



## Overview of Requirements for Nine Metal Fabrication and Finishing Source Categories 40 CFR Part 63 Subpart XXXXX



## NESHAP + Your Company = Rules and Requirements

NESHAP stands for National Emission Standards for  
Hazardous Air Pollutants (HAPs)

The HAPs of concern in your industry are: chromium,  
cadmium, lead, nickel and manganese

EPA is required to:

- Identify those HAPS with the highest risk to human health and the environment
- Identify the industrial categories who emit these HAPs
  - of which the plating and polishing industry is only one
- Develop NESHAPs (or standards) for these categories to reduce emissions of these HAPs

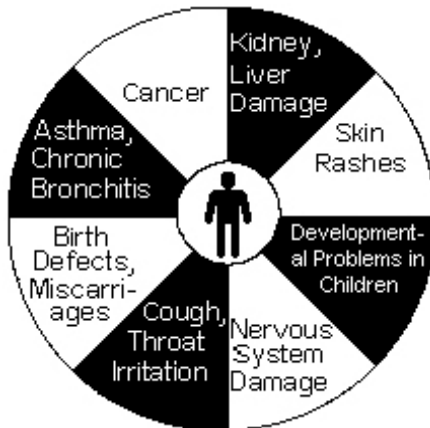


## So why is the state of Oregon involved?

- Every regulated industry no matter where they operate is required to be in compliance with the federal rule
- Each state can decide to adopt the rule or have EPA implement the rule
  - Oregon DEQ has decided to adopt the rule because it is better for industry
    - Ability to be less heavy handed
- Oregon DEQ adopted the rule in December 2009
  - State will be helping with assistance, assigning permits and doing inspections



## Why should I care?



- These metals are known or suspected of causing cancer and other diseases in humans.
  - Specifically, you, your employees, the public and potentially your family



## Let's determine if the standard applies to your operation



### Is my business *\*primarily engaged* in one or more of the 9 regulated 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
9. Valves and Pipe Fittings

**\*Primarily engaged:** At least 50% of your production/work falls into one of these categories. Determine production over previous continuous 12 months by volume, linear or square foot or a suitable industry value



## What's my next step?

### If your answer was NO

Determine if Subpart 6H for misc surface coaters applies

- Do you spray apply coatings?
- Do the coatings contain any MHAPs? (listed on next slide)

Determine next steps:

- If Yes: comply w/rule and permitting requirements
- If No : maintain records as proof of exemption from both 6X and 6H

### If your answer was YES

Do you operate one or more of the following 5 activities:

- **Dry** Abrasive Blasting
- **Dry** Grinding and Polishing with Machines
- **Dry** Machining
- Spray Painting
- Welding



## Can I stop now?

Unfortunately no...

If you perform one or more of the 5 activities ask yourself:

Do I use materials that contain or have the potential to emit one of the following 5 metal Hazardous Air Pollutants (MHAPs)

- Cadmium or its elemental form
- Chromium or its elemental form
- Nickel or its elemental form
- Lead

#### ***known carcinogens***

- Manganese or its elemental form

#### ***suspect carcinogen***

☺ If no stop now, but keep records on site to prove your exemption (MSDSs, manuf info). An IN is not required but recommended

**Note: The rule applies to materials that contain > .1% for carcinogens and >1% for suspect carcinogens. If < these amounts the material is exempt from the rule.**



## My operation is affected, now what?

First determine what activities or equipment are “exempt”

- Activities where no MHAPs are used or emitted
- Tool or equipment repair operations, facility maintenance or quality control activities

Then determine if your operation is existing or new

**Existing operation:** Construction/re-const. **before April 3, 2008**

Must be in compliance by: **July 25, 2011**

**New operation:** Construction/re-const. **on or after April 3, 2008**

Must be in compliance by: **July 23, 2008** or 120 days after startup

*We will discuss compliance dates and reporting requirements a bit later*

**Now let’s talk about what you need to know to comply with the standard**



## Dry abrasive blasting

**Objects < 8 Ft in any one dimension**

**Enclosed and unvented enclosures**

- No vents to the atmosphere (no emissions permitted)
- Minimize dust generation while emptying abrasive blasting enclosure

**Vented enclosures**

- Capture & vent emissions to a filtration control device operated as per manufacturer instructions
- Minimize excess dust in surrounding area to reduce emissions
- Enclose material storage areas and holding bins
- Seal chutes and conveyors transporting abrasive materials

**Operate all equipment & controls according to manufacturer’s instructions – keep instructions on file**



## Dry abrasive blasting

### Objects > 8 Ft in any one dimension

#### Vented enclosures

Comply with requirements for objects < 8ft or the following:

- Substitute low PM-emitting blast media (glass, hematite, steel shot, aluminum oxide) for high PM-emitting blast media (sand) whenever practicable to reduce MFHAP emissions
- Minimize excess dust in surrounding area to reduce emissions
- Enclose material storage areas and holding bins
- Seal chutes and conveyors transporting abrasive materials
- Do not re-use dry blast media unless contaminants have been removed (filtration or screening) and blast media conforms to its original size

**Operate all equipment & controls according to manufacturer's instructions – keep instructions on file**



## Objects > 8 Ft – monitoring requirements

### EPA Method 22 - visual fugitive dust determinations

Progressive schedule: daily, weekly, monthly, quarterly

#### Outdoors

- perform at fence line/property border nearest blasting operation

#### Indoors

- perform at primary vent, stack, exit or opening from building containing blasting operation

**\* If visible emissions detected: Perform corrective actions until emissions eliminated, then follow-up Method 22 observation**

#### **Keep records of all Method 22 determinations**

- Date & results of each observation
- Description of any problems and corrective actions taken
- Date & results of follow-up observations

**\* All information & reports should be kept on site and copies added to annual certification**



## Dry machining

Implement management practices to minimize emissions  
– take measures necessary to minimize excess dust in the surrounding area

**Operate all equipment & controls according to manufacturer's instructions – keep instructions on site**



## Dry Grinding and Polishing with machines

Capture emissions and vent to filtration control device  
– demonstrate compliance by maintaining, onsite, a copy of the manufacturer's specs for the device

Implement management practices to minimize emissions  
– take measures necessary to minimize excess dust in the surrounding area

**Operate all equipment & controls according to manufacturer's instructions – keep instructions on site**



## Spray painting

### Exemptions

Cups <3 oz./non-atomizing /aerosol cans/hand painting, etc.

### Spray booth and filter exemptions:

- Painting at fabricated structural steel manufacturing facilities
- Where objects >15 ft are not painted within booths or rooms

### **In all other cases spray booths or rooms must have**

A full roof with at least two complete walls plus:

**Booth:** 2 additional walls\* **Room:** 1 or 2 additional walls\*  
(curtains or barrier material ok)

- Roof may contain narrow slots for connecting fabricated products to overhead cranes and/or for cords or cables
- Ventilate so air is drawn inward & leaves only through filter
- Filter must be 98% efficient – Keep filter vendor data on site
- Inspect & replace filters according to manufacturer's specs
  - Maintain documentation of all activities



## Spray painting

Waterwash or waterspray booths/rooms may be used if:

- Maintained according to manufacturers specifications
- Can prove they achieve 98% capture efficiency/control

### **Training requirements for certification**

Training requirements same as for Subpart 6H, except

- Different training compliance dates

New business: By **January 20, 2009** or **180 days after start-up or after a new hire**

Existing business: By **July 25, 2011** or **180 days after new hire**, whichever is later

### **Spray application**

- Gun requirements same as for Subpart 6H





## Spray painting

### Gun Cleaning – Approved methods

Requirements same as for Subpart 6H, except this rule covers use of non-HAP solvents in place of non-atomization

### Spray techniques - To minimize paint usage & overspray

Requirements same as for Subpart 6H.

- Training records must include a description of the methods to be used after training is performed to demonstrate, document and certify successful completion of training
  - initial training not required if owner can document or certify previous accumulated training is equivalent, complies with the rule and was given within the past 5 years



## Training requirements (cont)

### Records

Requirements same as for Subpart 6H

### Equipment Maintenance – Booths, rooms & filters

- Requirements same as for Subpart 6H except
  - Waterwash or waterspray booths are acceptable if 98% capture efficiency can be documented and maintained
- Disposal – hazardous vs. non-hazardous
  - An initial hazardous waste determination must be conducted for filters, etc.
  - As long as nothing changes this determination must only be performed every 3 to 5 years. If the composition of the coating changes, the determination should be performed again.

### Training Schedule

Every 5 years

**\*make sure painters know how equipment operates and how to read any gages to determine proper operation of booth and guns**



## Welding

Determine yearly usage of welding rod and wire on a rolling 12 month basis. If you use:

**< 2000 lbs/year**

- One or more management practices must be implemented
- **No monitoring required**

**≥ 2000 lbs/year**

- One or more management practices **OR** fume control measures must be implemented
- **Monitoring is required** (Method 22 and possibly Method 9)
- Keep records of all visual determinations and corrective actions taken and submit with annual certification

**Operate all equipment & controls according to manufacturer's instructions – keep instructions on site**



## Welding management practices

To minimize emissions you must implement one or more of the following management practices:

- Processes with reduced fume generation capabilities
- Process variations which can reduce fume generation rates
- Welding filler materials, shielding gases, carrier gases or other materials capable of reducing fume generation
- Optimization of welding process variables to reduce the amount of fume generated, and/or
- Use of welding fume capture and control systems



## Welding – Method 22 (M22) observations

### Use EPA M22 to determine visible emissions (VEs)

- No certification is needed to perform M22 observations, however, you need to understand the general procedures required while observing and will need some equipment to assist you
- Observe welding emissions from primary vents, stacks, exits or openings of buildings housing welding operations.
- Perform under normal operating conditions
- Duration of observation: 15 min

**Note: VEs are considered present if detected for more than 6 minutes out of the total observation of 15 minutes**

- Record & report instances of VEs, corrective actions taken & results of follow-up observations
- Submit all information with annual cert & compliance report
- Progressive observation schedule is daily, weekly, monthly or quarterly depending upon VEs observed.



## Welding – Tier 1 visible emissions monitoring

### Daily Monitoring

- If VEs detected, perform corrective action (inspection of welding fume sources and controls, evaluation of BMPs, etc) & follow-up M22
  - If first time VEs detected in 12 months-stay with daily schedule, otherwise go to **Tier 2**
- If no VEs detected for 10 days, go to weekly schedule

### Weekly Monitoring (5 days of operation)

- If VEs detected, perform corrective action & follow-up M22
  - If first time VEs detected in 12 months-go back to daily, otherwise go to **Tier 2**
- If no VEs detected for 4 consecutive weeks, go to monthly



## Welding – Tier 1 visible emissions monitoring

### Monthly monitoring (21 days of operation)

- If VEs detected, perform corrective action & follow-up M22
  - If first time VEs detected in 12 months-go back to weekly, otherwise go to **Tier 2**
- If no VEs detected for 3 consecutive months, go to quarterly

### Quarterly monitoring (60 days of operation)

- If VEs detected, perform corrective action & follow-up M22
  - If first time VEs detected in 12 months-go back to monthly, otherwise go to **Tier 2**
- If no VEs detected within a 12 month period continue with quarterly observations.

***\*Emissions detected more than once during any consecutive 12 month period triggers Tier 2 (do not count follow-up M22s)***



## Welding – Tier 2 Method 9 (M9) monitoring

### Within 24 hrs of detection of the second VE in 12 months

- Perform an EPA M9 opacity reading from primary vents, stacks, exits or openings
- Certification is required to perform M9 observations
- Perform under normal operating conditions
- Duration: 30 min (1 every 15 sec-average each 6 min period)
- If average of any 6 min period is  $> 0$ , but  $\leq 20\%$  opacity
  - Perform corrective action and follow-up M9 readings
  - Progressive schedule kicks in (daily, weekly, monthly, quarterly). Do not count follow-up readings
- If  $< 20\%$  for 3 consecutive mo go to 120 day operation schedule
  - Can also return to M22 monthly schedule if  $< 20\%$  for 2 consecutive months
- All recording and reporting requirements found in Tier 1 apply to Tier 2 to include all “readings and averages”

***\* If any average exceeds 20% you must go to Tier 3 monitoring***



## Welding – Tier 3 Method 9 monitoring

### Average of one 6 minute reading exceeds 20%

- Submit report detailing exceedence of 20% opacity with annual certification and compliance report
- Within 30 days of exceedence prepare and implement a Site Specific Welding Emissions Management Plan. If plan already in place, a revision must be performed.
  - During prep or revision continue to perform daily readings
  - Maintain records of daily readings and averages
  - Include records in annual certification and compliance report
- If after 2 consecutive months no average 6 min period is > 20%
  - You can return to Method 22 if 20% or less over 2 consecutive months or continue with Method 9
- All recording and reporting requirements found in Tier 2 apply to Tier 3



## Notification Requirements

*Must submit notification/reports for each affected facility*

### Initial Notification

- Existing: no later than **July 25, 2011**
- New: Due now (11/29/2008) or no later than 120 days after initial startup

### Notification of Compliance Status

- Existing: on or before **November 22, 2011**
- New: Due now or no later than 120 days after initial startup

### Annual Certification and Compliance Report

- First report based on last 12 months of data prior to date of each monthly calculation (**rolling total**)
- First report begins the day after the compliance date and ends December 31<sup>st</sup> (existing: July 26, 2011, new: July 26, 2008)
- Subsequent reports will cover January 1 through December 31<sup>st</sup>
- Submit no later than **January 31<sup>st</sup>** each year
- Keep on site and readily accessible for 5 years
- Exceedence reports within the year must also be submitted



## Permitting Information

### What “would” be required

- All operations affected by the standard required to obtain a general air contaminant discharge permit or ACDP
- Permit fee of \$1,296

### Proposed exemption from permitting

Operations meeting “all” three of the following criteria:

1. NO dry abrasive blasting in vented enclosure or on object >8Ft in any one dimension
2. NO shielded metal arc welding (SMAW) using MHAP rod and/or wire
3. Use < 100 lbs of MHAP containing rod and/or wire per year

### Proposed fee structure for permitted operations

Permit fee of \$1,296

Operations performing two or more of the following activities:

- Dry abrasive blasting as outline above
- Spray applied painting with MHAP containing coatings
- Welding using > 2000 lbs of MHAP containing rod and/or wire



## Permitting Information

### Proposed fee structure for permitted operations (cont)...

Permit fee of \$720

Operations performing only one of the listed activities

Permit fee of \$360

Operations performing none of the listed activities

***These facilities will be performing other operations affected by the standard that require a permit such as machining, grinding, use of < 2000 lbs per year of MHAP containing rod and/or wire, etc***

### Proposed schedule

- Permit applications to be sent to large operations first
- For small operations, DEQ plans to:
  - adopt lower fee category in Feb 2011
  - develop a separate general permit in March 2011
  - Send permit applications in April 2011



## What do I do if I need help or have questions?

Visit DEQ's small business webpage at:

<http://www.deq.state.or.us/aq/bap/neshap.htm>

There are factsheets, forms, summaries and much more available to copy, fill out or download

**Contact me**, Rebecca Hillwig, DEQ's Small Business Assistance Program Coordinator and Ombudsman

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Contact your local DEQ office