

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

**[EPA-HQ-OAR-2006-0306; FRL-]**

**RIN 2060-A027**

**National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories**

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

**ACTION:** Final rule.

**SUMMARY:** EPA is issuing national emission standards for control of hazardous air pollutants for nine metal fabrication and finishing area source categories (identified in section I.A. below). This final rule establishes emission standards in the form of management practices and equipment standards for new and existing operations of dry abrasive blasting, machining, dry grinding and dry polishing with machines, spray painting and other spray coating, and welding operations. These standards reflect EPA's determination regarding the generally achievable control technology and/or management practices for the nine area source categories.

**DATES:** This final rule is effective on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The incorporation by

reference of certain publications listed in this final rule is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2006-0306. All documents in the docket are listed in the Federal Docket Management System index at <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., 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 [www.regulations.gov](http://www.regulations.gov) or in hard copy at the National Emission Standards for Hazardous Air Pollutants for Nine Metal Fabrication and Finishing Area Source Categories Docket, at the EPA Docket and Information Center, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

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**SUPPLEMENTARY INFORMATION:**

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### **I. General Information**

#### A. Does this action apply to me?

The regulated categories and entities potentially affected by this final action are shown in Table 1 below. This final rule applies to area sources<sup>a</sup> where the primary activity of their facilities is in one of the following nine source categories:

- (1) Electrical and Electronic Equipment Finishing Operations;
- (2) Fabricated Metal Products; (3) Fabricated Plate Work (Boiler Shops); (4) Fabricated Structural Metal Manufacturing; (5) Heating Equipment, except Electric; (6) Industrial Machinery and Equipment Finishing Operations; (7) Iron and Steel Forging; (8)

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<sup>a</sup> Section 112(a) of the Clean Air Act defines an area source as any stationary source of HAP that is not a major source. A major source is defined as any stationary source or group of stationary sources located within a contiguous area and under common control that emits, or has the potential to emit, considering controls, in the aggregate, 10 tons per year (tpy) or more of any single HAP or 25 tpy or more of any combination of HAP.

Primary Metal Products Manufacturing; and (9) Valves and Pipe Fittings. More specifically, this rule applies to area sources in these nine source categories that use or have the potential to emit compounds of cadmium, chromium, lead, manganese, or nickel from metal fabrication or finishing operations.

Facilities affected by this final rule are not subject to the miscellaneous coating requirements in 40 CFR part 63, subpart HHHHHH, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources," for their affected source(s) that are subject to the requirements of this final rule. There potentially may be other operations at the area sources that are not subject to the requirements of this final rule, but are instead subject to subpart HHHHHH of this part.

Table 1 - Regulated Categories and Entities Potentially Affected

Metal Fabrication and Finishing Category	NAICS Codes <sup>1</sup>	Examples of Regulated Entities
Electrical and Electronics Equipment Finishing Operations	335999 335312	Establishments primarily engaged in manufacturing motors and generators; and electrical machinery, equipment, and supplies, not elsewhere classified. The electrical machinery equipment and supplies industry sector of this source category includes facilities primarily engaged in high energy particle acceleration systems and equipment, electronic simulators, appliance and extension cords, bells and chimes, insect

		traps, and other electrical equipment and supplies, not elsewhere classified. The Motors and Generators Manufacturing industry sector of this source category includes those establishments primarily engaged in manufacturing electric motors (except engine starting motors) and power generators; motor generator sets; railway motors and control equipment; and motors, generators and control equipment for gasoline, electric, and oil-electric buses and trucks.
Fabricated Metal Products	332117 332999	Establishments primarily engaged in manufacturing fabricated metal products, such as fire or burglary resistive steel safes and vaults and similar fire or burglary resistive products; and collapsible tubes of thin flexible metal. Also included are establishments primarily engaged in manufacturing powder metallurgy products, metal boxes; metal ladders; metal household articles, such as ice cream freezers and ironing boards; and other fabricated metal products not elsewhere classified.
Fabricated Plate Work (Boiler Shops)	332313 332410 332420	Establishments primarily engaged in manufacturing power and marine boilers, pressure and nonpressure tanks, processing and storage vessels, heat exchangers, weldments and similar products
Fabricated Structural Metal Manufacturing	332312	Establishments primarily engaged in fabricating iron and steel or other metal for structural purposes, such as bridges, buildings, and sections for ships, boats, and barges.
Heating Equipments, except Electric	333414	Establishments primarily engaged in manufacturing heating equipment, except electric and warm air furnaces, including gas, oil, and stoker coal fired equipment for the automatic utilization of gaseous, liquid, and solid fuels. Typical products produced in this source category include low-pressure heating (steam or hot water) boilers, fireplace inserts, domestic (steam or hot water) furnaces, domestic gas burners, gas room heaters, gas infrared heating units, combination gas-

		oil burners, oil or gas swimming pool heaters, heating apparatus (except electric or warm air), kerosene space heaters, gas fireplace logs, domestic and industrial oil burners, radiators (except electric), galvanized iron nonferrous metal range boilers, room heaters (except electric), coke and gas burning salamanders, liquid or gas solar energy collectors, solar heaters, space heaters (except electric), mechanical (domestic and industrial) stokers, wood and coal-burning stoves, domestic unit heaters (except electric), and wall heaters (except electric).
Industrial Machinery and Equipment Finishing Operations	333120 333132 333911	Establishments primarily engaged in construction machinery manufacturing; oil and gas field machinery manufacturing; and pumps and pumping equipment manufacturing. The construction machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing heavy machinery and equipment of types used primarily by the construction industries, such as bulldozers; concrete mixers; cranes, except industrial plan overhead and truck-type cranes; dredging machinery; pavers; and power shovels. Also included in this industry are establishments primarily engaged in manufacturing forestry equipment and certain specialized equipment, not elsewhere classified, similar to that used by the construction industries, such as elevating platforms, ship cranes and capstans, aerial work platforms, and automobile wrecker hoists. The oil and gas field machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing machinery and equipment for use in oil and gas fields or for drilling water wells, including portable drilling rigs. The pumps and pumping equipment industry sector of this source category includes establishments primarily engaged in

		manufacturing pumps and pumping equipment for general industrial, commercial, or household use, except fluid power pumps and motors. This category includes establishments primarily engaged in manufacturing domestic water and sump pumps.
Iron and Steel Forging	33211	Establishments primarily engaged in the forging manufacturing process, where purchased iron and steel metal is pressed, pounded or squeezed under great pressure into high strength parts known as forgings. The process is usually performed hot by preheating the metal to a desired temperature before it is worked. The forging process is different from the casting and foundry processes, as metal used to make forged parts is never melted and poured.
Primary Metals Products Manufacturing	332618	Establishments primarily engaged in manufacturing products such as fabricated wire products (except springs) made from purchased wire. These facilities also manufacture steel balls; nonferrous metal brads and nails; nonferrous metal spikes, staples, and tacks; and other primary metals products not elsewhere classified.
Valves and Pipe Fittings	332919	Establishments primarily engaged in manufacturing metal valves and pipe fittings; flanges; unions, with the exception of purchased pipes; and other valves and pipe fittings not elsewhere classified.

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

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be effected by this action. For descriptions of the North American Industry Classification System (NAICS) codes, you can view information on the U.S. Census site at <http://www.census.gov/epcd/ec97brdg>. To determine whether your facility would be regulated by this



action you should examine the applicability criteria in the final rule (40 CFR 63.11514, "Am I subject to this subpart?"). If you have any questions regarding the applicability of this action to a particular entity, consult either the air permit authority for the entity or your EPA regional representative as listed in 40 CFR 63.13 of subpart A (General Provisions).

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

In addition to being available in the docket, an electronic copy of this final action will also be available on the Worldwide Web (WWW) through EPA's Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address:

<http://www.epa.gov/ttn/oarpg/>. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Under section 307(b)(2) of the CAA, the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Section 307(d) (7) (B) 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 EPA to convene a proceeding for reconsideration, “[i]f the person raising an objection can demonstrate to 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 Ave., NW., Washington, DC 20460, with a copy to both the persons(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 Information for this Final Rule**

Section 112(d) of the CAA requires us to establish national emission standards for hazardous air pollutants (NESHAP) for both major and area sources of hazardous air pollutants (HAP)

that are listed for regulation under CAA section 112(c). A major source emits or has the potential to emit 10 tons per year (tpy) or more of any single HAP or 25 tpy or more of any combination of HAP. An area source is a stationary source that is not a major source.

Section 112(k)(3)(B) of the CAA calls for EPA to identify at least 30 HAP which, as the result of emissions from area sources, pose the greatest threat to public health in the largest number of urban areas. EPA implemented this provision in 1999 in the Integrated Urban Air Toxics Strategy, (64 FR 38715, July 19, 1999). Specifically, in the Strategy, EPA identified 30 HAP that pose the greatest potential health threat in urban areas, and these HAP are referred to as the "30 urban HAP." Section 112(c)(3) requires EPA to list sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 urban HAP are subject to regulation. We selected these nine source categories for regulation based on these required analyses. We then implemented these requirements through the Integrated Urban Air Toxics Strategy (64 FR 38715, July 19, 1999) and subsequent updates to the source category list.

Under CAA section 112(d)(5), we may elect to promulgate standards or requirements for area sources "which provide for the use of generally available control technologies or

management practices by such sources to reduce emissions of hazardous air pollutants." As explained in the preamble to the proposed NESHAP, we are issuing standards based on generally available control technology (GACT).

We are issuing these final national emission standards in response to a court-ordered deadline that requires EPA to issue standards for 11 source categories listed pursuant to section 112(c)(3) and (k) by June 15, 2008 (Sierra Club v. Johnson, no. 01-1537, D.D.C., March 2006). We have already issued regulations addressing one of the 11 area source categories. See regulations for Wood Preserving (72 FR 38864, July 16, 2007.) Other rulemakings will include standards for the remaining source categories that are due in June 2008.

### **III. Summary of Major Changes Since Proposal**

#### **A. Applicability**

In response to comments, we made several changes to clarify the applicability of this final rule. Specifically, we have revised the definition of metal fabrication and finishing HAP (MFHAP) to mean any compound of cadmium, chromium, lead, manganese, and nickel. We also clarified throughout this final rule that this final rule applies only to area sources in the nine source categories that use or have the potential to emit MFHAP.<sup>b</sup> In addition, we have revised the definition of MFHAP to

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<sup>b</sup> Note that the control devices and management practices that control and/or

clarify that material that "contains" MFHAP means a material containing one or more MFHAP as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material. Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and does not contain manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), is not considered to be a material containing MFHAP. We have also added language clarifying that the rule does not apply to military installations, NASA and National Nuclear Security facilities, and aerospace facilities.

#### B. Compliance Dates

We made changes to the compliance dates of this final rule. Specifically, we have extended the two-year compliance period to three years for existing affected sources. We have also corrected errors in the compliance dates for new sources.

#### C. Standards and Compliance Requirements

In response to comments, we have made several changes to the standards for operations at the nine metal fabrication and

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reduce emissions of MFHAP in this rule also control and/or reduce emissions of all HAP (including the additional metal HAP of arsenic, cobalt, and selenium, for example) that have the potential to be emitted, as those HAP are included in, or adsorbed or condensed onto, the PM. All potential metal HAP emissions are thereby controlled because the equipment standards and management practices in this rule control particulate matter (PM) as a surrogate for MFHAP and any other metal HAP (as listed above), that have the potential to be emitted, via these PM controls.

finishing source categories, and more specific changes to the standards for abrasive blasting, painting, and welding.

For all operations where the proposed rule required regularly scheduled sweeping, we have changed the requirement to take measures necessary to minimize excess dust.

For abrasive blasting, we have revised the rule text to clarify the requirements for objects greater than 8 feet in any dimension. These objects are allowed to be abrasive blasted without control devices, but sources must still comply with all applicable management practices for such operations and conduct visible emissions monitoring. We have also changed the requirements for outdoor abrasive blasting to remove the prohibition on blasting during wind events and on substrates with coatings containing lead.

For painting operations, in response to comments we have removed the VOHAP coating limit requirements. Also, we have revised the provisions regulating MFHAP emissions from painting so that sources in the Fabricated Structural Metal Manufacturing source category (Standard Industrial Classification (SIC) 3441, NAICS 332312) are only subject to the spray painting management practices (i.e., use of HVLP paint guns, painter training and certification, and spray gun cleaning requirements).

For welding, we have revised the rule to clarify that the management practices are to be implemented "as practicable," and

in accordance with sound welding engineering principles, while maintaining required weld quality. We have also removed the requirement for specific control efficiency for welding fume control systems.

We have also changed the process by which facilities seek approval to use an alternative equipment standard other than those specifically listed in this final rule. In the proposal we indicated that facilities that would like to use equipment other than those listed must seek approval to do so pursuant to the procedures in §63.6(g) of the General Provisions to part 63. We did not receive any comments on this part of the proposal, nor did any commenters identify any alternative equipment standards that are equivalent to those specified in this final rule. We believe that facilities should be able to request approval to use an alternative equipment standard, and therefore, we have identified two different options available to facilities that would like to use alternative equipment that achieves at least equivalent MFHAP emission reductions as the controls specified in this final rule: (1) facilities may petition the Agency to amend this final rule pursuant to section 553(e) of the Administrative Procedure Act, or (2) facilities may work with state permitting authorities pursuant to EPA's regulations at 40 CFR subpart E ("Approval of State Programs and Delegation of Federal Authorities"). Subpart E implements

section 112(1) of the CAA, which authorizes EPA to approve alternative state/local/tribal HAP standards or programs when such requirements are demonstrated to be no less stringent than EPA promulgated standards. We believe that these options are more appropriate mechanisms for area sources subject to section 112(d)(5) rules to obtain approval of alternative equipment standards.

In response to comments, we have also made several changes to the compliance requirements. We eliminated the visual determination of fugitive emissions requirements for dry abrasive blasting performed in vented chambers, dry grinding and dry polishing with machines, and machining. We have maintained the visual determination of fugitive emissions requirement for abrasive blasting of objects greater than 8 feet in any dimension performed without the use of a control device. We have changed the graduated schedule for visible emissions testing to allow for quarterly testing after three months of successful monthly tests (i.e., tests where no visible emissions are detected). We have also removed the visual emissions determination requirements for smaller welding operations that annually use less than 2,000 pounds of welding rod containing one or more MFHAP.

D. Reporting and Recordkeeping Requirements



We have revised §63.11519, "What are my notification, reporting, and recordkeeping requirements?" of this final rule to add a requirement for submittal of annual certification and compliance reports (which were already required to be prepared and maintained on-site.) We have also corrected the submittal dates for the Initial Notification and Compliance of Notification Status reports.

E. Definitions

We have made several changes to the definitions in §63.11522, "What definitions apply to this subpart?", of this final rule and have added definitions for other terms used in this final rule. We added definitions for control device, filtration control device, material containing MFHAP, military munitions, and quality control activities. We have revised the definitions of dry grinding and polishing with machines, facility maintenance, and MFHAP.

F. Other

We also corrected some typographical errors that appeared in various sections of the proposed rule.

**IV. Summary of Final Standards**

A. Do the final standards apply to my source?

This final rule (subpart XXXXXX) applies to new or existing affected metal fabrication and finishing area sources in one of the following nine source categories (listed alphabetically)

that use or emit MFHAP: (1) Electrical and Electronic Equipment Finishing Operations; (2) Fabricated Metal Products; (3) Fabricated Plate Work (Boiler Shops); (4) Fabricated Structural Metal Manufacturing; (5) Heating Equipment, Except Electric; (6) Industrial Machinery and Equipment Finishing Operations; (7) Iron and Steel Forging; (8) Primary Metal Products Manufacturing; and (9) Valves and Pipe Fittings. A more detailed description of these source categories can be found in section II.B, above. If you have any questions regarding the applicability of this action to a particular entity, consult either the air permit authority for the entity or your EPA regional representative as listed in 40 CFR 63.13 of subpart A (General Provisions). Source categories affected by this final rule are not subject to the miscellaneous coating requirements in 40 CFR part 63, subpart HHHHHH, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources," for their operations subject to the requirements of this final rule. There potentially may be other operations at the facility not subject to the requirements of this final rule that are instead subject to subpart HHHHHH of this part.

B. When must I comply with these standards?

All existing area source facilities subject to this final rule will be required to comply with the rule requirements no

later than [INSERT DATE THREE YEARS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]. New sources must comply with the requirements of this final rule by [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER] or start-up; whichever is later.

C. What processes does this final rule address?

There are five general production operations common to the nine metal fabrication and finishing source categories that can emit MFHAP. These five production operations are: (1) dry abrasive blasting; (2) dry grinding and dry polishing with machines; (3) machining; (4) spray painting; and (5) welding, which we have further differentiated into nine distinct metal fabrication and finishing processes.

For dry abrasive blasting operations, this final rule addresses three distinct types of blasting operations: (1) those performed in completely enclosed chambers that do not allow any air or emissions to escape, (2) those performed in vented enclosures, and (3) those performed on objects greater than 8 feet in any dimension that are not performed in vented enclosures.

We identified three distinct types of spray painting operations that emit MFHAP: (1) operations that spray paint objects less than or equal to 15 feet in any dimension where paint spray booths or spray rooms are commonly used; (2) operations that spray paint objects greater than 15 feet in

any dimension for which paint spray booths or spray rooms are not used; and (3) spray painting operations in the Fabricated Structural Metal Manufacturing source category, which also do not use paint spray booths or spray rooms. The latter two types of processes that do not use spray booths or spray rooms were combined for applicability of this final rule. Therefore this final rule addresses: (1) spray painting of objects, in general, and (2) spray painting of objects greater than 15 feet in any dimension or spray painting operations in the Fabricated Structural Metal Manufacturing source category.

For dry grinding and dry polishing with machines, machining, and welding, we did not observe any distinct differences that would warrant further distinguishing the operations into separate processes. Therefore, these three processes, combined with the three for dry abrasive blasting and the two for painting described above, results in eight total processes addressed by this final rule, as follows: (1) dry abrasive blasting performed in completely enclosed and unvented blast chambers; (2) dry abrasive blasting performed in vented enclosures; (3) dry abrasive blasting of objects greater than 8 feet in any dimension that are not performed in vented enclosures; (4) dry grinding and dry polishing with machines; (5) machining; (6) control of MFHAP in the spray painting of objects in paint spray booths or spray rooms; (7) control of

MFHAP in the spray painting of objects greater than 15 feet in any dimension, or spray painting operations in the Fabricated Structural Metal Manufacturing source category; and (8) welding.

D. What are the emissions control requirements?

The following is a description of the control requirements for the eight metal fabrication and finishing processes described above in section III.C of this preamble. The control requirements only apply when an operation is being performed that uses materials that contain or have the potential to emit MFHAP.<sup>c</sup> The definition of "containing" MFHAP is identical to the Occupational Safety and Health Administration (OSHA) definitions specified in 29 CFR 1910.1200(d)(4), where carcinogens are contained in quantities of 0.1 percent by mass or more, and 1.0 percent by mass or more for noncarcinogens, as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material. For MFHAP, this corresponds to materials that contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and manganese in amounts greater than or equal to 1.0 percent by weight (as the metal).

1. Standards for Dry Abrasive Blasting Performed in Completely Enclosed and Unvented Blast Chambers.

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<sup>c</sup> See footnote (b) above that discusses the co-control of all HAP via control of MFHAP with the PM controls of this rule.

Completely enclosed and unvented blast chambers are generally small "glove box" type dry abrasive blasting operations. Because there are no vents or openings in the enclosures, there are no emissions directly from the operation itself.

This final rule requires owners or operators of completely enclosed and unvented blast chambers to comply with the following two management and pollution prevention practices: (1) minimize dust generation during emptying of the enclosure; and (2) operate all equipment used in the blasting operation according to manufacturer's instructions.

## 2. Standards for Dry Abrasive Blasting Performed in Vented Enclosures.

This final rule requires owners or operators of affected new and existing dry abrasive blasting operations performed in vented enclosures to perform blasting with a control system that includes an enclosure as a capture device, and a cartridge, fabric, or HEPA filter as a control device to control particulate matter (PM) emissions, as a surrogate for MFHAP, from the process.

An enclosure is defined to be any structure that includes a roof and at least two complete walls, with side curtains and ventilation as needed to ensure that no air or PM exits the chamber while blasting is performed. Apertures or slots may be

present in the roof or walls to allow for transport of the blasted objects using overhead cranes, or cable and cord entry into the blasting chamber.

This final rule also requires owners or operators of all affected new and existing dry abrasive blasting operations performed in vented enclosures to comply with the following three management and pollution prevention practices: (1) as practicable, take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions; (2) enclose abrasive material storage areas and holding bins, seal chutes and conveyors transporting abrasive materials; and (3) operate all equipment according to manufacturer's instructions.

### 3. Standards for Dry Abrasive Blasting of Objects Greater than 8 Feet in Any Dimension.

This final rule requires owners or operators of affected new and existing dry abrasive blasting operations that perform abrasive blasting on substrates greater than 8 feet in any dimension without control systems to comply with the following four management and pollution prevention practices to minimize MFHAP emissions from the processes: (1) switch from high PM-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), whenever practicable; (2) do not re-use the blast media unless contaminants (i.e., any material other than the base

metal, such as paint residue) have been removed by filtration or screening so that the abrasive material conforms to its original size and makeup; (3) enclose abrasive material storage areas and holding bins, seal chutes and conveyors transporting abrasive materials; and (4) operate all equipment according to manufacturer's instructions. This final rule also requires that visible emissions monitoring be performed.

#### 4. Standards for Dry Grinding and Dry Polishing with Machines.

Dry grinding and dry polishing with machines operations often emit significant PM, which is a surrogate for MFHAP. Dry grinding and dry polishing with machines operations do not include dry grinding and dry polishing operations performed with hand-held or bench-scale devices.

This final rule requires owners or operators of affected new and existing dry grinding and dry polishing with machines operations to capture PM emissions, as a surrogate for MFHAP, and vent the exhaust to a cartridge, fabric, or HEPA filter.

This final rule also requires owners or operators of affected new and existing dry grinding and dry polishing with machines operations to comply with the following two management and pollution prevention practices: (1) as practicable, take measures necessary to minimize excess dust in the surrounding area to reduce PM emissions; and (2) operate all equipment used



in dry grinding and dry polishing with machines according to manufacturer's instructions.

#### 5. Standards for Machining.

The majority of the PM released by machining operations consists of large particles or metal shavings that fall immediately to the floor. Any MFHAP that is released would originate from the part or product being machined. Machining is totally enclosed and/or uses lubricants or liquid coolants that do not allow small particles to escape. This final rule requires owners or operators of affected new and existing machining operations to comply with the following two management and pollution prevention practices to minimize dust generation in the workplace: (1) as practicable, take measures necessary to minimize excess dust in the surrounding area to reduce PM emissions; and (2) operate equipment used in machining operations according to manufacturer's instructions.

#### 6. Standards for Control of MFHAP from Spray Painting

This final rule requires new and existing spray painting affected sources to comply with two equipment standards: (1) use of spray booths or spray rooms equipped with PM filters and (2) the use of low-emitting and pollution preventing spray gun technology. This final rule also requires two management practices associated with the spray gun technology: (1) spray painter training; and (2) spray gun cleaning. The requirement

for PM filters does not apply to spray painting of objects greater than 15 feet in any dimension and spray painting at Fabricated Structural Metal Manufacturing facilities not performed in spray booths, which are discussed separately in IV.D.7, below.

The following painting activities are not covered in this final rule:

- (1) Paints applied from a hand-held device with a paint cup capacity that is less than 3.0 fluid ounces (89 cubic centimeters);
- (2) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens;
- (3) Any painting or coating that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; or the application of paints or coatings that contain fillers that adversely affect atomization with HVLP or equivalent spray guns, and the application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

Spray painting also does not include thermal spray operations, also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names, in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact. Thermal spraying operations at area sources are subject to the Plating and Polishing Area Source NESHAP, subpart WWWWWW of this part.

*Spray Booth PM Control Requirement.* This final rule requires the spray booths or spray rooms<sup>d</sup> of affected new and existing facilities to be fitted with fiberglass or polyester fiber filters or other comparable filter technology that has been demonstrated to achieve at least 98 percent control efficiency of paint overspray (also referred to as "arrestance"). As an alternate compliance option, spray booths or spray rooms can be equipped with a water curtain, called a "waterwash" or "waterspray" booth.

*98 Percent PM Control Filter--*For spray booths or spray rooms equipped with a PM filter, the procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning

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<sup>d</sup> The spray booth roof may contain narrow slots for connecting the parts and products to overhead cranes, or for cord or cable entry into the spray booth.

Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14). The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the ASHRAE at 1791 Tullie Circle, N.E. Atlanta, GA 30329 or by electronic mail at [orders@ashrae.org](mailto:orders@ashrae.org). You may inspect a copy at the NARA. For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html). Compliance with the filter efficiency standard also can be demonstrated through data provided by the filter manufacturer. The test paint for measuring filter efficiency must be a high-solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch air pressure (psi); the air flow rate across the filter shall be 150 feet per minute. Affected facilities may use published filter efficiency data provided by filter vendors to demonstrate compliance with the 98 percent efficiency requirement and would not be required to perform this measurement.

*Waterwash spray booths or spray rooms*--As an alternative compliance option, spray booths or spray rooms may be equipped with a water curtain that achieves at least 98 percent control of MFHAP. The waterwash or "waterspray" spray booths or spray rooms must be required to operated and maintained according to the manufacturer's specifications.

*Spray Gun Technology Requirements*. This final rule requires all affected new and existing facilities using spray-applied paints to use HVLP spray guns, electrostatic application, or airless spray techniques.

If you would like to use paint spray equipment that you believe is equivalent to HVLP spray guns, you must seek the appropriate approval, as explained above in section III.C. The method that you use to show the equivalency of the alternate spray equipment must conform with the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see §63.14).

The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the California South Coast Air Quality Management District website at

<http://www.aqmd.gov/permit/docspdf/TransferEfficiencyTestingGuidelinesforHVLPEquivalency.pdf> and

<http://www.aqmd.gov/permit/docspdf/Spray-Eqpt-Trfr-Efficiency.pdf>. You may inspect a copy at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training centers.

*Spray Painting Training Requirements.* This final rule requires all workers that perform spray painting at affected new and existing facilities to be trained, with certification made available that this training has occurred. The painters must be certified as having completed classroom or hands-on training in the proper selection, mixing, and application of paints. Refresher training must be repeated at least once every 5 years. These requirements do not apply to operators of robotic or automated surface painting operations. The initial and refresher training must address the following topics to reduce paint overspray, which has a direct effect on emissions reductions, as follows:

- Spray gun equipment selection, set up, and operation, including measuring paint viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.
- Spray technique for different types of paints to improve transfer efficiency and minimize paint usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
- Routine spray booth and filter maintenance, including filter selection and installation.

For the purposes of the training requirements, the facility owner or operator may certify that their employees have completed training during "in-house" training programs. Also, facilities that can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training described above are not required to provide the initial training required for these painters.

Spray painters at existing sources must be trained by the compliance date, or 180 days after hiring, whichever is later. Spray painters at new sources must be trained and certified no later than [INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], 180 days after startup, or 180 days after

hiring, whichever is later. These training requirements do not apply to the students of an accredited surface painting training program who are under the direct supervision of an instructor who meets the requirements of this paragraph. The training and certification for this rule is valid for a period not to exceed 5 years after the date the training is completed.

Spray Gun Cleaning Requirements. This final rule requires all paint spray gun cleaning operations at affected new and existing facilities to be done with either non-HAP gun cleaning solvents, or in such a manner that an atomized mist or spray of spray gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done, for example, by hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of these non-atomizing methods above may also be used.

7. Standards for Control of MFHAP from Spray Painting of Objects Greater than 15 Feet in Any Dimension and Spray Painting at Fabricated Structural Metal Manufacturing Facilities not Performed in Spray Booths

This final rule requires owners or operators of new and existing spray painting affected sources which paint objects



greater than 15 feet in any dimension and owners or operators of new and existing spray painting affected sources in the Fabricated Structural Metal Manufacturing source category, that are not performed in spray booths, to comply with an equipment standard, the use of low-emitting and pollution preventing spray gun technology. This final rule also requires two management practices: (1) spray painter training and (2) spray gun cleaning. Paint operations that comply with these requirements do not need to comply with the PM filter requirements listed above for spray painting of objects in spray booths.

Sources subject to the MFHAP requirements from spray painting objects greater than 15 feet in any dimension must also meet the same requirements for spray gun technology standards, spray painting training requirements, and spray gun cleaning requirements as those specified above in IV.D.6 for the spray painting of objects in paint spray booths or rooms.

#### 8. Standards for Welding.

This final rule requires owners or operators of affected new and existing welding operations to minimize emissions of MFHAP by implementing one or more of the following management practices to be used as practicable, while concurrently maintaining the required welding quality through the application of sound welding engineering judgment:

(A) Use of welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas welding (MIG));

(B) Use of welding process variations (e.g., pulsed GMAW), which can reduce fume generation rates;

(C) Use of welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;

(D) Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated; and

(E) Use of a welding fume capture and control system, operated according to the manufacturer's specifications.

E. What are the initial compliance requirements?

To demonstrate initial compliance with this final rule, owners or operators of affected new and existing sources with dry abrasive blasting, machining, dry grinding and dry polishing with machines, spray painting, and welding operations must certify that they have implemented all required management and pollution prevention practices.

In addition, owners or operators of new and existing affected sources with spray painting operations that use or have the potential to emit MFHAP must also certify that they are in

compliance with the following requirements: use of PM filters in spray booths or spray rooms; use of approved spray delivery and cleaning systems; and proper training of workers in spray painting application techniques.

F. What are the continuous compliance requirements?

There are continuous requirements for all affected processes in metal fabrication and finishing sources. There are also additional continuous compliance requirements for specific processes or groups of processes, as follows: visual emissions testing for dry abrasive blasting of objects greater than 8 feet in any dimension; PM control efficiency rating of filters used in spray painting objects in spray booths or spray rooms for MFHAP control; and visual emissions testing for welding at facilities that use 2,000 pounds or more per year of MFHAP-containing welding rod (on a rolling 12-month average basis.) These requirements are discussed in more detail below.

1. Continuous Compliance Requirements for All Sources.

This final rule requires owners or operators of all affected new and existing sources to demonstrate continuous compliance by adhering to the management practices specified in this final rule and maintaining the appropriate records to document this compliance.

Owners or operators that comply with this final rule by operating capture and control systems must operate and maintain

each capture system and control device according to the manufacturer's specifications. They also must maintain records to document conformance with this requirement and keep the manufacturer's instruction manual available at the facility at all times.

2. Visual Emissions Testing For Dry Abrasive Blasting Of Objects Greater Than 8 Feet In Any Dimension To Determine Continuous Compliance.

Visible Emissions Testing. For new and existing affected sources of dry abrasive blasting operations of objects greater than 8 feet in any dimension who comply with the provisions of §63.11516(a)(3), "What are my standards and management practices?", this final rule requires visible emissions testing to demonstrate continuous compliance with management and pollution prevention practices intended to reduce emissions of PM, as a surrogate for MFHAP.

The affected sources of dry abrasive blasting of objects greater than 8 feet in any dimension must perform visual determinations of fugitive emissions, according to the graduated schedule described below, using EPA Method 22 (40 CFR part 60, appendix A-7) for a period of 15 continuous minutes at the fence line or property border nearest to the outdoor abrasive blasting operation, or at the primary vent, stack, exit, or opening from the building for indoor blasting operations. The presence of

visible emissions must be noted if any emissions are observed for more than a total of 6 minutes during the 15-minute period. In case of failure in any Method 22 test, immediate corrective action is required to reduce or eliminate the visible emissions. The affected source is then required to perform more frequent visible emissions testing, as described in the graduated schedule below.

Graduated Testing Schedule. The graduated schedule for continuous compliance with visible emissions testing for this rule, which progresses from daily to weekly to monthly to quarterly testing, is as follows.

Affected sources of dry abrasive blasting of objects greater than 8 feet in any dimension are required to be tested daily for visible emissions with Method 22 for 10 consecutive days that the source is in operation. If visible emissions are not observed during these 10 days, the affected source can be tested once every 5 consecutive days (weekly) that the source is in operation. If no visible emissions are observed during these four consecutive weekly Method 22 tests, the affected source can be tested once per consecutive 21 days (month) of operation. If no visible emissions are observed during three consecutive monthly Method 22 tests, the affected source can be tested once per consecutive three months of operation (quarterly.) If any visible emissions are observed during the weekly, monthly, or

quarterly testing, the affected source must resume visible emissions testing on the more frequent schedule, i.e., weekly visible emissions testing is increased to daily, monthly testing is increased to weekly, and quarterly testing is increased to monthly.

### 3. Tests for Spray Painting for MFHAP Control to Determine Continuous Compliance.

Affected new and existing facilities that perform spray painting must ensure and certify that: (1) all new and existing personnel, including contract personnel, who spray-apply surface paints with MFHAP are trained in the proper application of surface paints; (2) all spray-applied paints with MFHAP are applied with a HVLP spray gun, electrostatic application, airless spray gun, or equivalent; (3) emissions of MFHAP are minimized during mixing, storage, and transfer of paints; and (4) paint and solvent lids are kept closed when not in use.

In addition, for spray painting objects less than or equal to 15 feet in any dimension (except for spray painting affected sources in the Fabricated Structural Metal Manufacturing source category), owners or operators of affected processes must ensure and certify that paint spray booths or spray rooms are fitted with fiberglass or polyester fiber filters or other comparable filter or waterspray technology that can be demonstrated to

achieve at least 98 percent control efficiency of the MFHAP in the paint.

#### 4. Visual Emissions Testing for Welding to Determine Continuous Compliance.

For new and existing affected sources with welding operations that use 2,000 pounds or more per year of MFHAP-containing welding rod (on a rolling 12-month average basis), this final rule requires visible emissions testing from a vent, stack, exit, or opening from the building containing the welding metal fabrication and finishing operations to demonstrate continuous compliance with the emissions standards in this rule, which are expressed as management practices and equipment standards. This testing has a three-tier compliance structure.

Tier 1. The first tier for welding compliance requires visual determinations of fugitive emissions using EPA Method 22 and allows the same graduated testing schedule described above in section III.F.2 for dry abrasive blasting of objects 8 feet or more in any dimension, which includes provisions for reducing the frequency of the Method 22 tests when no visible emissions are observed in consecutive time periods of operation. If no visible emissions are found, no corrective action is required.

If visible emissions are present during any Method 22 test, immediate corrective action will be required that includes inspection of all fume sources and control methods in operation,

and documentation of the visual emissions test results. In this instance, the graduated schedule requires the affected source to resume visible emissions testing in the previous, more frequent schedule, i.e., weekly visible emissions testing is increased to daily, monthly testing is increased to weekly, and quarterly testing is increased to monthly.

Tier 2. The second tier for welding compliance must be implemented if visible emissions are detected for the second time in any consecutive 12-month period. The second tier requires corrective action and documentation of the detection of visible emissions and the corrective action taken. Corrective action must take place immediately after the failed Method 22 test. In addition, the second tier for welding compliance requires a facility to perform a visual determination of emissions opacity using EPA Method 9 (40 CFR part 60, appendix A-4) within 24 hours of the failed Method 22 test. In EPA Method 9, the average of 24 15-second intervals of opacity observation is determined, producing a total of 360 seconds or 6 minutes of opacity observation or 6-minute average opacity.

If in the second tier tests using Method 9 the average of the 6-minute opacities is determined to be 20 percent or less, implementation of Method 9 testing is required with a graduated schedule of reduced frequency like that used for the Method 22 tests, described above in section III.F.2, from daily to weekly



to monthly to quarterly for consecutive successful tests. If opacity continues to be less than or equal to 20 percent and, pursuant to the graduated schedule the Method 9 testing for the welding processes is able to be reduced to once a month, the facility would have the choice of switching back to performing Method 22 tests on a monthly basis. Alternatively, the facility could choose to continue performing monthly Method 9 tests. With either test method, the facility can reduce to quarterly testing if there are no exceedences in three consecutive monthly tests.

If the average of the 6-minute opacities is determined to be greater than 20 percent in the Method 9 tests in the second tier, the third tier of welding compliance requirements is required, as described below.

Tier 3. The third tier for welding compliance includes the development and implementation of a Site-specific Welding Emissions Management Plan (SWMP) within 30 days and submittal of the SWMP to the delegated authority. The SWMP must be kept at the facility in a readily accessible location for inspector review. Also, the facility must report any exceedence of the 20 percent opacity limit on an annual basis along with their annual certification and compliance report.

The purpose of the SWMP is to ensure that no visible emissions occur in the future from this process, as determined

by EPA Method 22 tests or 20 percent opacity or less by EPA Method 9. Application of the SWMP may involve more effective implementation of the management and pollution prevention practices, beyond the levels already in place at the facility, or, as a final option, the use of capture equipment and control devices. During the development of the SWMP, daily Method 9 tests are required to continue to be performed, according to the graduated schedule. The SWMP must be updated after any failures to meet 20 percent or less opacity as determined by Method 9. If opacity continues to be 20 percent or less and Method 9 testing of the welding processes at the facility falls to once a month, according to the graduated testing schedule, the facility will have a choice of changing to monthly Method 22 tests or remaining with monthly Method 9, as above. The SWMP must be updated annually and include revisions to reflect any changes in welding operations or controls at the facility.

The SWMP must address the following: the type(s) of welding operation(s) currently used at the facility; the measures used to minimize welding fume at each of type of welding operation or each welding station; and procedures used by the facility to ensure that these measures are being implemented. No outside consultants or professional engineer certification is required or necessary to prepare the SWMP.

G. What are the notification, recordkeeping, and reporting requirements?

The affected new and existing sources are required to comply with certain requirements of the General Provisions (40 CFR part 63, subpart A), which are identified in Table 2 of this final rule. Each new source is required to submit an Initial Notification no later than 120 days after initial startup or [INSERT DATE 120 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER], whichever is later. Existing affected sources must submit the Initial Notification no later than [INSERT DATE 3 YEARS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Notification of Compliance Status reports are required to be submitted according to the requirements in 40 CFR 63.9 in the General Provisions no later than 120 days after the applicable compliance date. The affected source is required to prepare and submit an annual certification and compliance status report. If there are any exceedences during the year, the facility must submit this annual certification and compliance report with any exceedence reports prepared during the year. The exceedence reports must describe the circumstance of the exceedence and the corrective action taken.

Facilities also are required to maintain all records that demonstrate initial and continuous compliance with this final rule, including records of all required notifications and

reports, with supporting documentation; and records showing compliance with management and pollution prevention practices. Owners and operators must also maintain records of the following, if applicable: date and results of all visual determinations of fugitive emissions, including any follow-up tests and corrective actions taken; date and results of all visual determinations of emissions opacity, and corrective actions taken; and a copy of the SWMP, if it is required.

## **V. Summary of Comments and Responses**

We received a total of 24 comments on the proposed NESHAP from industry representatives, trade associations, federal and state agencies, and the general public during the public comment period. Sections V.A through V.F of this preamble provide responses to the significant public comments received on the proposed NESHAP.

### **A. Applicability**

Comment: Several commenters expressed concern regarding potential overlap between the applicability of this subpart (XXXXXX) and other part 63 NESHAP. One commenter said that EPA should clarify that the proposed rule does not apply to "dry grinding and dry polishing with machines" affected sources that are also subject to the proposed area source standards for plating and polishing operations, subpart WWWWWW. Commenters also indicated that there appeared to be overlap with Paint

Stripping and Miscellaneous Surface Coating NESHAP, subpart HHHHHH, as there was overlap in the potentially applicable NAICS codes provided in the preambles. The commenter said that EPA should clarify that the rule does not apply to metal fabrication and finishing operations that are subject to a major source NESHAP, in particular the Aerospace Manufacturing NESHAP (subpart GG).

Response: Operations at a facility in one of the nine area source categories specifically listed in §63.11514, "Am I subject to this subpart?", specifically paragraphs (a)(1) through (9), are subject to this final rule. Each of these area source categories is characterized by the descriptions provided in Table 1 in section I.A of this preamble. The miscellaneous surface coating requirements in subpart HHHHHH are more generic regulations that apply to processes at many different types of facilities. The specificity regarding the applicability of this final rule overrides the more generic miscellaneous coating regulation in subpart HHHHHH, mainly because it is specified as such in subpart HHHHHH. In other words, if a facility is in one of the nine area source categories included under this final rule, it is not subject to any other area source regulation for the operations regulated by this final rule: abrasive blasting, dry grinding and dry polishing with machines, machining, spray painting, and welding.

On the other hand, operations addressed by the Plating and Polishing NESHAP (subpart WWWWWW), such as dry mechanical polishing operations performed after plating to complete the plating processes, and thermal spraying are subject to subpart WWWWWW. Therefore, any area source facilities that conduct polishing after plating or thermal spraying would be subject to subpart WWWWWW for their plating and polishing operations. However, the MFHAP control requirements for dry polishing with machines are identical between subpart WWWWWW for "dry mechanical polishing," and this final rule for "dry polishing with machines." The recordkeeping and reporting requirements are also the same between the two rules for polishing operations. At the time of this final rule, we were not aware of any overlap of facilities between these two area source rules, but since there may be sources in the future where there is an overlap, we leave open the possibility of the applicability of both rules.

With regard to the comment related to the major sources subject to the Aerospace NESHAP, we would point out that (1) Aerospace facilities would not be included under any of the nine source categories subject to this final rule, and (2) major sources are not subject to this final rule, as this final rule applies only to area sources.

Comment: Other commenters more specifically addressed the potential overlap between the Nine Metal Fabrication and Finishing Area Source Category rule and subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources NESHAP. The commenters noted that the proposed rule indicated that facilities covered by the proposed rule would be exempt from subpart HHHHHH. However, they said since subpart HHHHHH is already final, permitting authorities cannot exempt facilities from it merely on the basis of a subsequent proposed regulation, such as the metal fabrication NESHAP. One commenter recommended that EPA reverse the applicability and state that facilities subject to and complying with the requirements of subpart HHHHHH would be considered in compliance with the MFHAP provisions for painting operations under this metal fabrication NESHAP. The commenter said that facilities would still be required to comply with other provisions that are not covered under subpart HHHHHH.

Response: While we understand the potential confusion between the applicability of these two area source regulations, coating operations at a facility in one of the nine source categories specifically listed in §63.11514, "Am I subject to this subpart?", specifically paragraphs (a)(1) through (9), are subject to this final rule and not subpart HHHHHH (the Paint Stripping and Miscellaneous Surface Coating Operations Sources

NESHAP). We believe that the simplicity of having all affected sources at a single facility in one of these nine metal fabrication and finishing area source categories subject to a single subpart is better in the long term. Further, subpart HHHHHH was promulgated on January 9, 2008, and its compliance date for existing sources is not until January 10, 2011. We believe that any short term permitting complexities that have arisen in the five or six months between promulgation of the final Paint Stripping and Miscellaneous Surface Coating NESHAP and the Nine Metal Fabrication and Finishing Area Source Category NESHAP can be addressed in the two and one-half years before their compliance dates. Therefore, we did not make changes in accordance with the commenter's recommendation.

Comment: One commenter requested clarification of potential overlap of the metal fabrication rule and subpart HHHHHH. They note that the applicability section of the proposed rule states that if a facility is "subject to" the provisions of this final rule, it is not subject to subpart HHHHHH, the Miscellaneous Surface Coating Operations Rule. The commenter interprets this to mean that if a facility is in one of the nine source categories covered by this final rule, it is "subject to" this final rule, even though an exception in the rule may exempt it from one or more of the rule's requirements. Thus, according to the commenter, if the facility is not



required to comply with the standards for spray painting under this final rule, it is also not subject to subpart HHHHHH.

Response: We agree with the commenter's analysis. As noted above, facilities in one of the nine area source categories subject to this final rule are not subject to the miscellaneous coating requirements of the Paint Stripping and Miscellaneous Surface Coating Operations Sources NESHAP (subpart HHHHHH) because it is stated as such in the subpart HHHHHH rule. In addition, if facilities in one of the nine area source categories subject to this final rule use paints that do not contain MFHAP, they are not subject to the painting requirements in this final rule. The fact that subpart HHHHHH also has the same MFHAP criteria for determining applicability of that rule's painting requirements is not relevant to the applicability question.

Comment: One commenter stated that the mass balance necessary to determine the amount of PM emissions from forging operations which escape the building is not feasible. They suggested that the forging industry should not be included in the standard as a result.

Response: For forging operations, the only emissions measurement necessary is for determination of area source status for the facility as a whole, which is in terms of HAP emissions and not PM. Further, no mass balances are required for PM or

MFHAP emissions from any affected sources covered by the rule, including forging facilities.

Comment: Several commenters requested that maintenance activities, and research and development operations be excluded from the rule. Specifically, two commenters recommended welding and machining/grinding performed for maintenance should be excluded, and stick welding performed for maintenance was specifically mentioned in another instance. Another commenter requested that the fabrication of unique pieces of process equipment or materials handling equipment be excluded. One of the commenters also requested an exemption for research and development operations. Another requested an exemption for quality assurance/quality control operations and training centers. Alternatively, they requested that training centers be added to the definition of research and laboratory activities. They claimed that this exemption is necessary to cover trade schools and other academic centers of learning, as well as industrial training facilities, many of which will have to intensify their operations solely as a result of this rule's training requirements.

Related to these comments, two commenters requested changes to the definition of "facility maintenance". One commenter requested that the definition from the Paint Stripping and Miscellaneous Surface Coating Operations NESHAP be used,

specifically that the following phrase: "Facility maintenance includes the application of coatings to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Another commenter proposed that EPA revise the definition of "facility maintenance" to clarify that infrastructure includes process and control equipment.

Response: Research and laboratory facilities, equipment repair operations, and facility maintenance were excluded from the proposed rule because emissions from these activities were not part of the 1990 inventory. Specifically, §63.11514(e) of §63.11514, "Am I subject to this subpart?", states: "This subpart does not apply to research or laboratory facilities, as defined in section 112(c)(7) of the CAA." Additionally, §63.11514(f) states: "This subpart does not apply to tool or equipment repair operations, or facility maintenance as defined in §63.11522, "What definitions apply to this subpart?". We received no adverse comment regarding whether the nine listed area source categories included these activities, and we therefore did not make changes to this final rule.

We agree with the commenter that it is appropriate to also exclude quality control activities since, based on reasonable assumptions, we believe that emissions from these activities were not part of the 1990 inventory. Therefore this final rule

clarifies that the emission control requirements do not apply to these activities. We have also added a definition of quality control activities that is based on the definition in the Paint Stripping and Miscellaneous Surface Coating Operations Sources NESHAP (subpart HHHHHH).

With regard to the definition of facility maintenance, the language regarding stationary structures or appurtenances was already in the proposed rule. We did clarify that facility maintenance includes work on process and control equipment.

Finally, we did not add an exclusion for training centers as the commenter suggested, nor did we add "training center" into the definition of research and development activities. While the commenter is correct that the requirements of this rule will result in increased training needs, the examples that they provided (trade schools, academic centers of learning, industrial training facilities) would not be subject to this rule as they are not in one of the nine area source categories covered, since their primary business is not in the fabrication or finishing of metal products.

Comment: Two commenters recommended the addition of language that EPA has included in several other rules to prevent surface coating operations on military installations from being subject to multiple rules.

Response: While the operations covered by the rule may be performed at military installations, the applicability of the rule is specific to the nine metal fabrication area source categories, as specified in §63.11514, "Am I subject to this subpart?". In order to make this clear with regard to military operations, paragraphs have been added to §63.11514 that specify that this subpart does not apply to military operations or the production of military munitions. In addition, consistent with subpart HHHHHH, we have also clarified that these provisions do not apply to NASA and National Nuclear Security facilities.

Comment: Two commenters requested clarification that although their facilities may perform some metal fabrication and finishing operations, since their facilities are not primarily engaged in any of the nine source categories identified in the rule, they are not subject to the provisions of the rule.

Response: The commenter is correct. If the primary activities of their facilities do not place them in one of the identified source categories, they are not subject to the rule. To clarify this issue, we have added a definition to the rule for "primarily engaged", as follows: "Primarily engaged means the manufacturing, fabricating, or forging of one or more products listed in one of the nine metal fabrication and finishing source categories described in Table 1, "Description of Source Categories Affected by this Subpart," represents at

least 50 percent of the production at a facility, where production quantities are established by the volume, linear foot, square foot, or other value suited to the specific industry." This definition is consistent with the descriptions provided above in section I.A, "Does this action apply to me?". It is also consistent with the basis of the listing of the source categories in the 1990 air toxics inventory.

Comment: Several commenters opposed the requirements in the proposed rule because they felt these requirements were not justified by the environmental benefits. One commenter questioned the justification for the rule, stating that the imposition of significant costs for additional control, monitoring, recordkeeping and reporting obligations, with no corresponding environmental benefit is unwarranted and unduly burdensome. Similarly, another commenter stated that the proposed NESHAP creates an unjustifiable administrative burden for many manufacturers, disproportionately burdening smaller operations that would have *de minimis* emissions. According to the commenters, small businesses which have never before been subject to a NESHAP would be required to submit notifications, reports, and keep records needed to demonstrate compliance with the rule. These commenters believe that EPA should not require small businesses to comply with such administrative requirements because of the negligible risk they believe are posed by these

small businesses with marginal emissions. Still another commenter opposed the proposed rule because they believed it would further undermine the climate of business certainty necessary for manufacturers to comply with rational federal regulations that balance economic growth and environmental protection. The commenter said that EPA seeks to impose a real compliance burden that will achieve no clear environmental objective.

Several commenters recommended that EPA consider *de minimis* exemptions or thresholds for small operations or operations emitting very small amounts of MFHAP which would be heavily impacted by the rule, but result in only small emissions reductions. Two commenters specifically requested exclusions of machining and grinding operations, and operations which are already controlled.

Response: These nine metal fabrication and finishing area source categories are area source categories that are needed to meet the CAA section 112(c)(3) requirement that we subject to regulation the area source categories representing 90 percent of the emissions of cadmium, chromium, lead, manganese and nickel. See section 112(c)(3). We recognize that these nine metal fabrication and finishing area source categories are comprised of a large number of relatively small facilities. Although area sources individually may be considered low-emitting sources,

collectively, they are not. The commenters' suggestions do not take into account our requirement under section 112(c)(3). As discussed above, we previously determined that we need these nine area source categories to fulfill EPA's obligation under this requirement, which provides that EPA regulate area sources accounting for 90 percent of the emissions of the 30 urban HAP.

However, in developing this final rule, we attempted to further reduce the burden, especially on small facilities, while ensuring that this final rule includes sufficient requirements for ensuring compliance. We have incorporated the following changes in this final rule to reduce the burden: reducing the number of operations that are required to do monitoring from five to two operations (if present); further reducing the requirement for monitoring by excluding from the monitoring requirement any facility with welding operations that use less than 2,000 pounds per year of welding rod containing MFHAP; reducing the frequency of monitoring to quarterly for affected operations that do not have visible emissions or opacity exceedences; specifying that this final rule does not apply to material that contains MFHAP in quantities less than 0.1 percent for carcinogens (which includes cadmium, chromium, nickel, and lead), or less than 1.0 percent for carcinogens (which includes manganese). In addition, we are planning various outreach activities specifically for this industry to help affected



facilities comply with this final rule to further reduce the overall burden.

Comment: The criteria in §63.11514, "Am I subject to this subpart?", specifically paragraph §63.11514(a), states that you are subject to this subpart "if you own or operate an area source of MFHAP." The commenter indicated that this implies that facilities within the scope of the proposed rule could have emissions other than MFHAP. Since there is no limitation on the size of sources subject to the proposed rule, the proposed language leaves open the possibility that a major source of HAP, but not of MFHAP, could be subject to the rule if the MFHAP emissions do not exceed the major source threshold.

Response: We acknowledge the awkward wording referred to by the commenter and have made changes to make it clear that the regulation applies to sources that are area sources for HAP.

Comment: One commenter suggested that in determining the applicability of the proposed rule, a source should only be considered to be engaged in metal fabrication or finishing operations if it manufactures a finished and assembled product. They suggested that rather than simply referencing applicable source categories and included NAICS codes, "metal fabrication or finishing source categories" should be unambiguously defined as "operations described in Table 1 to this subpart that are assembly operations that purchase cast metal parts (no casting

on site), perform various finishing operations, and then assemble their products, with the exception of iron and steel forging."

Response: While we appreciate the commenter's attempt to further clarify the applicability provisions of the rule, we do not believe that this language captures the basis of the listing of the source categories in the 1990 inventory as do the descriptions in Table 1 of the proposed and final rules. Therefore, we have declined to incorporate the commenter's suggested language in our definitions. While some of the activities described in Table 1 do produce a finished and assembled product, some of them do not. However, as a result of other comments, we have revised the description of affected sources to only include facilities that are "primarily engaged" in the indicated activities, as discussed above. We believe that this change should sufficiently clarify the applicability of this final rule.

Comment: One commenter stated that his organization, which represents a subset of the Fabricated Structural Metal Manufacturing source category, namely, "Structural Steel Fabricators in Non-urban, Non-stainless, Non-galvanizing Fully-enclosed Shop (NAICS 332312)," should be excluded from this rule because their products are covered by permit under the Architectural Surface Coating rule under the CAA. Also, the

spray paint booths or spray rooms required by this final rule are infeasible and cost-prohibitive, and the VOHAP calculations are inapplicable and unmanageable compared to previous EPA approaches to calculating VOHAP content of paints. In addition, the commenter stated that this subset of the source category is not like the other categories, because facilities in NAICS 332312 only do some of the operations regulated in the proposed rule and some operations do not use or emit the MFHAP. Therefore, this source category should be separately regulated and not included with the other eight source categories in this rule.

Response: In regard to the conflict of this rule alleged by the commenter with EPA's National VOC Emission Standards for Architectural Coatings (40 CFR part 59, subpart D), we clarify for the commenter that subpart D controls VOC emissions, as per CAA section 183(e), and only affects manufacturers, distributors, and importers of architectural coatings; users of the architectural coating products, therefore, are not regulated entities under CAA section 183(e). Subpart D also covers coatings intended for field application rather than coatings intended for shop or factory application. Therefore, the commenter is incorrect that this rule is in conflict with subpart D. Since this final rule removes the standards for VOHAP from spray painting operations, the issues raised with

regard to VOHAP calculations are no longer relevant.

To address this and other commenter's concerns regarding the burden of compliance, we have revised this final rule so that if facilities do not emit or use materials containing MFHAP above specified levels, i.e., greater than or equal to 0.1 percent cadmium, chromium, lead, or nickel by weight (of the metal), or 1 percent manganese by weight (of the metal), then the requirements of this final rule do not apply. We have also reduced the monitoring requirement in this final rule so that only two types of operations will need to do monitoring, as compared to the previous five operations in the proposed rule: (1) abrasive blasting with MFHAP performed on objects greater than 8 feet, and (2) welding operations performed with annual use of welding rod with MFHAP greater than or equal to 2,000 pounds. Under this final rule, affected facilities with annual use of welding rod with MFHAP less than 2,000 pounds are not subject to the visible emissions monitoring requirements.

In addition, we found through other comments we received that there is a unique feature of the facilities in the Fabricated Structural Metal Manufacturing source category (NAICS 332312), as the commenter has also noted, in regard to spray painting small objects less than or equal to 15 feet along with large objects greater than 15 feet in open areas and not enclosed in spray booths or spray rooms, as discussed below

(under section V.E.4, Management Practices for MFHAP Control for Painting). Therefore, we have revised this rule to accommodate this process difference and removed the spray booth requirement.

Finally, based on our research for this rule that included site visits, surveys, and contacts with industry representatives, we believe that the operations in all the nine metal fabrication and finishing source categories are sufficiently similar to justify including all nine source categories in one rule, if the above-cited exception that accommodates the one significant difference is included.

#### B. Compliance Dates

Comment: Four commenters disagreed with the two-year compliance timeframe. They suggested that because of the large number of sources that state or local permitting agencies will need to identify and contact (many of whom are small businesses), and the potential need for sources to train painters and install necessary equipment, that three years is more typical and more appropriate.

Response: We agree with the commenter's reasoning, and have adjusted the compliance date accordingly.

Comment: One commenter from a regulatory assistance organization noted that the scheduling of the promulgation and compliance dates of this rule will make it difficult for them to provide outreach while commenting on the other EPA area source

rules proposed or in development. They recommended adjusting the notification dates and other dates in this rule to avoid this conflict.

Response: While we appreciate the difficulty the commenter has in managing these various activities, we have little latitude in shifting the promulgation date of this final rule since it is mandated by a court order. The notification and other dates in this rule are guided by the part 63 General Provisions. We have extended the compliance period to three years in this final rule to provide sufficient opportunity for facilities and organizations to prepare for compliance. We expect that this additional time will provide some relief to the commenter in their needs as well.

Comment: One commenter suggested that because of the necessity of arranging training, it will be very difficult for small facilities with painting operations to meet the compliance deadlines.

Response: The proposed rule would have required that, for existing sources, training would be completed by September 3, 2008. Upon reconsideration, we believe that having this training completed in advance of the compliance date is not necessary. Therefore, this final rule requires that training be complete by the compliance date. This will give facilities three full years to schedule and complete the training.

Comment: One commenter stated that new affected sources should be allowed 180 days after startup to demonstrate compliance, rather than 120 days, as proposed, to be consistent with other major and area source rules.

Response: The commenter is correct in that the notification of compliance status report is sometimes required by some 40 CFR part 63 major and area source rules to be submitted 180 days after the startup of new affected sources. However, there are also examples where these rules require this compliance notification 120 days after startup. Since there are no source tests that are required for this rule, we do not feel that an additional 60 days is necessary.

Comment: One commenter stated that there was no compliance deadline included in the proposed rule for a new affected source that starts up prior to the publication of this final rule.

Response: The commenter is incorrect. The proposed compliance dates at §63.11515 "What are my compliance dates?", states: "[i]f you start up a new affected source after the date of publication of this final rule in the Federal Register, you must achieve compliance with the provisions in this subpart upon startup of your affected source." However, this text was incomplete and should have required new sources to comply with the requirements of this final rule by the date of publication of this final rule in the Federal Register, or upon start-up,

whichever is later. This language has been corrected in this final rule.

C. Scope of Rule

Comment: Several comments were received expressing concern about how the proposed rule applied to the use of MFHAP. First, one commenter pointed out that the definition of MFHAP in the proposed rule is not consistent with definition in the proposal preamble. The preamble referred to MFHAP compounds, while the definition of MFHAP in the rule only lists the elements. The comments suggested adding "compounds of" to the definition.

Two commenters requested clarification that, for spray painting affected sources, EPA only intended to require the use of a spray booth and other work practices when the paint being sprayed contains MFHAP. If a fabricator uses paints containing MFHAP even once, the language of the regulation might require it to apply the management practices even when spraying non-MFHAP paints.

Two commenters recommended establishing threshold amounts for MFHAP in the same manner that the proposed rule did for VOHAP in paints. Specifically, they stated, for paints, the proposed rule required that you count each VOHAP that is measured to be present at 0.1 percent by mass or more for OSHA-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4), and 1.0 percent by mass or more for other compounds.



Response: With regard to the definition of MFHAP, it was our intent that the rule apply to compounds containing these five metals, as noted by the commenter. Therefore, we have revised the definition of MFHAP in this final rule to include "any compound of the following metals: cadmium, chromium, lead, manganese, or nickel, or any of these metals in the elemental form, with the exception of lead," consistent with the HAP definitions in the CAA (section 112 (b)).

The proposed rule, in §63.11514(a), "Am I subject to this subpart?", states that "(y)ou are subject to this subpart if you own or operate an area source that emits metal fabrication or finishing metal HAP (MFHAP), defined to be the compounds of cadmium, chromium, lead, manganese, and nickel, or an area source that emits VOHAP from spray painting operations, which performs metal fabrication or finishing operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of this section." As discussed above, we have removed the requirements related to VOHAP. Therefore, the affected sources are equipment and activities necessary to perform the designated operations (abrasive blasting, machining, dry grinding and polishing, spray painting, and welding) which use or have the potential to emit MFHAP. It is our intent that any of these operations that ever use materials containing MFHAP, or that have the potential to ever emit MFHAP, are affected sources.

However, we have made a modification to the affected source definition in §63.11514(b), "Am I subject to this subpart?", to add the concept of the use of "materials containing MFHAP", as opposed to just "MFHAP." We agree with the recommendation that OSHA-based thresholds are appropriate for defining whether a material "contains" MFHAP, since we believe that materials that contain MFHAP below these thresholds contain such very small amounts of HAP that they were not included in the 1990 inventory. For example, §63.11514(b)(2) of this final rule states: "A machining affected source is the collection of all equipment and activities necessary to perform machining operations that uses materials containing MFHAP...", where "material containing MFHAP" is defined in §63.11522, "What definitions apply to this subpart?", to be: "material that contains cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material."

In addition, when operations are occurring at an affected source that does not use any materials containing MFHAP, we do not believe that the management practices to minimize MFHAP emissions need to be followed. While the commenter only raised

this issue with respect to painting, we believe that it should be universally applicable to all types of affected sources. Therefore, we have made changes in §63.11516, "What are my standards and management practices," of this final rule to make it clear that these requirements apply only when materials containing MFHAP are being used. For example, §63.11516(a) of this final rule states the following: "Dry abrasive blasting standards. If you own or operate a new or existing dry abrasive blasting affected source you must comply with the requirements in paragraphs (a)(1) through (3) of this section, as applicable, for each dry abrasive blasting operation that uses materials that contain MFHAP or have the potential to emit MFHAP. These requirements do not apply when abrasive blasting operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP."

Comment: One commenter recommended that EPA specify hexavalent chromium instead of using the general term "chromium." The general term "chromium" includes trivalent chromium, which is an important material used in small quantities for achieving certain metallic and pearlescent finishes; it has a relatively benign nature as compared to hexavalent chromium. Also, EPA used hexavalent chromium in their Urban HAP analysis in the Integrated Urban Air Toxics Strategy instead of total chromium.

Response: The CAA specifically lists "chromium compounds" as a hazardous air pollutant. In our original listing for the Urban Air Toxics Strategy (64 FR 38706, July 19, 1999), we listed "chromium compounds" as one of the Urban HAP targeted for the Integrated Urban Air Toxics Strategy. CAA section 112(c)(3) requires us to list source categories accounting for 90 percent of the emissions of each of the listed urban HAP, including chromium compounds. As explained above, we need the nine source categories at issue here to reach the 90 percent requirement in CAA section 112(c)(3) for chromium compounds.

The commenter is correct that trivalent chromium is relatively benign as compared to hexavalent chromium. The reason why we used hexavalent chromium in the Urban HAP analysis in the Integrated Urban Air Toxics Strategy was to prioritize and rank the sources of Urban HAP area source categories for regulation, for the exact reason that the commenter states. However, we always intended to use chromium compounds as the regulated pollutant since the listing of the categories was based on emissions of chromium compounds, not hexavalent chromium. Many of our control strategies for chromium and other metal HAP involve the use of PM as a surrogate for chromium and other metal HAP. These PM control strategies control all chromium compounds along with PM and other metal HAP, therefore the form of chromium would not change the type of PM control

strategy we choose. The coating control strategies in this rule either control PM and other metal HAP along with chromium (for the case of PM paint booth filters required for spray painting) or reduce the total amount of coating used (and therefore the amount of PM and other metal HAP), through the use of HVLP spray technology, training, and management practices.

In summary, although we recognize the differences in the health effects of hexavalent and trivalent chromium, we are required to regulate chromium compounds from the nine source categories at issue in this rule.

Comment: Two commenters questioned whether the HAP reduction warrants the regulation. One commenter stated that MFHAP are present only in small amounts at the facilities it represents. Little PM leaves the building perimeters, and an even smaller percentage is MFHAP.

Response: As noted in the preamble to the proposed rule and reiterated above, section 112(k)(3)(B) of the CAA requires EPA to identify at least 30 HAP which, as the result of emissions from area sources, pose the greatest threat to public health in urban areas. Section 112(c)(3) requires EPA to list sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 urban HAP are subject to regulation. We determined that these nine metal fabrication and finishing area source

categories are among the area source categories that we need to meet the section 112(c)(3) requirement to regulate area source categories representing 90 percent of the emissions of cadmium, chromium, lead, manganese and nickel. See section 112(c)(3).

We recognize that these metal fabrication area source categories are comprised of a large number of relatively small facilities. Although area sources individually may be considered low-emitting sources, collectively, they are not; therefore, we are issuing regulations for these source categories. However, as discussed above, we have attempted to minimize the burden on the affected facilities, especially small businesses, and have revised the requirements further in this final rule to further reduce the burden to small facilities.

We disagree with the commenter's statement that this rule will result in no environmental benefit. This final rule will help to ensure that future emissions will be limited to the same levels currently achieved. If the source categories were not regulated, as suggested by the commenter, there would be no such limit of future emissions from new facilities in the nine metal fabrication and finishing area source categories.

Comment: One commenter noted that in §63.11514(b)(4), "Am I subject to this subpart?", the paragraph defining a spray painting operation includes those using paints containing VOHAP or MFHAP. The commenter stated that the standards outlined in

§63.11516(d) and (e), "What are my standards and management practices?", apply to all spray painting affected sources and thus do not specifically apply to sources that only emit MFHAP or VOHAP. The commenter recommended that the standards be rephrased so that paragraph (d) specifically states that it applies to sources of MFHAP and paragraph (e) to sources of VOHAP. Another commenter noted an error wherein §63.11516(d) states: "If you own or operate a new or existing spray painting affected source as defined in §63.11522, "What definitions apply to this subpart?". However, the definition of "spray painting affected source" is in §63.11514(b)(4), "Am I subject to this subpart?", not in the "Definitions" section (§63.11522).

Response: The commenters are correct, in that the provisions in §63.11516(d) and (e), "What are my standards and management practices?", are intended to apply only to operations using paints containing MFHAP. The rule text has been revised to reflect this. The standards for VOHAP from spray painting operations have been removed from this final rule.

#### D. Impacts of Rule

Comment: Two commenters suggested that the proposed rule will potentially affect many more small facilities than estimated by EPA. One commenter noted that "InfoUSA" ([www.infousa.com](http://www.infousa.com)) reports over 37,000 facilities with fewer than 100 employees and over 17,000 with fewer than 10 employees in

the SIC codes corresponding to the Nine Metal Fabrication and Finishing Area Source Categories, versus the 5,800 facilities estimated in the proposal preamble. Another commenter stated that there are over 4,000 metal fabrication sources in Texas alone.

Response: Our estimate of the total number of affected facilities, and the number of small businesses, was based on the most recently available U.S. Economic Census (2002). We were able to obtain similar facility numbers using the cited web site, but have no explanation for the discrepancy between these two respected sources of information. However, we stand by the Census, which has the sole purpose of providing U.S. economic information, to obtain an estimate of the number of facilities in these source categories.

Comment: One commenter notes that the preamble states that 5,800 sources will be regulated by this rule, of which 90 percent are small businesses. They say this is inequitable and places a considerable burden on small businesses.

Response: As explained above, we need to regulate these nine metal fabrication and finishing area source categories to meet the 90 percent requirement in section 112(c)(3) for emissions of cadmium, chromium, lead, manganese, and nickel. In developing the proposed rule, we attempted to minimize the burden on small businesses, while ensuring that the rule



includes sufficient requirements for ensuring compliance. This final rule imposes no testing requirements, and we have eliminated the requirement to conduct visual emissions monitoring for some types of sources from that which was required in the proposed rule. With respect to recordkeeping, our understanding is that the required records are already maintained at most facilities as part of routine procedures. Therefore, the recordkeeping requirements do not represent any significant burden on these facilities.

Comment: Seven commenters stated that the estimated costs of the proposed rule are underestimated, and that \$1,120 initially and \$735 annually is not reflective of the actual cost to small businesses. They argue that the total number of labor hours is also not reflective of the time needed by small businesses to comply. According to the commenters, the number of hours needed to comply with the paperwork, training, monitoring and installation of upgraded equipment will exceed 80 hours the first year. They stated their belief that cost estimates using EPA's initial cost and hours pro-rated, will be over \$3,700 per facility. According to the commenters, this does not include any capital costs needed to comply with the NESHAP and no consideration has been given to non-fiscal resources. The commenters argued that most companies will require outside consulting assistance to meet compliance,

training, and record-keeping requirements. One commenter specifically mentioned the costs of obtaining Method 9 certification (and annual re-certification) for employees.

Response: We based those reporting and recordkeeping estimates of the burden on past experience with similar rules, and believe that they are reasonable. As noted in response to other comments, we have made several changes to this final rule to decrease the burden on all affected facilities. For example, we have eliminated the requirement to conduct visual emission observations from all sources except large welding operations and uncontrolled blasting operations on objects greater than 8 feet in any dimension. No capital costs are incurred as a result of this rule since all facilities are currently using the MFHAP control methods that the rule requires. Also, Method 9 is only required if an exceedence of Method 22 occurs twice and we do not expect this to occur for most facilities.

#### E. Management Practices

##### 1. General

Comment: The management practices in the proposed rule for abrasive blasting, machining, and dry grinding and polishing included the requirement that affected sources "must keep work areas free of excess MFHAP material by sweeping or vacuuming dust once per day, once per shift, or once per operation, as needed depending on the severity of dust generation." Several

commenters disagreed with these requirements. One commenter suggested that leaving dust on the floor may produce less airborne dust than frequent sweeping, which renders the dust airborne again. They also suggested that there may be worker safety issues related to sweeping in unsafe areas. Another commenter stated that the proposed rule would overlap with existing Federal and state programs and with jurisdiction of OSHA. They stated that by proposing to mandate that manufacturers "keep work areas free of excess dust by regular sweeping or vacuuming to control the accumulation of dust and other particles," and further giving a regulatory definition for what constitutes "regular vacuuming," EPA complicates manufacturers' efforts to comply with various federal and state worker safety regulations, but also mandates practices that most business owners either already undertake pursuant to existing law, and/or to maximize the health of their works. They stated their belief that this increases or duplicates regulatory burdens and best practices and hampers operational efficiency within manufacturing facilities. Further, this commenter said that mandating the frequency with which metal operations must sweep the floor of their factories will not help EPA fulfill its mandate to protect environmental and public health, since manufacturers already comply with these practices.

While these comments are related to the sweeping requirements for all sources, other commenters had more specific criticisms of these requirements as applied to outdoor blasting. These commenters noted that the requirements for sweeping and enclosure of storage areas and conveyors for outdoor abrasive blasting seem inappropriate for outdoor operations which are not themselves enclosed, and where the abrasive falls to the ground under the work pieces. They stated that making outdoor blasting operations "clear and enclose as you go" would be cost prohibitive.

These commenters provided a variety of suggestions. Some commenters requested removal of these requirements. Another commenter suggested that the term "if possible" be added to the management practice of sweeping outdoor areas, as they pointed out that an affected source may not be able to sweep or vacuum over unpaved surfaces or rock. One commenter said that EPA should reexamine the proposal and attempt to pinpoint real, potential gaps that may exist under existing regulatory programs rather than issue regulations that will cause overlaps and potential confusion, thereby undermining environmental compliance and industrial productivity. Finally, a commenter suggested a requirement for sweeping on a frequency determined by facility managers considering safety and emissions.

Response: The primary purpose of the management practices described by the commenters is to minimize the potential for fugitive emissions that occur due to the "stirring up" of MFHAP dust in the work area. We recognize that these practices would likely have a larger beneficial effect on the ambient air inside the facility than for outside the plant boundaries. We also recognize that these practices are commonly employed at these facilities to reduce worker exposure to these dusts, hence the inclusion of these practices as "generally available control technology.". Our intention was to have these requirements work in concert with established plant practices and OSHA requirements. However, we understand how conflicts could result from the very prescriptive proposed requirements. We also recognize there could be situations where a requirement to sweep at least once per day could be more detrimental than beneficial. We do, however, continue to believe that it is important that owners and operators of these operations perform routine practices to reduce the possibility of fugitive MFHAP emissions due to accumulated dust in these work areas. Therefore, we did not take the one commenter's suggestion to completely eliminate these requirements. Rather, we have incorporated the recommendation of another commenter to make these sweeping/vacuuming requirements at the discretion of the owner or operator of the affected source. Specifically, this final

rule requires that affected sources "must take measures necessary to minimize excess dust to reduce emissions." This general requirement also applies to blasting that is conducted outdoors or indoors.

## 2. Abrasive Blasting

Comment: One commenter suggested that EPA revise §63.11516(a), "What are my standards and management practices?", to take into account all possible abrasive blasting activities. They indicated that the proposed paragraph §63.11516(a) (1) applied to dry blasting objects less than or equal to 8 feet in totally enclosed and unvented blast chambers, paragraph §63.11516(a) (2) applied to dry blasting objects less than or equal to 8 feet in vented enclosures, and paragraph §63.11516(a) (3) applied to dry blasting objects greater than 8 feet. They concluded that it appeared that EPA meant to draft this section so that paragraph (a) (3) applied to any size objects dry blasted outdoors. Also, they pointed out that there were no regulations that applied to dry blasting objects greater than 8 feet indoors. In this regard, the commenter stated that there appeared to be a typographical error in the second sentence of paragraph (a) (2). They indicated that it should be re-written to the following: "As an alternative, dry abrasive blasting operations for which the items to be blasted are equal to or less than 8 feet (2.4 meters) in any dimension, may be

performed outdoors, subject to the requirements in paragraph (a) (3) of this section.”

Response: Paragraph §63.11516(a) (1), “What are my standards and management practices?”, is specific to dry blasting of objects in totally enclosed and unvented blast chambers. While we would not expect that large objects would ever be blasted in a totally enclosed and unvented blast chamber, these provisions are applicable to any situation where an object is blasted in such a blast chamber. Therefore, we have corrected the title of the section in this final rule to state: “Standards for dry abrasive blasting performed in enclosed and unvented blast chambers.”

The proposed standard in §63.11516(a) (2), “What are my standards and management practices?”, applied to blasting operations which have vents allowing any air or blast material to escape. This provision of the proposed rule was intended to encompass all blasting performed in vented blasting chambers, regardless of the size of the object being blasted. Therefore, the size of the material blasted has been removed from the title of the provision in this final rule so that the rule applies to objects of any size, as long as the objects are blasted in chambers vented to a filtration control device.

The only blasting operations (excluding those in enclosed unvented chambers) that may not be subject to the revised

provisions of §63.11516(a) (2), "What are my standards and management practices?" in this final rule, are operations where objects greater than 8 feet are being blasted. These operations may be performed indoors or outdoors, without a filtration control device. These operations are subject to the management practices in paragraph §63.11516(a) (3). They are also subject to visual emissions testing requirements. In other words, we consider that the differences in the type of the process where large (i.e., greater than 8 feet) objects are being blasted to warrant separate requirements for situations where blast chambers, vented or unvented, cannot be used.

Therefore, in this final rule, the title of paragraph §63.11516(a) (1), "What are my standards and management practices?", has been changed to "Standards for dry abrasive blasting performed in totally enclosed and unvented blast chambers." Also, the title of paragraph §63.11516(a) (2) has been changed to "Standards for dry abrasive blasting performed in vented enclosures". Paragraph §63.11516(a) (3), "Standards for dry abrasive blasting of objects greater than 8 feet in any one dimension" has been amended to address blasting of objects greater than 8 feet in any one dimension, either indoors or outdoors, with operations performed in both blasting locations required to perform management practices and visible emissions monitoring.



Comment: One commenter questioned the mention of silica sand in the rule as an acceptable abrasive, noting OSHA regulations related to worker exposure to silicon dioxide (SiO<sub>2</sub>) and dangers of silicosis.

Response: The commenter is mistaken that we recommend the use of sand or silica. The intent of this portion of the proposed rule was explicitly to limit emission of MFHAP by minimizing the use of high-PM generating blast media, such as sand. In this final rule, in §63.11516 (a) (3) (i) (E), "What are my standards and management practices?", we say in this regard: "Whenever practicable, you must switch from high PM-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), where PM is a surrogate for MFHAP."

Comment: One commenter asked that the proposed rule text be clarified to specify that the requirement in §63.11516(a) (2) (ii) (B), "What are my standards and management practices?", for enclosure of conveyors only applies to conveyors used to transport blast media and debris, not those carrying the material to be blasted. Other commenters noted that the requirements for enclosure of storage areas and conveyors for outdoor abrasive blasting seemed inappropriate for outdoor operations which are not themselves enclosed, and they requested removal of these requirements.

Response: We agree with these comments and have revised the requirements in this final rule accordingly.

Comment: One commenter noted that §63.11516(a)(3)(i)(E), "What are my standards and management practices?", states that no dry abrasive blasting shall be performed on substrates having paints containing greater than 0.1 percent lead. However, no test method is specified in the rule. Another commenter asked whether the prohibition of blasting of lead bearing paints only applies to outdoor activities or if it applies to indoor blasting as well.

Response: We have removed this requirement. We agree with the commenter that testing for lead in all painted substrates would impose an impractical burden. We believe that the required work practices will address emissions of lead and other MFHAP through reduction of PM emissions.

Comment: One commenter objected to the absolute prohibition of outdoor dry blasting during a wind event. They have several facilities in locations where these wind events are very common. If no visible emissions are detected at the facility fence line or property border or border, there should be no absolute prohibition of blasting during a wind event.

Response: We agree with the commenter. This final rule retains the provisions that require the determination of visible emissions at the fence line or property border. Therefore, we

believe that the owner or operator of an abrasive blasting affected source can use their judgment whether a windy event would impact the visible emissions at the fence line or property border. Therefore, this prohibition of outdoor blasting during a wind event has been removed.

### 3. Dry Grinding and Polishing with Machines

Comment: Two commenters requested clarification that the grinding requirements do not apply to hand-held grinding equipment; one commenter requested that bench-scale equipment also not be included in the requirement since capture and control devices are not used in this situation.

Response: As evidenced by the name of the affected source (i.e., dry grinding and dry polishing with machines), our intention was not to cover hand-held grinding or polishing, or bench-scale equipment. To make this clear, we have revised the definition of dry grinding and dry polishing with machines as follows: "Dry grinding and dry polishing with machine means grinding or polishing without the use of lubricating oils or fluids in fixed or stationary machines. Hand grinding and hand polishing, and bench-scale grinding and polishing are not included under this definition."

### 4. Painting for MFHAP Control

Comment: Two commenters stated that the requirement for spray booths or spray rooms for painting objects under 15 feet

is excessively burdensome for facilities in the Fabricated Structural Metal Manufacturing source category (SIC 3441 and NAICS 332312). They indicated that custom paint work performed in this source category differs greatly from other industries, which they claim use assembly lines to manufacture and paint standard products with a minimum of variation. The commenters reported that these shops deal with large and small pieces, and the specifications often change with each job. They cited numerous significant logistical difficulties with implementation of paint booths or spray rooms, including issues associated with material movement, drying/curing time, shop size, and costs (production and equipment costs). Specifically, they noted:

- (1) regardless of their size, the structural metal objects being painted are very heavy and typically must be moved with cranes;
- (2) there is a two to eight hour curing time for the paint to dry, during which the objects must be turned over to paint the other side;
- (3) moving the work pieces into and out of paint booths might add 25 percent to the cost;
- (4) the use of paint booths for some objects (regardless of the exact size cut-off) would require adding an entirely new process line incorporating the booths, which would take up large amounts of scarce space on the factory floor.

One of the commenters also offered several reasons that the enclosure requirement is unlikely to have a significant positive impact on emissions from facilities in this

SIC/NAICS code: (1) the paints used by facilities in the Fabricated Structural Metal Manufacturing source category do not contain high levels of metal HAP; (2) the facilities will be using spray guns meeting the standards of the proposed regulation; and (3) only a small percentage of the work pieces are under 15 feet. The commenter states that the minor emission reductions do not justify the high cost of creating an alternate paint process to comply, if such an alternate is feasible at all. In conclusion, these commenters recommended that the paint booth requirement for objects less than 15 feet be removed in its entirety.

Another commenter stated that the proposed requirement to conduct painting of parts less than or equal to 15 feet in any dimension within enclosed, filtered spray booths or spray rooms was incompatible with the requirements of aerospace manufacturing, and is not required by existing EPA or OSHA regulations. One of their points was that in its recent hexavalent chromium standard, OSHA recognized that some aerospace parts are so large that they must be painted in "oversized workspaces."

Response: We did not accept the recommendation to delete the paint booth requirements entirely, as was suggested by the commenter. We determined that the use of spray booth equipped with filters was generally available for most painting

operations present at the source categories addressed by this rulemaking. However, we did recognize that there were circumstances where booths or spray rooms were not feasible. Based on our information gathering efforts prior to proposal (which included site visits and other information gathering for the Fabricated Structural Metal Manufacturing source category), we believed that these situations could be adequately characterized based on object size, and we selected 15 feet as the cutoff that represented these situations. However, based on the information provided by these commenters, we now recognize the uniqueness of this industry with regard to the type of process and their ability to install and operate paint booths or spray rooms with filters to reduce MFHAP emissions for spray painting operations. Therefore, we have revised this final rule to remove that requirement for spray painting affected sources in the Fabricated Structural Metal Manufacturing source category, which is comprised solely of facilities in NAICS 332312, to comply with the requirements for paint booths or spray rooms with filters to reduce MFHAP emissions as set out in §63.11516(d) (1), "What are my standards and management practices?". However, these affected sources will be subject to the management practices in §63.11516(d) (2) through (9).

With regard to the aerospace manufacturing comment, we would first point out that aerospace manufacturing facilities

are not among the area source categories covered under this subpart (XXXXXX). As discussed earlier, specific language has been added to the applicability provisions to make this clear. However, we also reiterate that we believe that the provisions in the proposed rule (which were retained in this final rule) where objects greater than 15 feet need not comply with the spray booth PM filter requirement is a valid difference in the final rule requirements. We believe differentiation is consistent with the "oversized workspaces" concept recognized by OSHA.

Comment: One commenter suggested that surface coating operations that do not utilize coatings containing HAP or at the minimum MFHAP should be exempted from the regulation. Although the proposed rule includes a pollution prevention regulation for these operations (3.0 pounds (lb) VOHAP per gallon (gal) paint solids), the commenter believes that EPA should provide additional incentive by including an exemption for coating operations that utilize non-HAP coatings.

Response: As described in more detail above (in section V.C., Scope of Rule) the spray painting provisions only apply to spray painting operations which use paints that contain MFHAP.

Comment: One commenter said that there is a new ASHRAE method (52.2) procedure to demonstrate filter efficiency that was similar to ASHRAE 52.1 that was required in the proposed

rule. The commenter stated that this new ASHRAE method has the additional benefit of considering particle size and is also very similar to proposed EPA Method 319 that was referenced in the NESHAP for Aerospace Manufacturing and Rework Facilities (40 CFR, part 63 subpart GG).

Response: This final rule states that: "...the procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, 'Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992' (incorporated by reference, see §63.14)." Therefore, another method can be used if it is "consistent" with ASHRAE 52.1. We believe that the new method, ASHRAE 52.2, is very likely to be consistent with ASHRAE 52.1. Since EPA Method 319 is only proposed at this time, it would be premature for EPA to include the new method by ASHRAE that relies on the proposed EPA method. We do not believe that requiring ASHRAE 52.1 in this final rule will be a hardship for the commenter since we believe that the commenter will be able to demonstrate, through the process described above, that the new ASHRAE 52.2 is "consistent" with ASHRAE 52.1. Therefore, we have not revised this final rule requirement to determine filter equivalency to include this new ASHRAE method.



## 5. Painting - VOHAP

Comment: One commenter indicated that EPA has not satisfied the statutory prerequisites to regulate VOHAP emissions from spray painting operations in this rulemaking. According to the commenter, none of the nine categories were listed for VOHAP, and none of the VOHAP are on EPA's list of 30 urban air toxics. The commenter stated that EPA cited CAA section 112(k)(3)(C) as providing the discretion to regulate these HAP in order to reduce the public health risk posed by the release of any HAP, but the commenter says that this passage is plainly not an independent grant of authority to EPA. The commenter further stated that this CAA section is only a directive to EPA as to the level of cancer risk reduction to be achieved by EPA and the states through the applicable rulemaking provision in the CAA. The commenter further noted that even if CAA section 112(k)(3)(C) could be interpreted as a general grant of discretionary regulatory authority, it cannot be interpreted to override the specific provisions of CAA section 112(k) regarding area sources, including CAA sections 112(c)(3) and 112(k)(3)(B), and 112(f)(1) and (2). The commenter argued that specific terms must be controlling over general terms. The commenter requested that all references to VOHAP be eliminated, and that the spray paint provisions apply only when coatings containing MFHAP are being spray applied.

Response: We proposed to set GACT for VOHAP emissions from spray painting because we found that VOHAP emissions from painting were over 60 percent of the total HAP emissions from the metal fabrication and finishing area source categories in the 2002 EPA National Emission Inventory. We also found that some facilities currently have state permits that allow them to emit high levels of VOHAP from their metal fabrication and finishing painting processes, although their actual emissions are currently lower. CAA section 112(c)(3) provides EPA with the authority to regulate any of the section 112(b) listed HAP upon certain findings being made.

Nonetheless, given the interest in this issue as expressed by the commenter, we have decided not to regulate VOHAP as part of this final rule. Accordingly, we have revised this final rule to remove the VOHAP control requirements.

## 6. Welding

Comment: Several commenters stated that the proposed welding standard is vague with respect to the need to comply with some or all of the management practices. They emphasized the relationship between emissions and other weld procedure inputs such as quality and safety in the selection of process variables. They suggest that the rule be revised to make it more explicit that weld quality need not be compromised in an attempt to reduce fume. The commenters emphasized that for many

welding applications weld quality can be an issue of public safety.

One commenter also suggested that the proposed rule could be interpreted to require that each of the individual welding management practices in §63.11516(f)(2), "What are my standards and management practices?", be implemented. Another objected to the use of the language "whenever possible." Several commenters questioned the use of the word "practicable" in the proposed welding rule text, saying that it invites differing interpretations of what is practicable, in particular the importance of considering welding codes and standards. Finally, a commenter noted that the requirement to "minimize" emissions of MFHAP is impractical, and that the word "reduce" would be more proper. They pointed out that changes implemented solely to minimize fume generation rates may have unintended consequences on product quality.

Response: We understand the commenter's concerns and did not intend for the welding provisions to adversely impact product quality, or that the facility be required to implement all of the management practices. The inclusion of the phrase "as practicable" was intended to convey this. However, to avoid any potential confusion, we have amended the language as follows: "implement one or more of the management practices ... to minimize emissions of MFHAP as practicable, while concurrently

maintaining the required welding quality through the application of sound welding engineering judgment.” Finally, we believe that the use of the word “minimize” is appropriate. We believe that replacement of “minimize” with “reduce” would imply that affected facilities that are already implementing management practices and pollution prevention techniques would be required to implement additional measure to further “reduce” their MFHAP emissions. Further, we believe that the combination of “minimize” and “as practicable” makes the balance between weld quality, sound welding engineering principles, and emission reductions clear.

Comment: One commenter described several highly technical issues with the specific welding management practices proposed, including use of shielding gases, use of “low fume welding processes”, inert carrier gases, 90° welding angles, and electrode diameter. They summed up by stating that welding is a complex science with many competing objectives, which may also be inconsistent. This commenter provided alternative management practices that incorporate the emission reduction concepts in the proposed rule in a more general manner. Their proposed management practices included: (1) utilization of welding processes with reduced fume generation capabilities; (2) utilization of welding process variations, if available, such as pulsed GMAW, which can reduce fume generation rates; (3)

utilization of welding filler metals and shielding gasses which are capable of reduced welding fume generation; and

(4) utilization of welding procedures (electrode diameter, voltage, amperage, travel speed, etc.) that reduce the amount of welding fume generated.

The commenter stated that their proposed alternative management practices capture all the technically justified items from the proposed list of eleven items, and present the items in a manner consistent with how a manufacturing or welding engineer would approach such a task. According to the commenter, the alternative method will more effectively achieve the intended results. The commenter stated that only by considering each individual welding situation can the appropriate engineering controls be implemented. Finally, the commenter noted that the format of their list highlights the importance that weld quality not be compromised, reducing the likelihood of the unintended negative consequences that could result.

Response: While we do not necessarily agree with the commenter's technical criticisms of the 11 proposed welding management practices, we believe that their suggested approach improves the flexibility of the rule without changing the requirement to identify and implement emission minimization practices. We also believe that it will be beneficial in the future, as it provides the necessary flexibility to include

emerging technologies that may not be necessarily included in the more explicit practices in the proposed rule. Therefore, we have revised this final rule accordingly.

Comment: Two commenters questioned whether the 85 percent capture requirement for welding fume specified in the proposal is possible, and requested that it be removed. One commenter suggested that it may be more difficult to capture a high percentage of the fume with some welding processes, but the amount of fume released with these welding types could be less compared to other types of welding, even considering a lower capture percentage. They also noted the possibility of capture systems interfering with shielding gases.

One commenter noted that use of fume control systems, both area-wide and localized, is not always possible for the types of operations covered by the rule, for various logistical reasons. They added that local systems have a limited range of coverage and may be too big to reach smaller spaces.

Response: We understand the commenter's objection, and have removed the requirement for a specific numeric efficiency for fume capture and control systems. Our original determination was that such systems represented one of the generally available measures available to reduce MFHAP emissions from welding operations. Accordingly, we have revised the welding provisions of this final rule to make the use of a fume

capture and control system one of the list of management practices that may be used to minimize MFHAP emissions, as practicable, as long as the capture and control devices are operated according to the manufacturer's specifications and the specifications are kept on-site, nearby the equipment and readily available for inspector review. However, if the facility uses 2,000 pounds or more of MFHAP-containing welding rod annually, on a rolling 12-month basis, they must also conduct visible emissions tests. If the facility has a problem meeting the requirement of no visible emissions and they are operating a control device, the capture and/or control efficiency of the control systems may need to be improved so that they can meet the visible emissions requirement.

Comment: One commenter stated that it would be desirable to require application of welding controls only after determination of HAP in the fume, but as a compromise, they proposed application of controls only after determination of visible fugitive emissions.

Response: We believe that the requirement to apply welding management practices or controls to minimize emissions from welding "as practicable" allows significant flexibility to welding affected sources. If measures are being implemented that do not result in any visible emissions, we believe that

sufficient welding management practices or controls are already in effect.

Comment: One commenter noted that sometimes, although rarely, facilities may perform a small amount of welding on a component after its construction is finalized and has been moved outdoors. According to the commenter, the large size of some components could make it difficult, if not impossible, to move them back inside to perform the welding. For this reason, the commenter proposed that EPA revise the regulation to allow a limited amount of welding, 30 minutes per month, to occur outdoors. Another commenter noted that at large facilities, with complex manufacturing processes, spot welding may be performed along an assembly line; they suggested that the rule should allow for this.

Response: We believe that the flexibility provided by the language described above ("as practicable, while maintaining required weld quality and using sound welding engineering principles") allows for the operations the commenters describe. Note that the rule contains no prohibition against outdoor welding or welding along an assembly line, it just requires that you must implement management practices to minimize emissions of MFHAP as practicable.

#### F. Monitoring



Comment: Several commenters objected to the requirements that affected sources demonstrate that the applicable management practices are being implemented through the visual determination of fugitive emissions using Method 22 and, for some welding affected sources, Method 9. These commenters' objections were based on the opinion that these requirements would be overly burdensome and unnecessary, especially if EPA is correct in its assumption that no additional emissions reductions will take place. One commenter indicated that facilities which have previously not been permitted will not have capabilities to perform visible emissions determinations. They added that if permitted sources are not required to use these methods, it is unreasonable to require it of area sources. Another commenter indicated that these daily monitoring requirements would be very burdensome, particularly for welding, where Method 9 may also be required. They indicated that the training required to perform these determinations may be burdensome, particularly for small businesses. One commenter suggested that these requirements be removed for all types of affected sources. Another commenter was more specific to machining metal fabrication and finishing affected sources, as they noted that EPA indicated that HAP emissions from machining are minimal because of use of enclosures and cutting liquids.

Response: The proposed rule required visual determinations of fugitive emissions using Method 22 from all types of dry abrasive blasting operations, all machining operations, all grinding and polishing operations, and all welding operations. These determinations were initially required to be performed daily, and then could be reduced to less frequent intervals (weekly, monthly) if no visual emissions were present. For welding sources, there were additional requirements to conduct opacity measurements using Method 9 in situations where visible emissions were identified using Method 22.

The purpose of these visual determination requirements was to demonstrate that the specified management practices were being implemented to minimize fugitive MFHAP emissions. These management practices consist of three basic types:

(1) requirements to operate equipment properly (e.g., in accordance with manufacturer's specifications); (2) practices or operating procedures to minimize emissions (e.g., keep work areas free of excess MFHAP material); and (3) requirements to capture emissions and vent them to a filtration control device.

Upon consideration of these comments, we have determined that it is not necessary to perform visual determinations of fugitive emissions from operations that are required to capture emissions and vent them to a filtration control device. This final rule requires capture/filtration control for dry abrasive blasting

performed in vented chambers and dry grinding and dry polishing with machines. Therefore, we eliminated the visual determination of fugitive emissions requirements for these operations. In addition, we agree with the commenter that visual determinations for machining operations is not necessary because the metal waste produced by the machining process is composed of relatively large pieces which immediately fall to the floor, and because the majority of machining operations are performed under cutting oils or lubricants, which entrain any metal waste. We have therefore removed these visual determination requirements for those affected sources.

Fugitive emissions from abrasive blasting operations that are not performed in vented chambers are not required to be captured and vented to a filtration control device. We continue to believe that it is important that visual determinations be conducted to ensure that fugitive MFHAP emissions are minimized via the management practices. Therefore, this final rule maintains the requirement to conduct visual determinations of fugitive emissions using Method 22 for these sources.

Fugitive MFHAP emissions from welding operations are not subject to the capture/filtration control requirements. Therefore, we believe it is important that the proposed visual determinations be conducted to ensure that fugitive MFHAP emissions are being minimized. However, due to our concern with

the impact that these requirements could have on small businesses, we have removed the visual determination requirements for smaller welding operations that emit less MFHAP. Specifically, this final rule requires that welding operations that annually use 2,000 pounds or more of welding rod containing one or more MFHAP perform visual determinations. Welding operations that use less than this amount of welding rod are subject only to the GACT management practices.

## **VI. Impacts of the Final Standards**

### **A. What are the air impacts?**

Since 1990, facilities in these nine metal fabrication and finishing source categories have reduced their air impacts by voluntary controls that were likely motivated by concerns for worker safety. These controls would have reduced approximately 122 tons of the MFHAP (cadmium, chromium, lead, manganese, and nickel) attributed to this industry in the 1990 urban HAP inventory. Although there are no additional air emission reductions as a result of this final rule, we believe that this final rule will assure that the emission reductions made by the industry since 1990 will be maintained.

Along with the HAP described above, there is an undetermined amount of VOHAP, VOC, PM, and other HAP that have been co-controlled in the metal fabrication and finishing

processes that contributed to criteria pollutant emissions in 1990.

B. What are the cost impacts?

For all metal fabrication and finishing processes except painting, all facilities are expected to be achieving the level of control required by the final standard. Therefore, no additional air pollution control devices or systems would be required. No capital costs are associated with this final rule, and no operational and maintenance costs are expected because facilities are already following the manufacturer's instructions for operation and maintenance of pollution control devices and systems. Many of the management practices required by this final rule are pollution prevention and have the co-benefit to provide a cost savings for facilities.

The annual cost of monitoring, reporting, and recordkeeping for this final rule is estimated at approximately \$569 per facility per year after the first year with an additional \$384 per facility for one-time costs in the first year. While most of these facilities are small, the costs are expected to be less than 0.01 percent of revenues. This cost estimate includes an estimate of 10 hours per year per facility, on the average, for labor to perform the visible emissions or opacity tests required by the rule for up to two affected operations. This estimate includes performance of the visible emissions or opacity test as

well as documentation of the results. The labor estimate also includes 16 hours for preparation of a Site-specific Welding Management Plan (SWMP) by the approximately 60 facilities estimated to require the SWMP in any one year of compliance.

C. What are the economic impacts?

The only measurable costs attributable to these final standards are associated with the monitoring, recordkeeping, and reporting requirements. These final standards are estimated to impact a total of 5,800 area source facilities. We estimate that over 5,300 of these facilities are small entities. Our analysis indicates that this final rule would not impose a significant adverse impact on any facilities, large or small since these costs are approximately 0.01 percent of revenues.

D. What are the non-air health, environmental, and energy impacts?

No detrimental secondary impacts are expected to occur from the non-painting sources because all facilities are currently achieving the GACT level of control. No facilities would be required to install and operate new or additional control devices or systems, or install and operate monitoring devices or systems. No additional solid waste would be generated as a result of the PM emissions collected and there are no additional energy impacts associated with operation of control devices or monitoring systems for the non-painting sources.

We expect no increase in generation of wastewater or other water quality impacts. None of the control measures considered for this final rule generates a wastewater stream. The installation of spray booths or spray rooms and enclosed gun washers, and increased worker training in the proper use and handling of coating materials should reduce worker exposure to harmful chemicals in the workplace. This should have a positive benefit on worker health, but this benefit cannot be quantified in the scope of this rulemaking.

## **VII. Statutory and Executive Order Reviews**

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

This action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under the Executive Order.

### **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 requirements are not enforceable until OMB approves them.

The recordkeeping and reporting requirements in this final rule are based on the requirements in EPA's NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping and

reporting requirements in the General Provisions are mandatory pursuant to section 114 of the CAA (42 U.S.C 7414). All information other than emissions data submitted to EPA pursuant to the information collection requirements for which a claim of confidentiality is made is safeguarded according to CAA section 114(c) and the Agency's implementing regulations at 40 CFR part 2, subpart B.

This final NESHAP will require area sources in the nine metal fabrication and finishing source categories to submit an Initial Notification and a Notification of Compliance Status according to the requirements in 40 CFR 63.9 of the General Provisions (subpart A). Records will be required to demonstrate compliance with operation and maintenance of capture and control devices, and other management practices. The owner or operator of a metal fabrication and finishing facility also is subject to notification and recordkeeping requirements in 40 CFR 63.9 and 63.10 of the General Provisions (subpart A). Annual certification and compliance and annual exceedence reports will be required instead of the semiannual excess emissions reports required by the NESHAP General Provisions.

The annual burden for this information collection averaged over the first three years of this ICR is estimated to be a total of 20,566 labor hours per year at a cost of \$655,501 or approximately \$339 per facility. The average annual reporting



burden is 11 hours per response, with one response per facility for 1,933 respondents. The only costs attributable to these final standards are associated with the monitoring, recordkeeping, and reporting requirements. There are no capital, operating, maintenance, or purchase of services costs expected as a result of this final rule.

Although it is possible that some facilities would initially be required by this final rule to record the results of daily visual emissions or opacity testing, the graduated compliance test schedule of this final rule allows for decrease in frequency to quarterly if emissions are not found. Also, the requirement for preparation of a SWMP is expected to result in a maximum of three exceedences from one percent (58) of the facilities because of the pollution prevention focus of the SWMP. 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 EPA's regulations in 40 CFR part 63 are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the Federal Register to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act

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

For the purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) a small business that meets the Small Business Administration size standards for small businesses, 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 which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule is estimated to impact a total of 5,800 area source metal fabrication and finishing facilities;

over 5,300 of these facilities are estimated to be small entities. We have determined that small entity compliance costs, as assessed by the facilities' cost-to-sales ratio, are expected to be less than 0.01 percent. The analysis also shows that none of the small entities would incur economic impacts exceeding three percent of its revenue. Although this final rule contains requirements for new area sources, we are not aware of any new area sources being constructed now or planned in the next 3 years, and consequently, we did not estimate any impacts for new sources.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this final rule on small entities. The standards represent practices and controls that are common throughout the sources engaged in metal fabrication and finishing. The standards also require minimal amount of recordkeeping and reporting needed to demonstrate and verify compliance. These standards were developed based on information obtained from small businesses in our surveys, consultation with small business representatives on the state and national level, and industry representatives that are affiliated with small businesses.

D. Unfunded Mandates Reform Act

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

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

This final rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local, or tribal governments or of the private sector. This final rule is not expected to impact state, local, or tribal governments. Thus, this final rule is not subject to the requirements of sections 202 and 205 of the UMRA. EPA has determined that this final rule contains no regulatory requirements that might significantly or uniquely affect small governments. This final rule contains no requirements that apply to such governments, and impose no obligations upon them. Therefore, this final rule is not subject to section 203 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have

“substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.”

This final rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final rule does not impose any requirements on state and local governments. Thus, Executive Order 13132 does not apply to this final rule. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and state and local governments, EPA specifically solicited comment on the proposed rule from state and local officials.

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

Executive Order 13175 (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” This final rule does not have tribal implications, as specified in Executive Order 13175. This final

rule imposes no requirements on tribal governments. Thus, Executive Order 13175 does not apply to this rule

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

EPA interprets Executive Order 13045 (62 F.R. 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on technology performance.

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

This final rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113 (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical

standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action involves technical standards. The Agency conducted a search to identify potentially applicable VCS. No VCS were identified. Therefore, we are citing ASHRAE Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992," to measure paint booth filter efficiency and to measure the control efficiency of paint overspray arrestors with spray-applied paintings. This method will enable owner/operators to determine their facility's compliance with the spray booth filter requirement of this rule.

We are also using two methods from the California South Coast Air Quality Management District: "Spray Equipment Transfer Efficiency Test Procedure For Equipment User, May 24, 1989," and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002," as methods to demonstrate the equivalency of spray gun transfer efficiency for spray guns that do not meet the definition of HVLP, airless spray, or electrostatic spray.



These methods will enable owner/operators to determine their facility's compliance with the HVLP requirement of this rule.

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

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

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

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately

high and adverse human health or environmental effects on any population, including any minority or low-income population. This final rule establishes national standards for nine area source categories.

K. Congressional Review Act

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

**National Emission Standards for Hazardous Air Pollutants: Area  
Source Standards for Nine Metal Fabrication and Finishing Source  
Categories**

**Page 115 of 177**

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

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

\_\_\_\_\_  
Dated:

\_\_\_\_\_  
Stephen L. Johnson,  
Administrator.

For the reasons stated in the preamble, 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.

**Subpart A--[Amended]**

2. Section 63.14 is amended as follows:

(a) By revising paragraphs (d) (7) and (8).

(b) By revising paragraph (1) (1)

§63.14 Incorporations by reference.

\* \* \* \* \*

(d) \* \* \*

(7) California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989," IBR approved for §63.11173(e) and §63.11516(d).

(8) California South Coast Air Quality Management District's "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002," IBR approved for §§63.11173(e) and 63.11516(d).

\* \* \* \* \*

(1) \* \* \*

(1) American Society of Heating, Refrigerating, and Air Conditioning Engineers Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992," IBR approved for §§63.11173(e) and 63.11516(d).

\* \* \* \* \*

3. Part 63 is amended by adding subpart XXXXXX consisting of §§63.11514 through 63.11523 and tables 1 through 2 to read as follows:

**Subpart XXXXXX--National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories**

**Applicability and Compliance Dates**

63.11514 Am I subject to this subpart?

63.11515 What are my compliance dates?

**Standards and Compliance Requirements**

63.11516 What are my standards and management practices?

63.11517 What are my monitoring requirements?

63.11518 [Reserved]

63.11519 What are my notification, recordkeeping, and reporting requirements?

63.11520 [Reserved]

**Other Requirements and Information**

63.11521 Who implements and enforces this subpart?

63.11522 What definitions apply to this subpart?

63.11523 What General Provisions apply to this subpart?

Table 1 to Subpart XXXXXX of Part 63 - Description of Source Categories Affected by this Subpart

Table 2 to Subpart XXXXXX of Part 63 - Applicability of General Provisions to Metal Fabrication or Finishing Area Sources

**Subpart XXXXXX--National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories**

**Applicability and Compliance Dates**

§63.11514 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an area source that is primarily engaged in the operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of this section. Descriptions of these source categories are shown in Table 1 of this subpart. "Primarily engaged" is defined in §63.11522. An area source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate less than 9.07 megagrams (Mg) (10 tons) or more per year and less than a rate of 22.68 Mg (25 tons) or more per year for any combination of HAP.

(1) Electrical and Electronic Equipment Finishing Operations;

(2) Fabricated Metal Products;

(3) Fabricated Plate Work (Boiler Shops);

(4) Fabricated Structural Metal Manufacturing;

(5) Heating Equipment, except Electric;

(6) Industrial Machinery and Equipment Finishing Operations;

(7) Iron and Steel Forging;

(8) Primary Metal Products Manufacturing; and

(9) Valves and Pipe Fittings.

(b) The provisions of this subpart apply to each new and existing affected source listed and defined in paragraphs (b) (1) through (5) of this section if you use materials that contain or have the potential to emit metal fabrication or finishing metal HAP (MFHAP), defined to be the compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead. Materials that contain MFHAP are defined to be materials that contain greater than 0.1 percent for carcinogens, as defined by OSHA at 29 CFR 1910.1200(d) (4), and greater than 1.0 percent for noncarcinogens. For the MFHAP, this corresponds to materials that contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (of the metal),

and materials that contain manganese in amounts greater than or equal to 1.0 percent by weight (of the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material.

(1) A dry abrasive blasting affected source is the collection of all equipment and activities necessary to perform dry abrasive blasting operations which use materials that contain MFHAP or that have the potential to emit MFHAP.

(2) A machining affected source is the collection of all equipment and activities necessary to perform machining operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or that have the potential to emit MFHAP.

(3) A dry grinding and dry polishing with machines affected source is the collection of all equipment and activities necessary to perform dry grinding and dry polishing with machines operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or have the potential to emit MFHAP.

(4) A spray painting affected source is the collection of all equipment and activities necessary to perform spray-applied painting operations using paints which contain MFHAP. A spray painting affected source includes all equipment used to apply cleaning materials to a substrate to prepare it for paint



application (surface preparation) or to remove dried paint; to apply a paint to a substrate (paint application) and to dry or cure the paint after application; or to clean paint operation equipment (equipment cleaning). Affected source(s) subject to the requirements of this paragraph are not subject to the miscellaneous surface coating provisions of subpart HHHHHH of this part, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

(5) A welding affected source is the collection of all equipment and activities necessary to perform welding operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or have the potential to emit MFHAP.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source, as defined in §63.2, "General Provisions" to part 63, before April 3, 2008.

(d) An affected source is new if you commenced construction or reconstruction of the affected source, as defined in §63.2, "General Provisions" to part 63, on or after April 3, 2008.

(e) This subpart does not apply to research or laboratory facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(f) This subpart does not apply to tool or equipment repair operations, facility maintenance, or quality control activities as defined in §63.11522, "What definitions apply to this subpart?"

(g) This subpart does not apply to operations performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such state), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.

(h) This subpart does not apply to operations that produce military munitions, as defined in §63.11522, "What definitions apply to this subpart?", manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such state), or equipment directly and exclusively used for the purposes of transporting military munitions.

(i) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous

sentence, you must continue to comply with the provisions of this subpart.

§63.11515 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart by [INSERT DATE THREE YEARS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) If you own or operate a new affected source, you must achieve compliance with the applicable provisions in this subpart by [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER] or upon startup of your affected source, whichever is later.

**Standards and Compliance Requirements**

§63.11516 What are my standards and management practices?

(a) *Dry abrasive blasting standards.* If you own or operate a new or existing dry abrasive blasting affected source, you must comply with the requirements in paragraphs (a) (1) through (3) of this section, as applicable, for each dry abrasive blasting operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when abrasive blasting operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

(1) *Standards for dry abrasive blasting of objects performed in totally enclosed and unvented blast chambers.* If you own or operate a new or existing dry abrasive blasting affected source which consists of an abrasive blasting chamber that is totally enclosed and unvented, as defined in §63.11522, "What definitions apply to this subpart?", you must implement management practices to minimize emissions of MFHAP. These management practices are the practices specified in paragraph (a) (1) (i) and (ii) of this section.

(i) You must minimize dust generation during emptying of abrasive blasting enclosures; and

(ii) You must operate all equipment associated with dry abrasive blasting operations according to the manufacturer's instructions.

(2) *Standards for dry abrasive blasting of objects performed in vented enclosures.* If you own or operate a new or existing dry abrasive blasting affected source which consists of a dry abrasive blasting operation which has a vent allowing any air or blast material to escape, you must comply with the requirements in paragraphs (a) (2) (i) and (ii) of this section. Dry abrasive blasting operations for which the items to be blasted exceed 8 feet (2.4 meters) in any dimension, may be performed subject to the requirements in paragraph (a) (3) of this section.

(i) You must capture emissions and vent them to a filtration control device. You must operate the filtration control device according to manufacturer's instructions, and you must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices, as specified by the requirements in §63.11519(c) (4), "What are my notification, recordkeeping, and reporting requirements?"

(ii) You must implement the management practices to minimize emissions of MFHAP as specified in paragraphs (a) (2) (ii) (A) through (C) of this section.

(A) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(B) You must enclose dusty abrasive material storage areas and holding bins, seal chutes and conveyors that transport abrasive materials; and

(C) You must operate all equipment associated with dry abrasive blasting operations according to manufacturer's instructions.

(3) *Standards for dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension.* If you own or operate a new or existing dry abrasive blasting affected source which consists of a dry abrasive blasting operation which

is performed on objects greater than 8 feet (2.4 meters) in any one dimension, you may implement management practices to minimize emissions of MFHAP as specified in paragraph (a)(3)(i) of this section instead of the practices required by paragraph (a)(2) of this section. You must demonstrate that management practices are being implemented by complying with the requirements in paragraphs (a)(3)(ii) through (iv) of this section.

(i) Management practices for dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension are specified in paragraphs (a)(3)(i)(A) through (E) of this section.

(A) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(B) You must enclose abrasive material storage areas and holding bins, seal chutes and conveyors that transport abrasive material; and

(C) You must operate all equipment associated with dry abrasive blasting operations according to manufacturer's instructions; and

(D) You must not re-use dry abrasive blasting media unless contaminants (i.e., any material other than the base metal, such as paint residue) have been removed by filtration or

screening, and the abrasive material conforms to its original size; and

(E) Whenever practicable, you must switch from high particulate matter (PM)-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), where PM is a surrogate for MFHAP.

(ii) You must perform visual determinations of fugitive emissions, as specified in §63.11517(b), "What are my monitoring requirements?", according to paragraphs (a)(3)(ii)(A) or (B) of this section, as applicable.

(A) For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed outdoors, you must perform visual determinations of fugitive emissions at the fenceline or property border nearest to the outdoor dry abrasive blasting operation.

(B) For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed indoors, you must perform visual determinations of fugitive emissions at the primary vent, stack, exit, or opening from the building containing the abrasive blasting operations.

(iii) You must keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in §63.11519(c)(2), "What are my notification, recordkeeping, and reporting requirements?"

(iv) If visible fugitive emissions are detected, you must perform corrective actions until the visible fugitive emissions are eliminated, at which time you must comply with the requirements in paragraphs (a) (3) (iv) (A) and (B) of this section.

(A) You must perform a follow-up inspection for visible fugitive emissions in accordance with §63.11517(a), "Monitoring Requirements."

(B) You must report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, with your annual certification and compliance report as required by §63.11519(b) (5), "Notification, recordkeeping, and reporting requirements."

(b) *Standards for machining.* If you own or operate a new or existing machining affected source, you must implement management practices to minimize emissions of MFHAP as specified in paragraph (b) (1) and (2) of this section for each machining operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when machining operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.



(1) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(2) You must operate all equipment associated with machining according to manufacturer's instructions.

(c) *Standards for dry grinding and dry polishing with machines.* If you own or operate a new or existing dry grinding and dry polishing with machines affected source, you must comply with the requirements of paragraphs (c)(1) and (2) of this section for each dry grinding and dry polishing with machines operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when dry grinding and dry polishing operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.

(1) You must capture emissions and vent them to a filtration control device. You must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices, as specified by the requirements in §63.11519(c)(4), "Notification, recordkeeping, and reporting Requirements."

(2) You must implement management practices to minimize emissions of MFHAP as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable;

(ii) You must operate all equipment associated with the operation of dry grinding and dry polishing with machines, including the filtration control device, according to manufacturer's instructions.

(d) *Standards for control of MFHAP in spray painting.* If you own or operate a new or existing spray painting affected source, as defined in §63.11514 (b)(4), "Am I subject to this subpart?," you must implement the management practices in paragraphs (d)(1) through (9) of this section when a spray-applied paint that contains MFHAP is being applied. These requirements do not apply when spray-applied paints that do not contain MFHAP are being applied.

(1) *Standards for spray painting for MFHAP control.* All spray-applied painting of objects must meet the requirements of paragraphs (d)(1)(i) through (iii) of this section. These requirements do not apply to affected sources located at Fabricated Structural Metal Manufacturing facilities, as described in Table 1, "Description of Source Categories Affected

by this Subpart," or affected sources that spray paint objects greater than 15 feet (4.57 meters), that are not spray painted in spray booths or spray rooms.

(i) Spray booths or spray rooms must have a full roof, at least two complete walls, and one or two complete side curtains or other barrier material so that all four sides are covered. The spray booths or spray rooms must be ventilated so that air is drawn into the booth and leaves only through the filter. The roof may contain narrow slots for connecting fabricated products to overhead cranes, and/or for cords or cables.

(ii) All spray booths or spray rooms must be fitted with a type of filter technology that is demonstrated to achieve at least 98 percent capture of MFHAP. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14). The test coating for measuring filter efficiency shall be a high-solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-High Volume Low Pressure) air-atomized spray gun operating at 40 psi air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators

may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement.

(iii) You must perform regular inspection and replacement of the filters in all spray booths or spray rooms according to manufacturer's instructions, and maintain documentation of these activities, as detailed in §63.11519(c)(5), "Notification, recordkeeping, and reporting requirements."

(iv) As an alternative compliance requirement, spray booths or spray rooms equipped with a water curtain, called "waterwash" or "waterspray" booths or spray rooms that are operated and maintained according to the manufacturer's specifications and that achieve at least 98 percent control of MFHAP, may be used in lieu of the spray booths or spray rooms requirements of paragraphs (d)(1)(i) through (iii) of this section.

(2) *Standards for spray painting application equipment of all objects painted for MFHAP control.* All paints applied via spray-applied painting must be applied with a high-volume, low-pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated to achieve transfer efficiency comparable to one of these spray gun technologies for a comparable operation, and for which written approval has been

obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see §63.14).

(3) *Spray system recordkeeping.* You must maintain documentation of the HVLP or other high transfer efficiency spray paint delivery methods, as detailed in §63.11519(c)(7), "Notification, recordkeeping, and reporting requirements."

(4) *Spray gun cleaning.* All cleaning of paint spray guns must be done with either non-HAP gun cleaning solvents, or in such a manner that an atomized mist of spray of gun cleaning solvent and paint residue is not created outside of a container that collects the used gun cleaning solvent. Spray gun cleaning may be done with, for example, by hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of these non-atomizing methods may also be used.

(5) *Spray painting worker certification.* All workers performing painting must be certified that they have completed

training in the proper spray application of paints and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (d)(6) of this section. The spray application of paint is prohibited by persons who are not certified as having completed the training described in paragraph (d)(6) of this section. The requirements of this paragraph do not apply to the students of an accredited painting training program who are under the direct supervision of an instructor who meets the requirements of this paragraph. The requirements of this paragraph do not apply to operators of robotic or automated painting operations.

(6) *Spray painting training program content.* Each owner or operator of an affected spray painting affected source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply paints are trained in the proper application of paints as required by paragraph (d)(5) of this section. The training program must include, at a minimum, the items listed in paragraphs (d)(6)(i) through (iii) of this section.

(i) A list of all current personnel by name and job description who are required to be trained;

(ii) Hands-on, or in-house or external classroom instruction that addresses, at a minimum, initial and refresher

training in the topics listed in paragraphs (d) (6) (ii) (A) through (D) of this section.

(A) Spray gun equipment selection, set up, and operation, including measuring paint viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

(B) Spray technique for different types of paints to improve transfer efficiency and minimize paint usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

(C) Routine spray booth and filter maintenance, including filter selection and installation.

(D) Environmental compliance with the requirements of this subpart.

(iii) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Alternatively, owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (d) (6) (ii) of this section

are not required to provide the initial training required by that paragraph to these painters.

(7) *Records of spray painting training.* You must maintain records of employee training certification for use of HVLP or other high transfer efficiency spray paint delivery methods as detailed in §63.11519(c)(8), "Notification, recordkeeping, and reporting requirements."

(8) *Spray painting training dates.* As required by paragraph (d)(5) of this section, all new and existing personnel at an affected spray painting affected source, including contract personnel, who spray apply paints must be trained by the dates specified in paragraphs (d)(8)(i) and (ii) of this section.

(i) If your source is a new source, all personnel must be trained and certified no later than [INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], 180 days after startup, or 180 days after hiring, whichever is later. Training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in paragraph (d)(6)(ii) of this section satisfies this requirement and is valid for a period not to exceed 5 years after the date the training is completed.

(ii) If your source is an existing source, all personnel must be trained and certified no later than [INSERT DATE 3 YEARS



AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] or 180 days after hiring, whichever is later. Worker training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in paragraph (d) (6) (ii) of this section, satisfies this requirement and is valid for a period not to exceed 5 years after the date the training is completed.

(9) *Duration of training validity.* Training and certification will be valid for a period not to exceed 5 years after the date the training is completed. All personnel must receive refresher training that meets the requirements of this section and be re-certified every 5 years.

(e) [Reserved]

(f) *Standards for welding.* If you own or operate a new or existing welding affected source, you must comply with the requirements in paragraphs (f) (1) and (2) of this section for each welding operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. If your welding affected source uses 2,000 pounds or more per year of welding rod containing one or more MFHAP (calculated on a rolling 12-month basis), you must demonstrate that management practices or fume control measures are being implemented by complying with the requirements in paragraphs (f) (3) through (8) of this

section. The requirements in paragraphs (f)(1) through (8) of this section do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

(1) You must operate all equipment, capture, and control devices associated with welding operations according to manufacturer's instructions. You must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the capture and control devices, as specified by the requirements in §63.11519(c)(4), "Notification, recordkeeping, and reporting requirements."

(2) You must implement one or more of the management practices specified in paragraphs (f)(2)(i) through (v) of this section to minimize emissions of MFHAP, as practicable, while maintaining the required welding quality through the application of sound engineering judgment.

(i) Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas welding (MIG));

(ii) Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates;

(iii) Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;

(iv) Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated; and

(v) Use a welding fume capture and control system, operated according to the manufacturer's specifications.

(3) *Tier 1 compliance requirements for welding.* You must perform visual determinations of welding fugitive emissions as specified in §63.11517(b), "Monitoring requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations. You must keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in §63.11519(c)(2), "Notification, recordkeeping, and reporting requirements."

(4) *Requirements upon initial detection of visible emissions from welding.* If visible fugitive emissions are detected during any visual determination required in paragraph (f)(3) of this section, you must comply with the requirements in paragraphs (f)(4)(i) and (ii) of this section.

(i) Perform corrective actions that include, but are not limited to, inspection of welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance

with paragraph (f) (2) of this section. After completing such corrective actions, you must perform a follow-up inspection for visible fugitive emissions in accordance with §63.11517(a), "Monitoring Requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations.

(ii) Report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, and submit with your annual certification and compliance report as required by §63.11519(b) (5), "Notification, recordkeeping, and reporting requirements."

(5) *Tier 2 requirements upon subsequent detection of visible emissions.* If visible fugitive emissions are detected more than once during any consecutive 12 month period (notwithstanding the results of any follow-up inspections), you must comply with paragraphs (f) (5) (i) through (iv) of this section.

(i) Within 24 hours of the end of the visual determination of fugitive emissions in which visible fugitive emissions were detected, you must conduct a visual determination of emissions opacity, as specified in §63.11517(c), "Monitoring requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations.

(ii) In lieu of the requirement of paragraph (f) (3) of this section to perform visual determinations of fugitive emissions with EPA Method 22, you must perform visual determinations of emissions opacity in accordance with §63.11517(d), "Monitoring Requirements," using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.

(iii) You must keep a record of each visual determination of emissions opacity performed in accordance with paragraphs (f) (5) (i) or (ii) of this section, along with any subsequent corrective action taken, in accordance with the requirements in §63.11519(c) (3), "Notification, recordkeeping, and reporting requirements."

(iv) You must report the results of all visual determinations of emissions opacity performed in accordance with paragraphs (f) (5) (i) or (ii) of this section, along with any subsequent corrective action taken, and submit with your annual certification and compliance report as required by §63.11519(b) (6), "Notification, recordkeeping, and reporting requirements."

(6) *Requirements for opacities less than or equal to 20 percent but greater than zero.* For each visual determination of emissions opacity performed in accordance with paragraph (f) (5) of this section for which the average of the six-minute average

opacities recorded is 20 percent or less but greater than zero, you must perform corrective actions, including inspection of all welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with paragraph (f) (2) of this section.

(7) *Tier 3 requirements for opacities exceeding 20 percent.* For each visual determination of emissions opacity performed in accordance with paragraph (f) (5) of this section for which the average of the six-minute average opacities recorded exceeds 20 percent, you must comply with the requirements in paragraphs (f) (7) (i) through (v) of this section.

(i) You must submit a report of exceedence of 20 percent opacity, along with your annual certification and compliance report, as specified in §63.11519(b) (8), "Notification, recordkeeping, and reporting requirements," and according to the requirements of §63.11519(b) (1), "Notification, recordkeeping, and reporting requirements."

(ii) Within 30 days of the opacity exceedence, you must prepare and implement a Site-Specific Welding Emissions Management Plan, as specified in paragraph (f) (8) of this section. If you have already prepared a Site-Specific Welding Emissions Management Plan in accordance with this paragraph, you

must prepare and implement a revised Site-Specific Welding Emissions Management Plan within 30 days.

(iii) During the preparation (or revision) of the Site-Specific Welding Emissions Management Plan, you must continue to perform visual determinations of emissions opacity, beginning on a daily schedule as specified in §63.11517(d), "Monitoring Requirements," using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.

(iv) You must maintain records of daily visual determinations of emissions opacity performed in accordance with paragraph (f)(7)(iii) of this section, during preparation of the Site-Specific Welding Emissions Management Plan, in accordance with the requirements in §63.11519(b)(9), "Notification, recordkeeping, and reporting requirements."

(v) You must include these records in your annual certification and compliance report, according to the requirements of §63.11519(b)(1), "Notification, recordkeeping, and reporting requirements."

(8) *Site-Specific Welding Emissions Management Plan.* The Site-Specific Welding Emissions Management Plan must comply with the requirements in paragraphs (f)(8)(i) through (iii) of this section.

(i) Site-Specific Welding Emissions Management Plan must contain the information in paragraphs (f) (8) (i) (A) through (F) of this section.

(A) Company name and address;

(B) A list and description of all welding operations which currently comprise the welding affected source;

(C) A description of all management practices and/or fume control methods in place at the time of the opacity exceedence;

(D) A list and description of all management practices and/or fume control methods currently employed for the welding affected source;

(E) A description of additional management practices and/or fume control methods to be implemented pursuant to paragraph (f) (7) (ii) of this section, and the projected date of implementation; and

(F) Any revisions to a Site-Specific Welding Emissions Management Plan must contain copies of all previous plan entries, pursuant to paragraphs (f) (8) (i) (D) and (E) of this section.

(ii) The Site-Specific Welding Emissions Management Plan must be updated annually to contain current information, as required by paragraphs (f) (8) (i) (A) through (C) of this section, and submitted with your annual certification and compliance



report, according to the requirements of §63.11519(b)(1), "Notification, recordkeeping, and reporting requirements."

(iii) You must maintain a copy of the current Site-Specific Welding Emissions Management Plan in your records in a readily-accessible location for inspector review, in accordance with the requirements in §63.11519(c)(12), "Notification, recordkeeping, and reporting requirements."

§63.11517 What are my monitoring requirements?

(a) *Visual determination of fugitive emissions, general.* Visual determination of fugitive emissions must be performed according to the procedures of EPA Method 22, of 40 CFR part 60, Appendix A-7. You must conduct the EPA Method 22 test while the affected source is operating under normal conditions. The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions will be considered to be present if they are detected for more than six minutes of the fifteen minute period.

(b) *Visual determination of fugitive emissions, graduated schedule.* Visual determinations of fugitive emissions must be performed in accordance with paragraph (a) of this section and according to the schedule in paragraphs (b)(1) through (4) of this section.

(1) *Daily Method 22 Testing.* Perform visual determination of fugitive emissions once per day, on each day the process is in operation, during operation of the process.

(2) *Weekly Method 22 Testing.* If no visible fugitive emissions are detected in consecutive daily EPA Method 22 tests, performed in accordance with paragraph (b)(1) of this section for 10 days of work day operation of the process, you may decrease the frequency of EPA Method 22 testing to once every five days of operation of the process (one calendar week). If visible fugitive emissions are detected during these tests, you must resume EPA Method 22 testing of that operation once per day during each day that the process is in operation, in accordance with paragraph (b)(1) of this section.

(3) *Monthly Method 22 Testing.* If no visible fugitive emissions are detected in four consecutive weekly EPA Method 22 tests performed in accordance with paragraph (b)(2) of this section, you may decrease the frequency of EPA Method 22 testing to once per 21 days of operation of the process (one calendar month). If visible fugitive emissions are detected during these tests, you must resume weekly EPA Method 22 in accordance with paragraph (b)(2) of this section.

(4) *Quarterly Method 22 Testing.* If no visible fugitive emissions are detected in three consecutive monthly EPA Method 22 tests performed in accordance with paragraph (b)(3) of this

section, you may decrease the frequency of EPA Method 22 testing to once per 60 days of operation of the process (3 calendar months). If visible fugitive emissions are detected during these tests, you must resume monthly EPA Method 22 in accordance with paragraph (b) (3) of this section.

(c) *Visual determination of emissions opacity for welding Tier 2 or 3, general.* Visual determination of emissions opacity must be performed in accordance with the procedures of EPA Method 9, of 40 CFR part 60, Appendix A-4, and while the affected source is operating under normal conditions. The duration of the EPA Method 9 test shall be thirty minutes.

(d) *Visual determination of emissions opacity for welding Tier 2 or 3, graduated schedule.* You must perform visual determination of emissions opacity in accordance with paragraph (c) of this section and according to the schedule in paragraphs (d) (1) through (5) of this section.

(1) *Daily Method 9 testing for welding, Tier 2 or 3.* Perform visual determination of emissions opacity once per day during each day that the process is in operation.

(2) *Weekly Method 9 testing for welding, Tier 2 or 3.* If the average of the six minute opacities recorded during any of the daily consecutive EPA Method 9 tests performed in accordance with paragraph (d) (1) of this section does not exceed 20 percent for 10 days of operation of the process, you may decrease the

frequency of EPA Method 9 testing to once per five days of consecutive work day operation. If opacity greater than 20 percent is detected during any of these tests, you must resume testing every day of operation of the process according to the requirements of paragraph (d)(1) of this section.

(3) *Monthly Method 9 testing for welding Tier 2 or 3.* If the average of the six minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with paragraph (d)(2) of this section does not exceed 20 percent for four consecutive weekly tests, you may decrease the frequency of EPA Method 9 testing to once per every 21 days of operation of the process. If visible emissions opacity greater than 20 percent is detected during any monthly test, you must resume testing every five days of operation of the process according to the requirements of paragraph (d)(2) of this section.

(4) *Quarterly Method 9 testing for welding Tier 2 or 3.* If the average of the six minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with paragraph (d)(3) of this section does not exceed 20 percent for three consecutive monthly tests, you may decrease the frequency of EPA Method 9 testing to once per every 120 days of operation of the process. If visible emissions opacity greater than 20 percent is detected during any quarterly test,

you must resume testing every 21 days (month) of operation of the process according to the requirements of paragraph (d)(3) of this section.

(5) *Return to Method 22 testing for welding, Tier 2 or 3.* If, after two consecutive months of testing, the average of the six minute opacities recorded during any of the monthly EPA Method 9 tests performed in accordance with paragraph (d)(3) of this section does not exceed 20 percent, you may resume EPA Method 22 testing as in paragraphs (b)(3) and (4) of this section. In lieu of this, you may elect to continue performing EPA Method 9 tests in accordance with paragraphs (d)(3) and (4) of this section.

§63.11518 [Reserved]

§63.11519 What are my notification, recordkeeping, and reporting requirements?

(a) *What notifications must I submit?*

(1) *Initial Notification.* If you are the owner or operator of an area source in one of the nine metal fabrication and finishing source categories, as defined in §63.11514 "Am I subject to this subpart?," you must submit the Initial Notification required by §63.9(b) "General Provisions," for a new affected source no later than 120 days after initial startup or [INSERT DATE 120 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER], whichever is later. For an existing affected source,

you must submit the Initial Notification no later than [INSERT DATE 3 YEARS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Your Initial Notification must provide the information specified in paragraphs (a)(1)(i) through (iv) of this section.

(i) The name, address, phone number and e-mail address of the owner and operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the relevant standard (i.e., this subpart); and

(iv) A brief description of the type of operation. For example, a brief characterization of the types of products (e.g., aerospace components, sports equipment, etc.), the number and type of processes, and the number of workers usually employed.

(2) *Notification of compliance status.* If you are the owner or operator of an existing affected source, you must submit a notification of compliance status on or before [INSERT DATE 3 YEARS AND 120 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If you are the owner or operator of a new affected source, you must submit a notification of compliance status within 120 days after initial startup, or by [INSERT DATE 120 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER],

whichever is later. You are required to submit the information specified in paragraphs (a)(2)(i) through (iv) of this section with your notification of compliance status:

(i) Your company's name and address;

(ii) A statement by a responsible official with that official's name, title, phone number, e-mail address and signature, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart;

(iii) If you operate any spray painting affected sources, the information required by §63.11516(e)(3)(vi)(C), "Compliance demonstration," or §63.11516(e)(4)(ix)(C), "Compliance demonstration," as applicable; and

(iv) The date of the notification of compliance status.

(b) *What reports must I prepare or submit?*

(1) *Annual certification and compliance reports.* You must prepare and submit annual certification and compliance reports for each affected source according to the requirements of paragraphs (b)(2) through (7) of this section. The annual certification and compliance reporting requirements may be satisfied by reports required under other parts of the CAA, as specified in paragraph (b)(3) of this section.

(2) *Dates.* Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), "General Provisions," you must prepare and submit each annual certification and compliance report according to the dates specified in paragraphs (b)(2)(i) through (iii) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first annual certification and compliance report must cover the first annual reporting period which begins the day after the compliance date and ends on December 31.

(ii) Each subsequent annual certification and compliance report must cover the subsequent semiannual reporting period from January 1 through December 31.

(iii) Each annual certification and compliance report must be prepared and submitted no later than January 31 and kept in a readily-accessible location for inspector review. If an exceedence has occurred during the year, each annual certification and compliance report must be submitted along with the exceedence reports, and postmarked or delivered no later than January 31.

(3) *Alternate dates.* For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, "Title V."



(i) If the permitting authority has established dates for submitting annual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), "Title V," you may prepare or submit, if required, the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (b)(2)(iii) of this section.

(ii) If an affected source prepares or submits an annual certification and compliance report pursuant to this section along with, or as part of, the monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), "Title V," and the compliance report includes all required information concerning exceedences of any limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same exceedences in the annual monitoring report. However, submission of an annual certification and compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(4) *General requirements.* The annual certification and compliance report must contain the information specified in paragraphs (b)(4)(i) through (iii) of this section, and the information specified in paragraphs (b)(5) through (7) of this section that is applicable to each affected source.

(i) Company name and address;

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report; and

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 12-month period ending on December 31. Note that the information reported for the 12 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(5) *Visual determination of fugitive emissions requirements.* The annual certification and compliance report must contain the information specified in paragraphs (b) (5) (i) through (iii) of this section for each affected source which performs visual determination of fugitive emissions in accordance with §63.11517(a), "Monitoring requirements."

(i) The date of every visual determination of fugitive emissions which resulted in detection of visible emissions;

(ii) A description of the corrective actions taken subsequent to the test; and

(iii) The date and results of the follow-up visual determination of fugitive emissions performed after the corrective actions.

(6) *Visual determination of emissions opacity requirements.* The annual certification and compliance report must contain the information specified in paragraphs (b) (6) (i) through (iii) of this section for each affected source which performs visual determination of emissions opacity in accordance with §63.11517(c), "Monitoring requirements."

(i) The date of every visual determination of emissions opacity;

(ii) The average of the six-minute opacities measured by the test; and

(iii) A description of any corrective action taken subsequent to the test.

(7) [Reserved]

(8) *Exceedences of 20 percent opacity for welding affected sources.* As required by §63.11516(f) (7) (i), "Requirements for opacities exceeding 20 percent," you must prepare an exceedence report whenever the average of the six-minute average opacities recorded during a visual determination of emissions opacity exceeds 20 percent. This report must be submitted along with your annual certification and compliance report according to the requirements in paragraph (b) (1) of this section, and must contain the information in paragraphs (b) (8) (iii) (A) and (B) of this section.

(A) The date on which the exceedence occurred; and

(B) The average of the six-minute average opacities recorded during the visual determination of emissions opacity.

(9) *Site-specific Welding Emissions Management Plan reporting.* You must submit a copy of the records of daily visual determinations of emissions recorded in accordance with §63.11516(f)(7)(iv), "Tier 3 requirements for opacities exceeding 20 percent," and a copy of your Site-Specific Welding Emissions Management Plan and any subsequent revisions to the plan pursuant to §63.11516(f)(8), "Site-specific Welding Emission Management Plan," along with your annual certification and compliance report, according to the requirements in paragraph (b)(1) of this section.

(c) *What records must I keep?*

You must collect and keep records of the data and information specified in paragraphs (c)(1) through (13) of this section, according to the requirements in paragraph (c)(14) of this section.

(1) *General compliance and applicability records.*

Maintain information specified in paragraphs (c)(1)(i) through (ii) of this section for each affected source.

(i) Each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report.

(ii) Records of the applicability determinations as in §63.11514(b)(1) through (5), "Am I subject to this subpart," listing equipment included in its affected source, as well as any changes to that and on what date they occurred, must be maintained for 5 years and be made available for inspector review at any time.

(2) *Visual determination of fugitive emissions records.*  
Maintain a record of the information specified in paragraphs (c)(2)(i) through (iii) of this section for each affected source which performs visual determination of fugitive emissions in accordance with §63.11517(a), "Monitoring requirements."

(i) The date and results of every visual determination of fugitive emissions;

(ii) A description of any corrective action taken subsequent to the test; and

(iii) The date and results of any follow-up visual determination of fugitive emissions performed after the corrective actions.

(3) *Visual determination of emissions opacity records.*  
Maintain a record of the information specified in paragraphs (c)(3)(i) through (iii) of this section for each affected source which performs visual determination of emissions opacity in accordance with §63.11517(c), "Monitoring requirements."

(i) The date of every visual determination of emissions opacity; and

(ii) The average of the six-minute opacities measured by the test; and

(iii) A description of any corrective action taken subsequent to the test.

(4) Maintain a record of the manufacturer's specifications for the control devices used to comply with §63.11516, "What are my standards and management practices?"

(5) *Spray paint booth filter records.* Maintain a record of the filter efficiency demonstrations and spray paint booth filter maintenance activities, performed in accordance with §63.11516(d)(1)(ii) and (iii), "Requirements for spray painting objects in spray booths or spray rooms."

(6) *Waterspray booth or water curtain efficiency tests.* Maintain a record of the water curtain efficiency demonstrations performed in accordance with §63.11516(d)(1)(ii), "Requirements for spray painting objects in spray booths or spray rooms."

(7) *HVLP or other high transfer efficiency spray delivery system documentation records.* Maintain documentation of HVLP or other high transfer efficiency spray paint delivery systems, in compliance with §63.11516(d)(3), "Requirements for spray painting of all objects." This documentation must include the manufacturer's specifications for the equipment and any

manufacturer's operation instructions. If you have obtained written approval for an alternative spray application system in accordance with §63.11516(d)(2), "Spray painting of all objects," you must maintain a record of that approval along with documentation of the demonstration of equivalency.

(8) *HVLP or other high transfer efficiency spray delivery system employee training documentation records.* Maintain certification that each worker performing spray painting operations has completed the training specified in §63.11516(d)(6), "Requirements for spray painting of all objects," with the date the initial training and the most recent refresher training was completed.

(9) [Reserved]

(10) [Reserved]

(11) *Visual determination of emissions opacity performed during the preparation (or revision) of the Site-Specific Welding Emissions Management Plan.* You must maintain a record of each visual determination of emissions opacity performed during the preparation (or revision) of a Site-Specific Welding Emissions Management Plan, in accordance with §63.11516(f)(7)(iii), "Requirements for opacities exceeding 20 percent."

(12) *Site-Specific Welding Emissions Management Plan.* If you have been required to prepare a plan in accordance with

§63.11516(f) (7) (iii), "Site-Specific Welding Emissions Management Plan," you must maintain a copy of your current Site-Specific Welding Emissions Management Plan in your records and it must be readily available for inspector review.

(13) *Manufacturer's instructions.* If you comply with this subpart by operating any equipment according to manufacturer's instruction, you must keep these instructions readily available for inspector review.

(14) *Welding Rod usage.* If you operate a new or existing welding affected source which is not required to comply with the requirements of §63.11516(f) (3) through (8) because it uses less than 2,000 pounds per year of welding rod (on a rolling 12-month basis), you must maintain records demonstrating your welding rod usage on a rolling 12-month basis.

(15) Your records must be maintained according to the requirements in paragraphs (c) (14) (i) through (iii) of this section.

(i) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b) (1), "General Provisions." Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(ii) As specified in §63.10(b) (1), "General Provisions," you must keep each record for 5 years following the date of each occurrence, measurement, corrective action, report, or record.



(iii) You must keep each record on-site for at least 2 years after the date of each occurrence, measurement, corrective action, report, or record according to §63.10(b)(1), "General Provisions." You may keep the records off-site for the remaining 3 years.

§63.11520 [Reserved]

### **Other Requirements and Information**

§63.11521 Who implements and enforces this subpart?

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

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

(c) The authorities that cannot be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of an alternative non-opacity emissions standard under §63.6(g), of the General Provisions of this part.

(2) Approval of an alternative opacity emissions standard under §63.6(h)(9), of the General Provisions of this part.

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

(4) Approval of a major change to monitoring under §63.8(f), of the General Provisions of this part. A "major change to monitoring" under is defined in §63.90.

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

§63.11522 What definitions apply to this subpart?

The terms used in this subpart are defined in the CAA; and in this section as follows:

Adequate emission capture methods are hoods, enclosures, or any other duct intake devices with ductwork, dampers, manifolds, plenums, or fans designed to draw greater than 85

percent of the airborne dust generated from the process into the control device.

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

Cartridge collector means a type of control device that uses perforated metal cartridges containing a pleated paper or non-woven fibrous filter media to remove PM from a gas stream by sieving and other mechanisms. Cartridge collectors can be designed with single use cartridges, which are removed and disposed after reaching capacity, or continuous use cartridges, which typically are cleaned by means of a pulse-jet mechanism.

Confined abrasive blasting enclosure means an enclosure that includes a roof and at least two complete walls, with side curtains and ventilation as needed to insure that no air or PM exits the enclosure while dry abrasive blasting is performed. Apertures or slots may be present in the roof or walls to allow for mechanized transport of the blasted objects with overhead cranes, or cable and cord entry into the dry abrasive blasting chamber.

Control device means equipment installed on a process vent or exhaust system that reduces the quantity of a pollutant that is emitted to the air.

Dry abrasive blasting means cleaning, polishing, conditioning, removing or preparing a surface by propelling a stream of abrasive material with compressed air against the surface. Hydroblasting, wet abrasive blasting, or other abrasive blasting operations which employ liquids to reduce emissions are not dry abrasive blasting.

Dry grinding and dry polishing with machines means grinding or polishing without the use of lubricating oils or fluids in fixed or stationary machines. Hand grinding, hand polishing, and bench top dry grinding and dry polishing are not included under this definition.

Fabric filter means a type of control device used for collecting PM by filtering a process exhaust stream through a filter or filter media; a fabric filter is also known as a baghouse.

Facility maintenance means operations performed as part of the routine repair or renovation of process equipment, machinery, control equipment, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity. Facility maintenance also includes operations associated with the

installation of new equipment or structures, and any processes as part of janitorial activities. Facility maintenance includes operations on stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Facility maintenance also includes operations performed on mobile equipment, such as fork trucks, that are used in a manufacturing facility and which are maintained in that same facility. Facility maintenance does not include spray-applied coating of motor vehicles, mobile equipment, or items that routinely leave and return to the facility, such as delivery trucks, rental equipment, or containers used to transport, deliver, distribute, or dispense commercial products to customers, such as compressed gas canisters.

Filtration control device means a control device that utilizes a filter to reduce the emissions of MFHAP and other PM.

Grinding means a process performed on a workpiece to remove undesirable material from the surface or to remove burrs or sharp edges. Grinding is done using belts, disks, or wheels consisting of or covered with various abrasives.

Machining means dry metal turning, milling, drilling, boring, tapping, planing, broaching, sawing, cutting, shaving, shearing, threading, reaming, shaping, slotting, hobbing, and chamfering with machines. Shearing operations cut materials

into a desired shape and size, while forming operations bend or conform materials into specific shapes. Cutting and shearing operations include punching, piercing, blanking, cutoff, parting, shearing and trimming. Forming operations include bending, forming, extruding, drawing, rolling, spinning, coining, and forging the metal. Processes specifically excluded are hand-held devices and any process employing fluids for lubrication or cooling.

Material containing MFHAP means a material containing one or more MFHAP. Any material that contains cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing MFHAP.

Metal fabrication and finishing HAP (MFHAP) means any compound of the following metals: cadmium, chromium, lead, manganese, or nickel, or any of these metals in the elemental form, with the exception of lead.

Metal fabrication and finishing source categories are limited to the nine metal fabrication and finishing source categories with the activities described in Table 1, "Description of Source Categories Affected by this Subpart."

Metal fabrication or finishing operations means dry abrasive blasting, machining, spray painting, or welding in any one of the nine metal fabrication and finishing area source categories listed in Table 1, "Description of Source Categories Affected by this Subpart."

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense (DoD) or for the U.S. Armed Services for national defense and security, including military munitions under the control of the DoD, the U.S. Coast Guard, the National Nuclear Security Administration (NNSA), U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, biological weapons, rockets, guided and ballistic missiles, bombs, warheads, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, nonnuclear components of nuclear weapons, wholly inert ammunition products, and all devices and components of any items listed in this definition.

Paint means a material applied to a substrate for decorative, protective, or functional purposes. Such materials

include, but are not limited to, paints, coatings, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered paints for the purposes of this subpart.

Polishing with machines means an operation which removes fine excess metal from a surface to prepare the surface for more refined finishing procedures prior to plating or other processes. Polishing may also be employed to remove burrs on castings or stampings. Polishing is performed using hard-faced wheels constructed of muslin, canvas, felt or leather, and typically employs natural or artificial abrasives. Polishing performed by hand without machines or in bench top operations are not considered polishing with machines for the purposes of this subpart.

Primarily engaged means the manufacturing, fabricating, or forging of one or more products listed in one of the nine metal fabrication and finishing source category descriptions in Table 1, "Description of Source Categories Affected by this Subpart," where this production represents at least 50 percent of the production at a facility, and where production quantities are



established by the volume, linear foot, square foot, or other value suited to the specific industry. The period used to determine production should be the previous continuous 12 months of operation. Facilities must document and retain their rationale for the determination that their facility is not "primarily engaged" pursuant to §63.10(b)(3) of the General Provisions.

Quality control activities means operations that meet all of the following criteria:

(1) The activities are intended to detect and correct defects in the final product by selecting a limited number of samples from the operation, and comparing the samples against specific performance criteria.

(2) The activities do not include the production of an intermediate or final product for sale or exchange for commercial profit; for example, parts that are not sold and do not leave the facility.

(3) The activities are not a normal part of the operation;

(4) The activities do not involve fabrication of tools, equipment, machinery, and structures that comprise the infrastructure of the facility and that are necessary for the facility to function in its intended capacity; that is, the activities are not facility maintenance.

Responsible official means responsible official as defined in 40 CFR 70.2.

Spray-applied painting means application of paints using a hand-held device that creates an atomized mist of paint and deposits the paint on a substrate. For the purposes of this subpart, spray-applied painting does not include the following materials or activities:

(1) Paints applied from a hand-held device with a paint cup capacity that is less than 3.0 fluid ounces (89 cubic centimeters).

(2) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.

(3) Painting operations that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; the application of paints that contain fillers that adversely affect atomization with HVLP spray guns, and the application of paints that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

(4) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among

other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

Spray booth or spray room means an enclosure with four sides and a roof where spray paint is prevented from leaving the booth during spraying by the enclosure. The roof of the spray booth or spray room may contain narrow slots for connecting the parts and products to overhead cranes, or for cord or cable entry into the spray booth or spray room.

Tool or equipment repair means equipment and devices used to repair or maintain process equipment or to prepare molds, dies, or other changeable elements of process equipment.

Totally enclosed and unvented means enclosed so that no air enters or leaves during operation.

Totally enclosed and unvented dry abrasive blasting chamber means a dry abrasive blasting enclosure which has no vents to the atmosphere, thus no emissions. A typical example of this sort of abrasive blasting enclosure is a small "glove box" enclosure, where the worker places their hands in openings or gloves that extend into the box and enable the worker to hold the objects as they are being blasted without allowing air and blast material to escape the box.

Vented dry abrasive blasting means dry abrasive blasting where the blast material is moved by air flow from within the chamber to outside the chamber into the atmosphere or into a control device.

Welding means a process which joins two metal parts by melting the parts at the joint and filling the space with molten metal.

Welding rod containing MFHAP means a welding rod that contains cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or that contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the welding rod.

§63.11523 What General Provisions apply to this subpart?

The provisions in 40 CFR part 63, subpart A, applicable to sources subject to §63.11514(a) are specified in Table 2 of this subpart.

**Table 1 to Subpart XXXXXX of Part 63 – Description of Source Categories Affected by this Subpart**

Metal Fabrication and Finishing Source Category	Description
Electrical and Electronic Equipment Finishing Operations	Establishments primarily engaged in manufacturing motors and generators; and electrical machinery, equipment, and supplies, not elsewhere classified. The electrical machinery equipment and

	<p>supplies industry sector of this source category includes establishments primarily engaged in high energy particle acceleration systems and equipment, electronic simulators, appliance and extension cords, bells and chimes, insect traps, and other electrical equipment and supplies not elsewhere classified. The motors and generators sector of this source category includes establishments primarily engaged in manufacturing electric motors (except engine starting motors) and power generators; motor generator sets; railway motors and control equipment; and motors, generators and control equipment for gasoline, electric, and oil-electric buses and trucks.</p>
Fabricated Metal Products	<p>Establishments primarily engaged in manufacturing fabricated metal products, such as fire or burglary resistive steel safes and vaults and similar fire or burglary resistive products; and collapsible tubes of thin flexible metal. Also, establishments primarily engaged in manufacturing powder metallurgy products, metal boxes; metal ladders; metal household articles, such as ice cream freezers and ironing boards; and other fabricated metal products not elsewhere classified.</p>
Fabricated Plate Work (Boiler Shops)	<p>Establishments primarily engaged in manufacturing power marine boilers, pressure and nonpressure tanks, processing</p>

	and storage vessels, heat exchangers, weldments and similar products.
Fabricated Structural Metal Manufacturing	Establishments primarily engaged in fabricating iron and steel or other metal for structural purposes, such as bridges, buildings, and sections for ships, boats, and barges.
Heating Equipment, except Electric	Establishments primarily engaged in manufacturing heating equipment, except electric and warm air furnaces, including gas, oil, and stoker coal fired equipment for the automatic utilization of gaseous, liquid, and solid fuels. Products produced in this source category include low-pressure heating (steam or hot water) boilers, fireplace inserts, domestic (steam or hot water) furnaces, domestic gas burners, gas room heaters, gas infrared heating units, combination gas-oil burners, oil or gas swimming pool heaters, heating apparatus (except electric or warm air), kerosene space heaters, gas fireplace logs, domestic and industrial oil burners, radiators (except electric), galvanized iron nonferrous metal range boilers, room heaters (except electric), coke and gas burning salamanders, liquid or gas solar energy collectors, solar heaters, space heaters (except electric), mechanical (domestic and industrial) stokers, wood and coal-burning stoves, domestic unit heaters (except electric), and wall heaters (except electric).

<p>Industrial Machinery and Equipment Finishing Operations</p>	<p>Establishments primarily engaged in construction machinery manufacturing; oil and gas field machinery manufacturing; and pumps and pumping equipment manufacturing. The construction machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing heavy machinery and equipment of types used primarily by the construction industries, such as bulldozers; concrete mixers; cranes, except industrial plant overhead and truck-type cranes; dredging machinery; pavers; and power shovels. Also establishments primarily engaged in manufacturing forestry equipment and certain specialized equipment, not elsewhere classified, similar to that used by the construction industries, such as elevating platforms, ship cranes, and capstans, aerial work platforms, and automobile wrecker hoists. The oil and gas field machinery manufacturing industry sector of this source category includes establishments primarily engaged in manufacturing machinery and equipment for use in oil and gas fields or for drilling water wells, including portable drilling rigs. The pumps and pumping equipment manufacturing sector of this source category includes establishments primarily engaged in manufacturing pumps and pumping</p>
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	equipment for general industrial, commercial, or household use, except fluid power pumps and motors. This category includes establishments primarily engaged in manufacturing domestic water and sump pumps.
Iron and Steel Forging	Establishments primarily engaged in the forging manufacturing process, where purchased iron and steel metal is pressed, pounded or squeezed under great pressure into high strength parts known as forgings. The forging process is different from the casting and foundry processes, as metal used to make forged parts is never melted and poured.
Primary Metals Products Manufacturing	Establishments primarily engaged in manufacturing products such as fabricated wire products (except springs) made from purchased wire. These facilities also manufacture steel balls; nonferrous metal brads and nails; nonferrous metal spikes, staples, and tacks; and other primary metals products not elsewhere classified.
Valves and Pipe Fittings	Establishments primarily engaged in manufacturing metal valves and pipe fittings; flanges; unions, with the exception of purchased pipes; and other valves and pipe fittings not elsewhere classified.

**Table 2 to Subpart XXXXXX of Part 63 - Applicability of General Provisions to Metal Fabrication or Finishing Area Sources**



*Instructions for Table 2* - As required in §63.11523, "General Provisions Requirements," you must meet each requirement in the following table that applies to you.

<b>Citation</b>	<b>Subject</b>
63.1 <sup>1</sup>	Applicability.....
63.2	Definitions.....
63.3	Units and abbreviations.....
63.4	Prohibited activities.....
63.5	Construction/reconstruction.....
63.6(a), (b) (1)-(b) (5), (c) (1), (c) (2), (c) (5), (g), (i), (j)	Compliance with standards and maintenance requirements
63.9(a)-(d)	Notification requirements.....
63.10(a), (b) except for (b) (2), (d) (1), (d) (4)	Recordkeeping and reporting.....
63.12	State authority and delegations..
63.13	Addresses of State air pollution control agencies and EPA regional offices
63.14	Incorporation by reference.....
63.15	Availability of information and confidentiality
63.16	Performance track provisions.....

<sup>1</sup> §63.11514(g), "Am I subject to this subpart?" exempts affected sources from the obligation to obtain title V operating permits.