



EPA MFHAP – NESHAPS Rule

40 CFR Part 63 Subpart XXXXXX

Metal Fabrication Hazardous Air Pollutants

National Emissions Standard for Hazardous Air Pollutants Rule

Promulgated July 23, 2008

For additional information see:
www.lincolnelectric.com/weld-fume-control
www.lincolnelectric.com/safety

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This summary of governmental regulations is provided for informational purposes only. Customers should consult with legal counsel in order to determine which regulations apply to their operations and what must be done to comply with those regulations.

What is MFHAP?

Metal Fabrication Hazardous Air Pollutants (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. This regulation applies to companies in certain industries that use materials containing MFHAP. A material containing MFHAP as defined in this regulation 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) 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 (MSDS) for the material, is considered to be a material containing MFHAP.

Is My Facility Subject to the Regulation?

Perhaps the most important section of this regulation is the Applicability portion. 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 below.

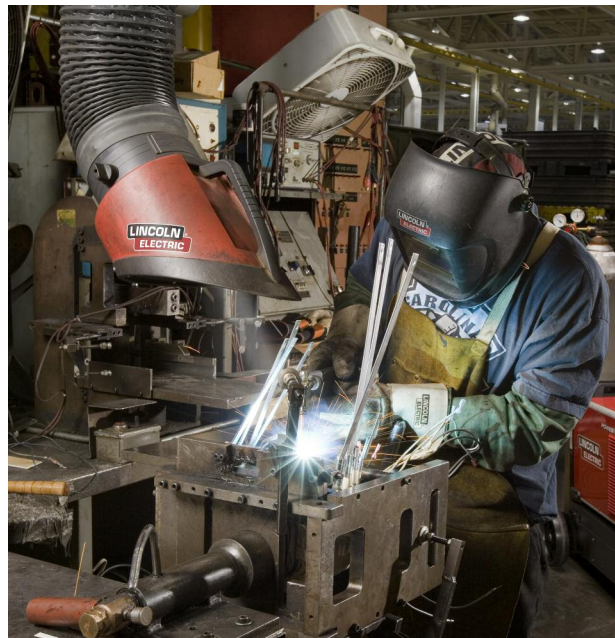
“Primarily engaged” is defined as the manufacturing, fabricating, or forging of one or more products listed in one of the nine metal fabrication and finishing source categories listed below where this production represents at least 50 percent of the production at a facility, and where production quantities 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.”

Nine Affected 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) Primary Metal Products Manufacturing; and
- (9) Valves and Pipe Fittings.

There are five primary processes common to these nine categories that are likely to emit MFHAP that are covered by this regulation: 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.

This guide is intended to help you determine your



requirements for welding operations under this regulation.

Please refer to the Code of Federal Regulations 40 CFR Part 63 Subpart XXXXXX or Federal Register / Vol. 73, No. 142 / Wednesday, July 23, 2008 beginning on page 42978 for information on the other four operations.

What are my Compliance Dates?

If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart by **July 25, 2011**. If you own or operate a new affected source, you must achieve compliance with the applicable provisions in this subpart upon startup of your affected source.

If you are the owner or operator of an area source in one of the nine metal fabrication and finishing source categories, you must submit the Initial Notification for a new affected source no later than 120 days after initial startup. For an existing affected source, you must submit the Initial Notification no later than **July 25, 2011**. Your Initial Notification must provide the information specified below:

- (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.

If you are the owner or operator of an existing affected source, you must submit a notification of compliance status on or before **November 22, 2011**. 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. You are

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required to submit the information specified below 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.

This Regulation Applies to Me: What Do I Have to Do?

- If your facility uses *less than 2,000 pounds per year* of welding rod that contains possible MFHAP, you must document your purchasing and are only subject to the above requirements.
- 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 performing visual inspections as described below. The following requirements 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) Proper Operation of Equipment. You must operate all equipment, capture, and control devices associated with welding operations according to manufacturer's instructions, including maintenance records. You must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the capture and control devices.

(2) Welding Management Plan. You must implement one or more of the management practices specified below 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, via *EPA Method 22*, of welding fugitive emissions 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.

(4) Requirements upon initial detection of visible emissions from welding. If visible fugitive emissions are detected during any visual determination required as above, you must comply with the following:

- (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 (2) above. After completing such corrective actions, you must perform a follow-up inspection for visible fugitive emissions 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.

(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 the following:

- (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, via *EPA Method 9* at the primary vent, stack, exit, or opening from the building containing the welding operations.
- (ii) In lieu of the requirement to perform visual determinations of fugitive emissions with *EPA Method 22*, you must perform visual determinations of emissions opacity 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 along with any subsequent corrective action taken.
- (iv) You must report the results of all visual determinations of emissions opacity performed along with any subsequent corrective action taken, and submit with your annual certification and compliance report.



(6) Requirements for opacities less than or equal to 20 percent but greater than zero. For each visual determination of emissions opacity performed, 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 (2) above.

(7) Tier 3 requirements for opacities exceeding 20 percent. For each visual determination of emissions opacity performed for which the average of the six-minute average opacities recorded exceeds 20 percent, you must comply with the following requirements:

- (i) You must submit a report of exceedence of 20 percent opacity, along with your annual certification and compliance report.
- (ii) Within 30 days of the opacity exceedence, you must prepare and implement a Site-Specific Welding Emissions Management Plan, as defined in paragraph (8) below. If you have already prepared a Site-Specific Welding Emissions Management Plan, 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 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 during preparation of the Site-Specific Welding Emissions Management Plan.
- (v) You must include these records in your annual certification and compliance report.

(8) Site-Specific Welding Emissions Management Plan. The Site-Specific Welding Emissions Management Plan must comply with the following requirements:

- (i) Site-Specific Welding Emissions Management Plan must contain the below listed information:
 - (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 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.
- (ii) The Site-Specific Welding Emissions Management Plan must be updated annually to contain current information, and submitted with your annual certification and compliance report.
- (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.

Additional Resources

Please direct questions to the EPA at www.epa.gov or to your local environmental authority.

EPA Method 9
<http://www.epa.gov/ttn/emc/methods/method9.html>

EPA Method 22
<http://www.epa.gov/ttn/emc/methods/method22.html>

Lincoln Electric Web Site - Arc Welding Safety
<http://www.lincolnelectric.com/community/safety>

Lincoln Electric Web Site - Fume Control Solutions
<http://www.lincolnelectric.com/weld-fume-control>

The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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