

Air Quality Requirements for Nine Metal Fabrication and Finishing Source Categories

In July 2008 the Environmental Protection Agency finalized rules for controlling hazardous air pollutants from area sources engaged in nine metal fabrication and finishing processes. These rules establish emission standards in the form of management practices and equipment standards for operations of dry abrasive blasting, machining, dry grinding and dry polishing with machines, spray painting and other spray coating, and welding operations.

DEQ adopted the federal rules by reference in December 2009.

Does this rule apply to my facility?

The rule applies to facilities that use materials containing the toxic metals cadmium (Cd); chromium (Cr); lead (Pb); nickel (Ni) or manganese (Mn), *or* facilities that have the potential to emit one or more of these metals *and* are primarily engaged in one or more of the nine regulated categories:

- Electrical and electronic equipment finishing operations
- Fabricated metal products
- Fabricated plate work (boiler shops)
- Fabricated structural metal manufacturing
- Heating equipment, except electric
- Industrial machinery and equipment finishing operations
- Iron and steel forging
- Primary metal products manufacturing
- Valves and pipe fittings

The rule does not apply to:

- Materials that contain the toxic metals in quantities less than 0.1 percent for cadmium, chromium, nickel, and lead, or less than 1.0 percent for manganese
- Activities that meet the definition of “tool or equipment repair operations,” “facility maintenance,” “quality control activities” or “research and laboratory facilities”
- Operations performed on site at installations owned or operated by the Armed Forces of the United States, the National Aeronautics and Space Administration, or the National Nuclear Security Administration
- Operations that produce military munitions or equipment directly and exclusively used for

the purposes of transporting military munitions

What are the requirements of the rule?

Dry Abrasive Blasting

Enclosed and unvented blast chambers:

- Minimize dust generation while emptying enclosure
- Operate all equipment according to manufacturer’s instructions

Vented enclosures:

- Vent dust to a cartridge, fabric or high efficiency particulate air filter
- Minimize excess dust in the surrounding area to reduce emissions
- Enclose abrasive material storage areas and holding bins
- Seal chutes and conveyors transporting abrasive materials
- Operate all equipment according to manufacturer’s instructions

Objects greater than eight feet in any dimension:

- Substitute low particulate matter-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide) for high PM-emitting blast media, whenever practicable
- Do not re-use blast media unless contaminants have been removed (filtration or screening) and material conforms to its original size and makeup
- Enclose abrasive material storage areas and holding bins
- Seal chutes and conveyors transporting abrasive materials
- Operate all equipment according to manufacturer’s instructions

Dry Grinding and Polishing With Machines

- Vent to a cartridge, fabric or high efficiency particulate air filter to capture particulate matter emissions
- Minimize excess dust in the surrounding area to reduce emissions
- Operate all equipment according to manufacturer’s instructions



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Machining

- Minimize excess dust in the surrounding area to reduce emissions
- Operate all equipment according to manufacturer's instructions

Surface coating

Spray Booths or Rooms:

- Equip with filters (fiberglass, polyester fiber, or other comparable filter) or with a water curtain ("waterwash" or "waterspray") that's at least 98 percent efficient
- Operated with a gauge for monitoring air flow and/or pressure within booth or room

Spray Guns:

- Apply spray paints with high volume low pressure spray guns (HVLP), electrostatic application, or airless spray techniques
- Use enclosed gun cleaner, clean spray guns with solvents that do not contain HAPs or use non-atomizing method

Painters:

- Train and certify in the proper spray gun selection, set-up and operation, spray techniques, and spray booth and filter maintenance. Training required every five years

Equipment:

Operate according to manufacturer's instructions. Exemptions include:

- Coating of objects >15 ft. in any dimension not already sprayed in a booth or room
- Coating of objects at fabricated structural metal manufacturing facilities not already sprayed in a booth or room

Welding

Welding rod, wire and filler material usage (rolling 12 month period):

- Less than 2,000 pounds used per year
 - One or more management practices must be implemented
 - No monitoring required
- 2,000 pounds or more used per year
 - Implement one or more management practices or fume control measures
 - Monitoring required (Method 22 or Method 9, if necessary)
 - Keep records of all visual observations and corrective actions taken and submit with annual certification

What about welding practices?

Implement one or more of the following:

- Welding processes with reduced fume generation capabilities (gas metal arc welding/inert gas welding)
- Welding process variations to reduce fume generation rates (pulsed gas metal arc welding)
- Welding filler metals, shielding gases, carrier gases or other process materials capable of reducing fume generation
- Optimize welding process variables to reduce fume generated (electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed)
- Welding fume capture and control system, operated according to the manufacturer's specifications

What are my permitting requirements?

If the NESHAP applies to your facility you must apply for and be issued a general air contaminant discharge permit. The activities with more complex compliance requirements determine what permit fee category you will be assigned to:

\$1,296 Permit fee

You perform two or more of the following listed activities at your facility:

- Dry abrasive blasting as outlined above
- Spray application of coatings containing one of the five toxic metals
- Welding using more than 2,000 pounds/yr of rod and/or wire containing the toxic metals. Wire and rod totals also include mobile welding occurring off site.

\$720 Permit fee

You perform only one of the listed activities above

\$360 Permit fee

You do not perform any of the listed activities above, but you perform one or more of the following:

- Dry grinding and polishing with machines
- Machining
- Welding using less than 2,000 pounds/yr of rod and/or wire containing the toxic metals.

Applications submitted after May 26, 2011:

You will be required to pay the initial application fee of \$1200. Prior to this date DEQ is waiving the fee.

Exemption from permitting

Your operation may be exempt from permitting if you meet all of the following criteria:

- No dry abrasive blasting in vented enclosures or on objects greater than eight feet in any one dimension
- No shielded metal arc welding with rod and/or wire containing the toxic metals
- Welding using less than 100 pounds/yr of rod and/or wire containing the toxic metals

Visit:

www.deq.state.or.us/aq/permit/acdp/acdp.htm

and click *General ACDPs*.

What are my reporting requirements?

- Initial Notification
 - Existing facilities (before April 3, 2008): July 25, 2011
 - New facilities (On or after April 3, 2008): Past due or if applicable, 120 days after initial startup
- Notification of Compliance
 - Existing facilities: Nov. 22, 2011
 - New facilities: Past due
 - Start-up facilities: Within 120 days after initial startup
- Annual Certification and Compliance Report
 - First report:
 - Based on last 12 months of data before the date of each monthly calculation (rolling total)Begin first day after compliance date (existing: July 26, 2011, new: July 26, 2008) and end Dec. 31
 - Subsequent reports:
 - Cover January 1 through Dec. 31
 - Submit no later than Jan. 31 each year
 - Submit all exceedance reports prepared during the year with annual certification and compliance report

What records must I keep?

Keep copies of the following records on-site for five years, suitable and available for review:

- Notifications, reports, supporting documentation, and records showing compliance with: all management practices, rule requirements and pollution prevention practices
- Applicability determinations, including equipment list, changes and dates
- Dates and results of all Method 22 fugitive observations, follow-up tests and corrective actions
- Dates and results of all Method 9 opacity observations and corrective actions

- Filter efficiency documentation, change out logs and maintenance
- Waterspray or water curtain efficiency tests
- Welding rod usage (rolling 12-month period)
- Painter training documentation
- Copy of current site-specific Welding Emissions Management Plan, if required
- Manufacturer's specifications and operating instructions for all equipment and processes

Agency Contacts

If you have questions or need assistance, please contact the DEQ representative in your area, or the Small Business Assistance Program at 503-229-5376.

Alternative Formats

DEQ is committed to accommodating people with disabilities. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format.

To make these arrangements, contact DEQ Communications and Outreach in Portland at 503-229-5696 or call toll-free in Oregon at 800-452-4011; fax to 503-229-6762; email deqinfo@deq.state.or.us.

People with hearing impairments may call 711.