouse and upstream of any wet acid gas scrubber.

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

(f) You must include in the standard operating procedures manual required by paragraph (a) of this section a corrective action plan that specifies the procedures to be followed in the case of a bag leak detection system alarm. The corrective action plan must include, at a minimum, the procedures that you will use to determine and record the time and cause of the alarm as well as the corrective actions taken to minimize emissions as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm.

(2) The cause of the alarm must be alleviated by taking the necessary corrective action(s) that may include, but not be limited to, those listed in paragraphs (f)(2)(i) through (vi) of this section.

(i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction 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 compartment.

(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.

(g) Baghouses equipped with high efficiency particulate air (or HEPA) filters as a secondary filter used to control emissions from any source subject to the lead emission standards in § 65.543(a) or (b), are exempt from the requirement to be equipped with a bag leak detection system. You must monitor and record the pressure drop across each HEPA filter system daily. If the pressure drop is outside the limit(s) specified by the filter manufacturer, you must take appropriate corrective measures, which may include but not be limited to those given in paragraphs (g)(1) through (4) of this section.

(1) Inspecting the filter and filter housing for air leaks and torn or broken filters.

(2) Replacing defective filter media, or otherwise repairing the control device.

(3) Sealing off a defective control device by routing air to other control devices

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

(h) Baghouses followed by a wet electrostatic precipitator used as a secondary control device for any source subject to the lead emission standards in § 63.543(a) or (b), are exempt from the requirement to be equipped with a bag leak detection system.

(i) If you use a wet scrubber to control particulate matter and metal hazardous air pollutant emissions from a process vent to demonstrate continuous compliance with the emissions standards, you must monitor and record the pressure drop and water flow rate of the wet scrubber during the initial performance or compliance test conducted to demonstrate compliance with the lead emissions limit under § 63.543(a) or (b). Thereafter, you must monitor and record the pressure drop and water flow rate values at least once every hour and you must maintain the pressure drop and water flow rate at levels no lower than 30 percent below the pressure drop and water flow rate measured during the initial performance or compliance test.

(j) You must comply with the requirements specified in paragraphs (j)(1) through (4) of this section to demonstrate continuous compliance with the total hydrocarbons and dioxins and furans emissions standards. During periods of startup and shutdown, the requirements of paragraph (j)(4) of this section do not apply. Instead, you must demonstrate compliance with the standard for total hydrocarbon by meeting the requirements of § 63.543(l).

(1) Continuous temperature monitoring. You must install, calibrate, maintain, and continuously operate a device to monitor and record the temperature of the afterburner or furnace exhaust streams consistent with the requirements for continuous monitoring systems in § 63.8.

(2) Prior to or in conjunction with the initial performance or compliance test to determine compliance with § 63.543(c), you must conduct a performance evaluation for the temperature monitoring device according to § 63.8(e). The definitions, installation specifications, test procedures, and data reduction procedures for determining calibration drift, relative accuracy, and reporting described in Performance Specification 2, 40 CFR part 60, appendix B, sections 2, 3, 5, 7, 8, 9, and 10 must be used to conduct the evaluation. The temperature monitoring device must meet the following performance and equipment specifications:

(i) The recorder response range must include zero and 1.5 times the average temperature identified in paragraph (j)(3) of this section.

(ii) The monitoring system calibration drift must not exceed 2 percent of 1.5 times the average temperature identified in paragraph (j)(3) of this section.

(iii) The monitoring system relative accuracy must not exceed 20 percent.

(iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference, subject to the approval of the Administrator.

(3) You must monitor and record the temperature of the afterburner or the furnace exhaust streams every 15 minutes during the initial performance or compliance test for total hydrocarbons and dioxins and furans and determine an arithmetic average for the recorded temperature measurements.

(4) To demonstrate continuous compliance with the standards for total hydrocarbons and dioxins and furans, you must maintain an afterburner or exhaust temperature such that the average temperature in any 3-hour period does not fall more than 28 °Celsius (50 °Fahrenheit) below the average established in paragraph (j)(3) of this section.

(k) You must install, operate, and maintain a digital differential pressure monitoring system to continuously monitor each total enclosure as described in paragraphs (k)(1) through (5) of this section.

(1) You must install and maintain a minimum of one building digital differential pressure monitoring system at each of the following three walls in each total enclosure that has a total ground surface area of 10,000 square feet or more:

(i) The leeward wall.

(ii) The windward wall.

(iii) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus ten meters of the midpoint of a straight line between the two other monitors specified. The midpoint monitor must not be located on the same wall as either of the other two monitors.

(2) You must install and maintain a minimum of one building digital differential pressure monitoring system at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet.

(3) The digital differential pressure monitoring systems must be certified by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 millimeters mercury (0.005 to 0.11 inches of water) with a minimum accuracy of plus or minus 0.001 millimeters of mercury (0.0005 inches of water).

(4) You must equip each digital differential pressure monitoring system with a continuous recorder.

(5) You must calibrate each digital differential pressure monitoring system in accordance with manufacturer's specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.

(l) Except as provided in paragraphs (l)(2) or (3) of this section, all new or reconstructed sources subject to the requirements under § 63.543 must install, calibrate, maintain, and operate a CEMS for measuring lead emissions. In addition to the General Provisions requirements for CEMS in § 63.8(c) that are referenced in Table 1 to this subpart, you must comply with the requirements for CEMS specified in paragraph (m) of this section.

(1) Sources subject to the emissions limits for lead compounds under § 63.543(b) must install a CEMS for measuring lead emissions within 180 days of promulgation by the EPA of performance specifications for lead CEMS.

(2) Prior to 180 days after the EPA promulgates performance specifications

for CEMS used to measure lead concentrations, you must use the procedure described in § 63.543(g)(1) to determine compliance.

(3) Vents from control devices that serve only to control emissions from buildings containing lead bearing materials are exempt from the requirement to install a CEMS for measuring lead emissions.

(m) If a CEMS is used to measure lead emissions, you must install a continuous emissions monitoring system with a sensor in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the CEMS used to measure lead emissions, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate.

(1) The continuous emissions monitoring system must be designed to measure the exhaust gas flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust gas flow rate.

(2) The continuous emissions monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (m)(1) of this section.

(3) You must perform an initial relative accuracy test of the continuous emissions monitoring system in accordance with the applicable Performance Specification in appendix B to part 60 of this chapter.

(4) You must operate the continuous emissions monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments.

(5) If you have a CEMS to measure lead emissions, you must calculate the average lead concentration and flow rate monthly to determine compliance with § 63.543(a).

(6) When the continuous emissions monitoring system is unable to provide quality assured data, the following apply:

(i) When data are not available for periods of up to 48 hours, the highest recorded hourly emissions rate from the previous 24 hours must be used.

(ii) When data are not available for 48 or more hours, the maximum daily emissions rate based on the previous 30 days must be used.

§ 63.549 Notification requirements.

(a) You must comply with all of the notification requirements of § 63.9. Electronic notifications are encouraged if suitable for the specific case (*e.g.,* by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by this subpart.

(b) You must submit the fugitive dust control standard operating procedures manual required under § 63.545(a) and the standard operating procedures manual for baghouses required under § 63.548(a) to the Administrator or delegated authority along with a notification that the smelter is seeking review and approval of these plans and procedures. You must submit this notification no later than January 7, 2013. For sources that commenced construction or reconstruction after January 5, 2012, you must submit this notification no later than 180 days before startup of the constructed or reconstructed secondary lead smelter, but no sooner than January 5, 2012. For an affected source that has received a construction permit from the Administrator or delegated authority on or before January 5, 2012, you must submit this notification no later than January 7, 2014.

§ 63.550 Recordkeeping and reporting requirements.

(a) You must comply with all of the recordkeeping and reporting requirements specified in § 63.10 that are referenced in Table 1 to this subpart.

(1) Records must be maintained in a form suitable and readily available for expeditious review, according to § 63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (*e.g.,* by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by this subpart.

(2) Records must be kept on site for at least 2 years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

(b) The standard operating procedures manuals required in §§ 63.545(a) and 63.548(a) must be submitted to the Administrator in electronic format for review and approval of the initial submittal and whenever an update is made to the procedure.

(c) You must maintain for a period of 5 years, records of the information listed in paragraphs (c)(1) through (13) of this section.

(1) Electronic records of the bag leak detection system output.

(2) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the corrective actions taken, and the date and time the cause of the alarm was corrected.

(3) All records of inspections and maintenance activities required under § 63.548(c) as part of the practices described in the standard operating procedures manual for baghouses required under § 63.548(a).

(4) Electronic records of the pressure drop and water flow rate values for wet scrubbers used to control metal hazardous air pollutant emissions from process fugitive sources as required in § 63.548(i).

(5) Electronic records of the output from the continuous temperature monitor required in § 63.548(j)(1), and an identification of periods when the 3-hour average temperature fell below the minimum established under § 63.548(j)(4), and an explanation of the corrective actions taken.

(6) Electronic records of the continuous pressure monitors for total enclosures required in § 63.548(k), and an identification of periods when the pressure was not maintained as required in § 63.544(c)(1).

(7) Records of any time periods power was lost to the continuous pressure monitors for total enclosures required in § 63.548(k) and records of loss of power to the air handling system maintaining negative pressure on total enclosures.

(8) Records of the inspections of facility enclosures required in § 63.544(d).

(9) Records of all cleaning and inspections required as part of the practices described in the standard operating procedures manual required under § 63.545(a) for the control of fugitive dust emissions.

(10) Electronic records of the output of any CEMS installed to monitor lead emissions meeting the requirements of § 63.548(m).

(11) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control equipment and monitoring equipment.

(12) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(13) Records of any periods of startup or shutdown of a furnace and actions taken to minimize emissions during that period in accordance with § 63.543(l).

(d) You must comply with all of the reporting requirements specified in § 63.10 of the General Provisions that are referenced in Table 1 to this subpart.

(1) You must submit reports no less frequent than specified under § 63.10(e)(3) of the General Provisions.

(2) Once a source reports a violation of the standard or excess emissions, you must follow the reporting format required under § 63.10(e)(3) until a request to reduce reporting frequency is approved by the Administrator.

(e) In addition to the information required under the applicable sections of § 63.10, you must include in the reports required under paragraph (d) of this section the information specified in paragraphs (e)(1) through (14) of this section.

(1) Records of the concentration of lead in each process vent, and records of the rolling 12-month flow-weighted average concentration of lead compounds in vent gases calculated monthly as required in § 63.543(a), except during the first year when the concentration is calculated using the method described in § 63.543(a)(2).

(2) Records of the concentration of total hydrocarbon and dioxins and furans in each process vent that has established limits for total hydrocarbon and dioxins and furans as required in § 63.543(c).

(3) Records of all periods when monitoring using a CEMS for lead or total hydrocarbon was not in compliance with applicable limits.

(4) Records of all alarms from the bag leak detection system specified in § 63.548.

(5) A description of the procedures taken following each bag leak detection system alarm pursuant to § 63.548(f)(1) and (2).

(6) A summary of the records maintained as part of the practices described in the standard operating procedures manual for baghouses required under § 63.548(a), including an explanation of the periods when the procedures were not followed and the corrective actions taken.

(7) An identification of the periods when the pressure drop and water flow rate of wet scrubbers used to control process fugitive sources dropped below the levels established in § 63.548(i), and an explanation of the corrective actions taken.

(8) Records of the temperature monitor output, in 3-hour block averages, for those periods when the temperature monitored pursuant to § 63.548(j) fell below the level established in § 63.548(j)(4).

(9) Certification that the plastic separation process for battery breakers required in § 63.543(m) was operated at all times the battery breaker was in service.

(10) Records of periods when the pressure was not maintained as required in § 63.544(c) or power was lost to the continuous pressure monitoring system as required in § 63.548(k).

(11) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with § 63.543(k), including actions taken to correct a malfunction.

(12) A summary of the fugitive dust control measures performed during the required reporting period, including an explanation of the periods when the procedures outlined in the standard operating procedures manual pursuant to § 63.545(a) were not followed and the corrective actions taken. The reports must not contain copies of the daily records required to demonstrate compliance with the requirements of the standard operating procedures manuals required under § 63.545(a).

(13) Records of any periods of startup or shutdown of a furnace including an explanation of the periods when the procedures required in § 63.543(l) were not followed and the corrective actions taken.

(14) You must submit records pursuant to paragraphs (e)(14)(i) through (iii) of this section.

(i) As of January 1, 2012 and within 60 days after the date of completing each performance test, as defined in § 63.2 and as required in this subpart, you must submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/ert_tool.html/*). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(ii) Within 60 days after the date of completing each CEMS performance evaluation test, as defined in § 63.2 and required by this subpart, you must submit the relative accuracy test audit data electronically into EPA's Central Data Exchange by using the Electronic Reporting Tool as mentioned in paragraph (e)(14)(i) of this section. Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(iii) All reports required by this subpart not subject to the requirements in paragraph (e)(14)(i) and (ii) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.,* by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (e)(14)(i) and (ii) of this section in paper format.

§ 63.551 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§ 63.541, 63.543 through 63.544, § 63.545, and § 63.546.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

§ 63.552 Affirmative defense to civil penalties for exceedance of emissions limit during malfunction.

In response to an action to enforce the standards set forth in this subpart, you may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) *Affirmative defense.* To establish the affirmative defense in any action to enforce such a limit, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The excess emissions:

(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner.

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices.

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for.

(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance.

(2) Repairs were made as expeditiously as possible when the applicable emissions limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs.

(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions.

(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

(5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health.

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices.

(7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs.

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions.

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) *Notification.* The owner or operator of the affected source experiencing an exceedance of its emissions limit(s) during a malfunction, shall notify the Administrator by telephone or facsimile transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense, shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45-day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

TABLE 1 TO SUBPART X OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART X

Reference	Applies to subpart X	Comment
63.1	Yes.	
63.2	Yes.	
63.3	Yes.	
63.4	Yes.	
63.5	Yes.	
63.6(a), (b), (c)	Yes.	
63.6(d)	No.	Section reserved.
63.6(e)(1)(i)	No.	See 63.543(k) for general duty requirement.
63.6(e)(1)(ii)	No.	
63.6(e)(1)(iii)	Yes.	
63.6(e)(2)	No.	Section reserved.
63.6(e)(3)	No.	
63.6(f)(1)	No.	
63.6(g)	Yes.	
63.6(h)	No.	No opacity limits in rule.
63.6(i)	Yes.	
63.6(j)	Yes.	
63.7(a)–(d)	Yes.	
63.7(e)(1)	No.	See 63.543(j).
63.7(e)(2)–(e)(4)	Yes.	
63.7(f), (g), (h)	Yes.	
63.8(a)–(b)	Yes.	
63.8(c)(1)(i)	No.	See 63.543(k) for general duty requirement.

TABLE 1 TO SUBPART X OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART X—Continued

Reference	Applies to subpart X	Comment
63.8(c)(1)(ii)	Yes.	
63.8(c)(1)(iii)	No.	
63.8(c)(2)–(d)(2)	Yes.	
63.8(d)(3)	Yes, except for last sentence.	
63.8(e)–(g)	Yes.	
63.9(a), (b), (c), (e), (g), (h)(1)through (3), (h)(5) and (6), (i) and (j).	Yes.	
63.9(f)	No.	
63.9(h)(4)	No.	Reserved.
63.10 (a)	Yes.	
63.10 (b)(1)	Yes.	
63.10(b)(2)(i)	No.	
63.10(b)(2)(ii)	No.	See 63.550 for recordkeeping of occurrence and duration of malfunctions and recordkeeping of actions taken during malfunction.
63.10(b)(2)(iii)	Yes.	
63.10(b)(2)(iv)–(b)(2)(v)	No.	
63.10(b)(2)(vi)–(b)(2)(xiv)	Yes.	
63.(10)(b)(3)	Yes.	
63.10(c)(1)–(9)	Yes.	
63.10(c)(10)–(11)	No.	See 63.550 for recordkeeping of malfunctions.
63.10(c)(12)–(c)(14)	Yes.	
63.10(c)(15)	No.	
63.10(d)(1)–(4)	Yes.	
63.10(d)(5)	No.	See 63.550(e)(11) for reporting of malfunctions.
63.10(e)–(f)	Yes.	
63.11	No.	Flares will not be used to comply with the emission limits.
63.12 to 63.15	Yes.	

TABLE 2 TO SUBPART X OF PART 63—EMISSIONS LIMITS FOR SECONDARY LEAD SMELTING FURNACES

For vents from these processes . . .	You must meet the following emissions limits . . . [a]	
	Total hydrocarbon ppm by volume expressed as propane corrected to 4 percent carbon dioxide	Dioxin and furan (dioxins and furans) nanograms/dscm expressed as TEQ corrected to 7 percent O_2
Collocated blast and reverberatory furnaces (new and existing)	20 ppmv	0.50 ng/dscm.
Collocated blast and reverberatory furnaces when the reverberatory furnace is not operating for units that comments construction or reconstruction before June 9, 1994.	360 ppmv	170 ng/dscm.
Collocated blast and reverberatory furnaces when the reverberatory furnace is not operating for units that commence construction or reconstruction after June 9, 1994.	70 ppmv	170 ng/dscm.
Blast furnaces that commence construction or reconstruction before June 9, 1994.	360 ppmv	170 ng/dscm.
Blast furnaces that commence construction or reconstruction after June 9, 1994.	70 ppmv	170 ng/dscm.
Blast furnaces that commence construction or reconstruction after May 19, 2011.	70 ppmv	10 ng/dscm.
Reverberatory and electric furnaces that commence construction or reconstruction before May 19, 2011.	12 ppmv	0.20 ng/dscm.
Reverberatory and electric furnaces that commence construction or reconstruction after May 19, 2011.	12 ppmv	0.10 ng/dscm.

[a] There are no standards for dioxins and furans during periods of startup and shutdown.

TABLE 3 TO SUBPART X OF PART 63—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001

TABLE 3 TO SUBPART X OF PART 63—TOXIC EQUIVALENCY FACTORS—Continued

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1

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