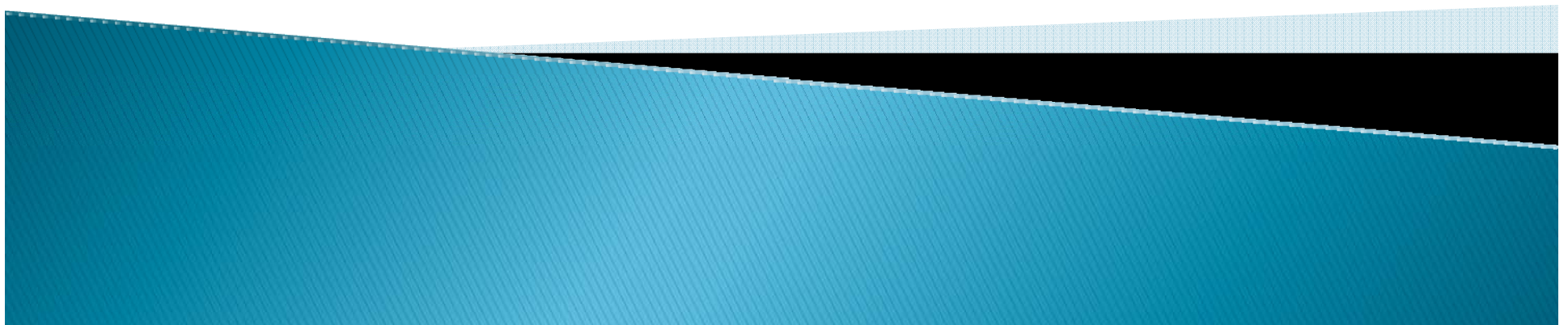


# Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

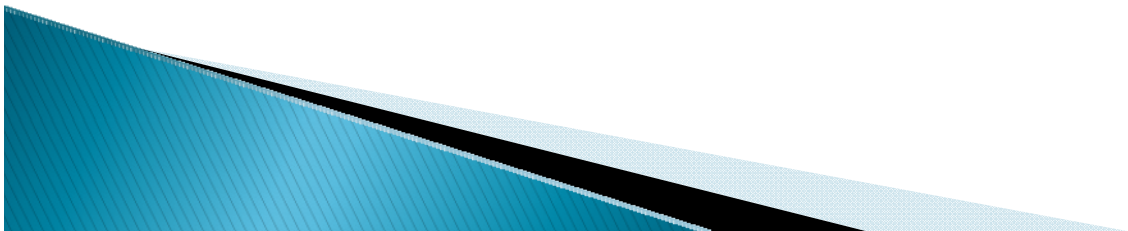
40 CFR Part 63, Subpart XXXXXX, (6X Area Source NESHAP)

<http://www.iowadnr.gov/air/prof/NESHAP/>



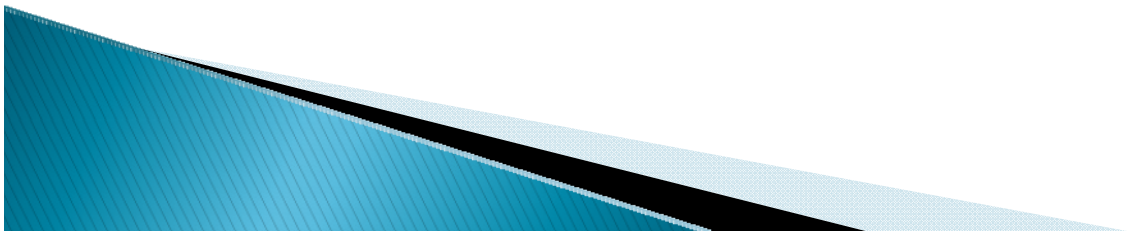
# Overview of presentation

- ▶ Background of the 6X rule
- ▶ Applicability
  - Facilities covered by rule
  - SIC/NAICS codes
    - Examples of types of facilities covered
  - Primarily engaged
  - Examples of facilities not covered
- ▶ Important dates
- ▶ Operations subject to regulation under the rule



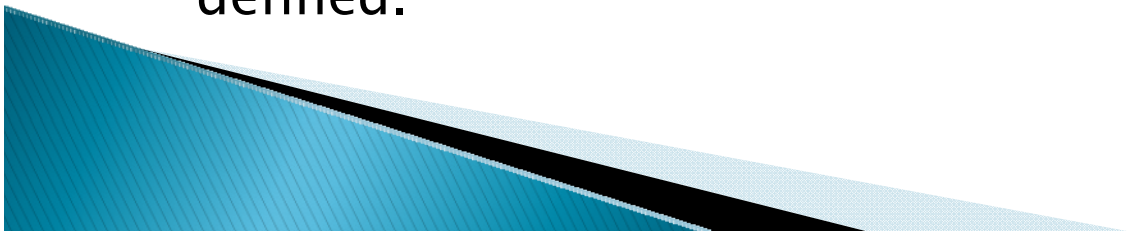
# Area Source Rules Background

- ▶ The federal Clean Air Act requires EPA to:
  - Reduce the public's exposure to Hazardous Air Pollutants (HAP)
  - Establish standards for major and area sources of HAP
- ▶ NESHAP – National Emission Standards for Hazardous Air Pollutants
  - Major source – facility emits or has the potential to emit more than 10 tons/yr of a single HAP or 25 tons/yr of total HAP
  - Area source – not a major source
- ▶ The 6X rule applies **only** to facilities that are area sources of HAPs and are in one of 9 Source Categories
- ▶ DNR has adopted the 6X rule into the IAC



# Facilities covered by 6X

- ▶ Facilities primarily engaged in one of the following source categories:
  1. Electrical and Electronic Equipment Finishing Operations
    - Electric Machinery, Equipment, and Supplies, not elsewhere classified
    - Motors and Generators Manufacturing
  2. Fabricated Metal Products, not elsewhere classified
  3. Fabricated Plate Work (Boiler Shops)
  4. Fabricated Structural Steel Manufacturing
  5. Heating Equipment, except Electric
  6. Industrial Machinery and Equipment: Finishing Operations
    - Construction Machinery Manufacturing
    - Oil and Gas Field Machinery Manufacturing
    - Pumps and Pumping Equipment Manufacturing
  7. Iron and Steel Forging
  8. Primary Metals Products Manufacturing, not elsewhere classified
  9. Valves and Pipe Fittings, not elsewhere classified
- ▶ It is important to understand how the source categories are defined.




# Facilities covered by 6X, cont.

- ▶ Table 1 of 6X rule provides description of facilities covered by rule
- ▶ EPA has provided a list of SIC/NAICS codes that are covered by the rule at:  
<http://epa.gov/ttn/atw/area/arearules.html>
  - 12 SIC codes (SIC = Standard Industrial Classification) covered by rule  
[http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html)
  - 15 NAICS codes (NAICS = North American Industrial Classification System) covered by rule  
<http://www.census.gov/eos/www/naics/>
- ▶ We will refer to SIC codes primarily in this presentation
  - Facilities that only know NAICS will need to determine SIC also

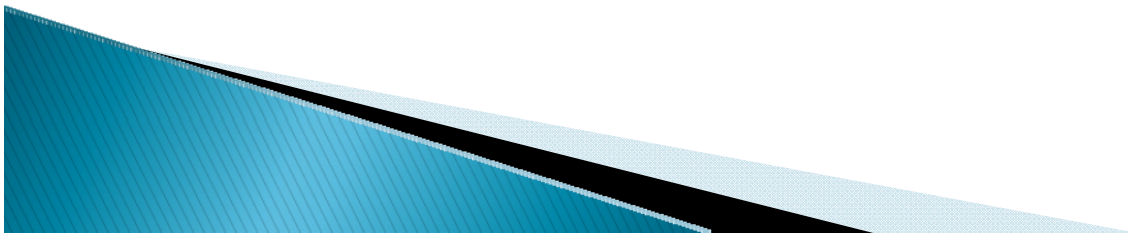


# Facilities covered by 6X, cont.

- ▶ Important! A facility must know what its SIC (and NAICS) codes are to determine applicability or non-applicability of 6X.
  - ▶ A facility may have more than one SIC code depending on what it manufactures.
  - ▶ SIC code is not assigned by the DNR. However, DNR has information on what SIC code has been reported in the past for many facilities
  - ▶ Check with other departments of your facility (e.g. accounting, human resources) to see what SIC code or codes are being used.
  - ▶ Read the description in SIC code manual to ensure that it fits your facility.
- 

# Electrical and Electronic Equipment Finishing Operations

- ▶ Motor and Generator Manufacturers ( SIC 3621)
  - For example, facilities that make:
    - Electric motors
    - Generator sets: gasoline, diesel and dual fuel
    - Motor housing and components
    - Control equipment for buses and trucks
    - Coils for motors
    - Stators
  - NAICS 335312 – Motor and Generator Manufacturing



# Electrical and Electronic Equipment Finishing Operations

- ▶ Electrical Machinery, Equipment and Supplies, NEC\* ( SIC 3699)
  - For example, facilities that make:
    - High energy particle acceleration system
    - Laser welding, drilling and cutting equipment
    - Extension cords, made from purchased insulated wire
    - Bells and chimes
    - Ultrasonic machines

\*Not Elsewhere Classified

- NAICS 335999 – All Other Miscellaneous Electrical Equipment and Component Manufacturing



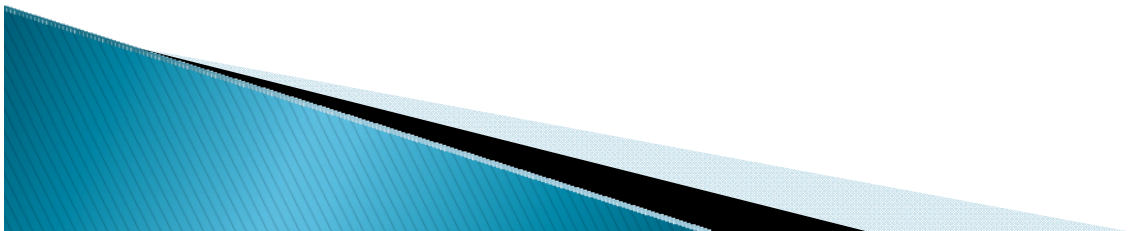


# Fabricated Metal Products, NEC

- ▶ Fabricated Metal Products, NEC \* (SIC 3499)
  - For example, facilities that make:
    - Powder metal products, custom molding – NAICS 332117
    - Friction material from powdered metal
    - Fire or burglary resistant metal safes and vaults
    - Metal boxes, metal ladders, metal household articles (e.g. ironing boards and freezers)
    - Collapsible metal tubes

\*Not elsewhere classified

NAICS 332999 – All Other Miscellaneous Fabricated Metal Product Manufacturing



# Fabricated Plate Work (Boiler Shops)

- ▶ Fabricated Plate Work (Boiler Shops) (SIC 3443)
  - For example, facilities that make:
    - Process and Storage Tanks from heavy gauge metal (metal plate) – NAICS 332420
      - Farm Storage Tanks
      - Fuel tanks
      - Gas tanks
      - Septic tanks
      - Water tanks
    - Boilers and Heat exchangers – NAICS 332410
    - Pressure Vessels
- ▶ NAICS 332313 – Plate Work Manufacturing



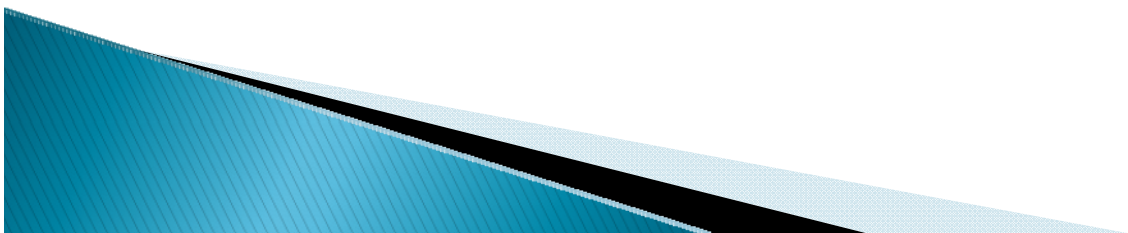
# Fabricated Structural Metal Manufacturing

## Fabricated Structural Metal Manufacturing (SIC 3441)

- For example, facilities that make structures from iron and steel, including:
  - Transmission tower sections
  - Steel joists and rebar
  - Radio and television tower sections
  - Expansion joints
  - Sections for ships, boats and barges
  - Highway bridge sections, prefabricated metal

**Note:** According to EPA, this is the industrial sector that will have most facilities subject to 6X. Many facilities are job shops.

NAICS 332312 – Fabricated Structural Metal Manufacturing



# Heating Equipment, except electrical

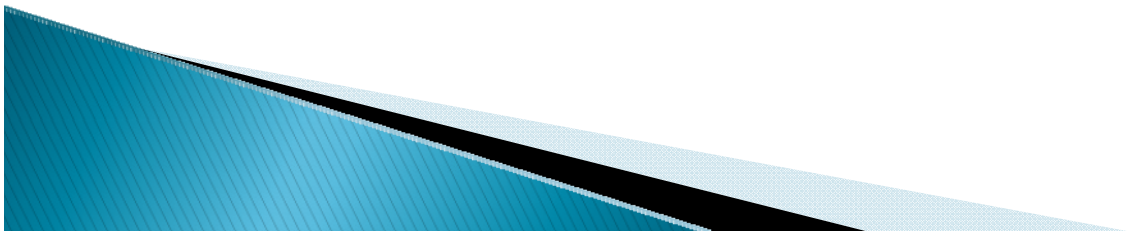
Heating equipment, except electric and warm air furnaces (SIC 3433)

- ▶ For example, facilities that make:
  - Equipment used for utilization of gaseous, liquid and solid fuels, including:
    - Gas heaters
    - Gas/oil burners
    - Mechanical stokers
    - Heating stoves and wall heaters
- ▶ Does not include electric and warm air furnaces
- ▶ NAICS 333414 – Heating equipment (except warm air furnaces) manufacturing



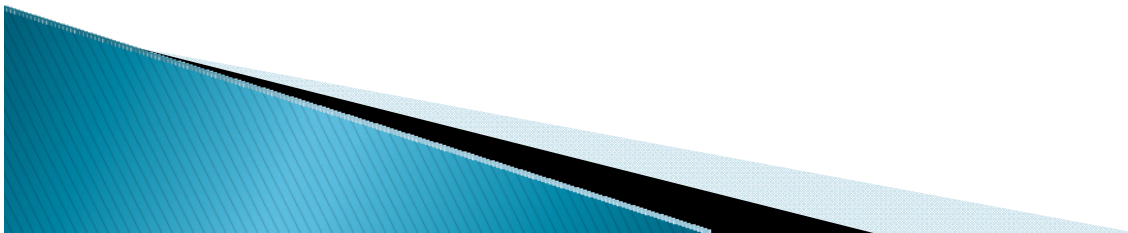
# Industrial Machinery & Equipment Finishing Operations

- ▶ Construction Machinery and Equipment (SIC 3531)
  - For example, facilities that make:
    - Heavy equipment, including bulldozers, asphalt plants, pavers, hammer mills, concrete plants, aerial work platforms
    - Components of heavy equipment – blades, buckets, attachments
    - Portable hammermills and crushers
    - Construction tractors, off-highway trucks
- NAICS 333120 – Construction Machinery Manufacturing



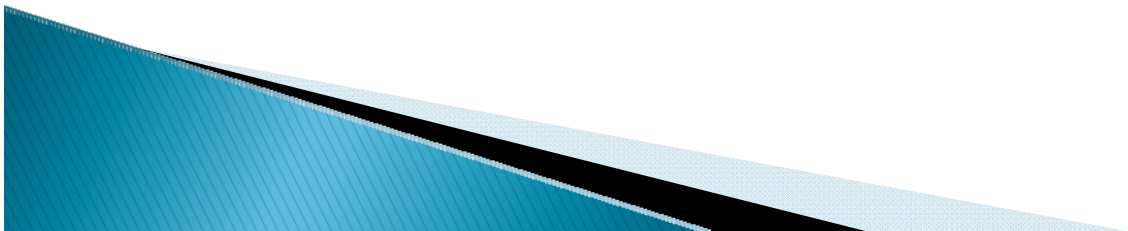
# Industrial Machinery & Equipment Finishing Operations

- ▶ Oil and Gas Field Machinery and Equipment (SIC 3533)
  - All type of drill rigs
  - Well machinery and equipment
  - Includes facilities that make water well drilling equipment
- ▶ NAICS 333132 – Oil and Gas Field Machinery and Equipment Manufacturing



# Industrial Machinery & Equipment Finishing Operations

- ▶ Pumps and Pumping Equipment (SIC 3561)
  - For example, facilities that make pumps for general industrial, commercial and household use.
    - Includes domestic water pumps
    - Does not include fluid power pumps or motor vehicle pumps
- ▶ NAICS 333911 – Pump and Pumping Equipment Manufacturing

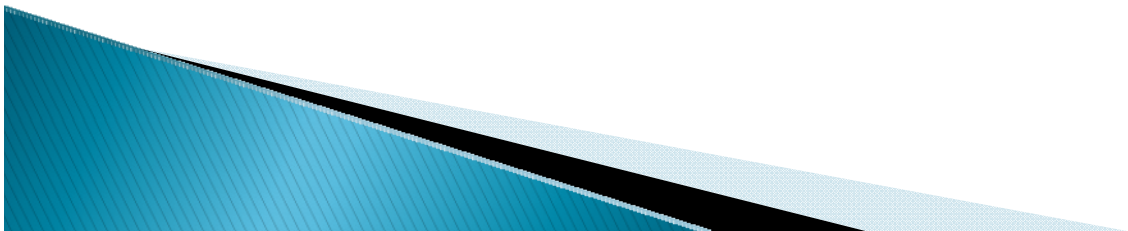


# Iron and Steel Forging

## Iron and Steel Forgings (SIC 3462)

- ▶ Facilities that purchase steel and press, pound or squeeze it into high strength parts
  - Does not include rolling mills or foundries.
  - Does not apply to metal stampings (SIC 3469)

NAICS 332111 – Iron and Steel Forging



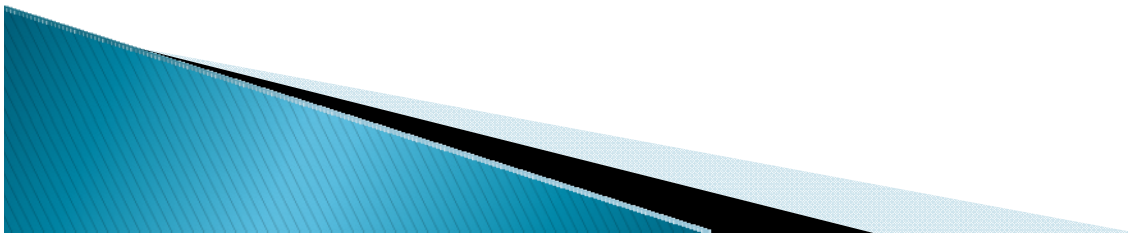


# Primary Metals Products Manufacturing

## Primary Metal Products, NEC\* (SIC 3399)

- ▶ For example, facilities that make nonferrous nails, brads and tacks
- ▶ Facilities that make steel balls
  
- ▶ NAICS 332618 – Other Fabricated Wire Product Manufacturing

\* Not elsewhere classified



# Valves and Pipe Fittings

## Valves and Pipe Fittings, NEC\* (SIC 3494)

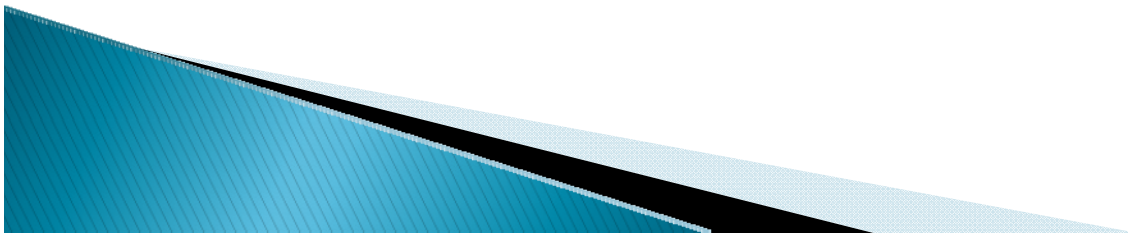
- ▶ For example, includes facilities that make:
  - Metal plumbing and heating valves
  - Pipe couplings
  - Metal flanges and flange unions
- ▶ Does not include facilities that make:
  - Plumbing fixture fittings
  - Fluid power valves
- ▶ NAICS 332999 – Other Metal Valve and Pipe Fitting Manufacturing

\* Not elsewhere classified



# Finding the correct SIC code

- ▶ Make sure that your facility's SIC code is the correct one
  - What has been listed in the past on permit applications? Has your facility been consistent?
- ▶ Descriptions in SIC manual can overlap or may not be specific enough for your facility
- ▶ Manufacturing activity may change; this may change your SIC code
- ▶ DNR can be contacted about questions about determining correct SIC code



# Primarily Engaged

- ▶ Important for facilities that make different products and have more than one SIC code
- ▶ To be subject to 6X, the facility must be primarily engaged in manufacturing or fabricating a product listed in one of the nine metal fabrication and finishing categories regulated by the rule, where this production represents at least 50% of the production at the facility.
- ▶ Production quantities are established by number of units made, linear foot, square foot, or other value suited to the specific industry.




# Primarily Engaged

- ▶ If facility can be classified under multiple SIC, it must document and retain rationale on why it is not subject to 6X.
- ▶ Facilities must maintain records to document that they are not primarily engaged based on production levels over a continuous 12 month period.
- ▶ Depending on its primary production, a facility could be subject to 6X requirements intermittently. (No once-in, always-in. )



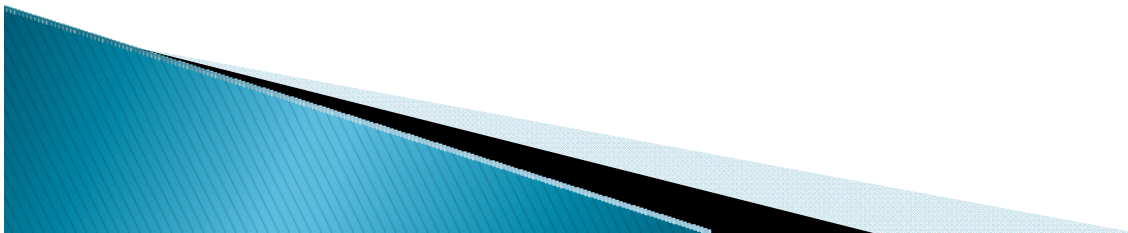
# What type of facilities are not covered by 6X?

## ▶ Facilities:

- that don't make things from metal
  - that are primarily repair shops
  - that make farm equipment
  - that make furniture
  - that make products for the transportation industry
  - that primarily make things from plastic
  - that make things from sheet metal (SIC 3444)
  - that are engaged in research or laboratory activities
  - that primarily produce military munitions or equipment used for the purposes of transporting military munitions
- 

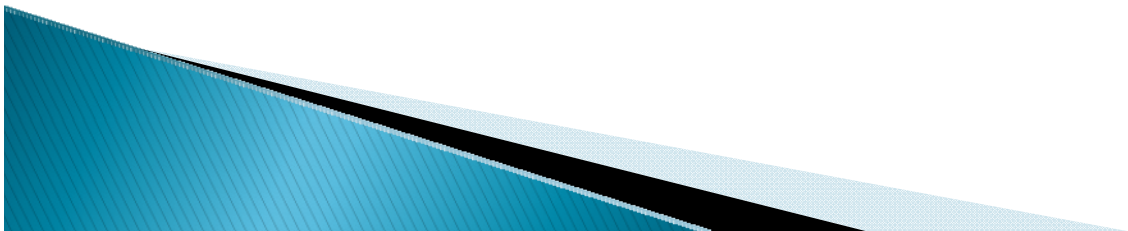
# What type of facilities are not covered by 6X?

- ▶ Operations performed at military installations (including National Guard)
- ▶ Major sources of HAP
- ▶ Any facility whose primary SIC/NAICS codes are not one of the ones covered by 6X (to repeat one more time)



# Important dates for 6X

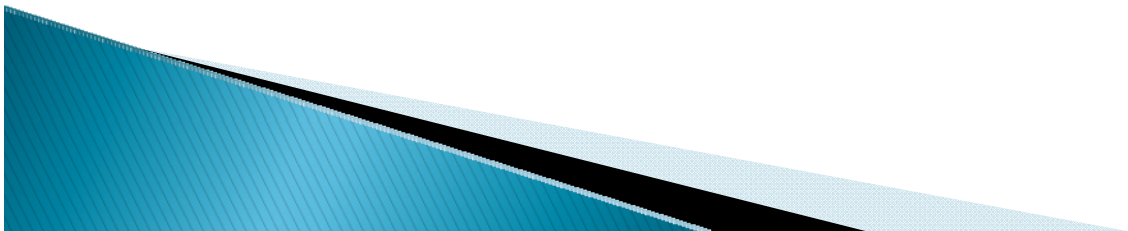
- ▶ Source is new if commenced construction on or after April 3, 2008
  - Compliance date is July 23, 2008 or upon startup, whichever is later
  - Initial notification and notification of compliance due by November 20, 2008 or 120 days after startup





# Important dates for 6X

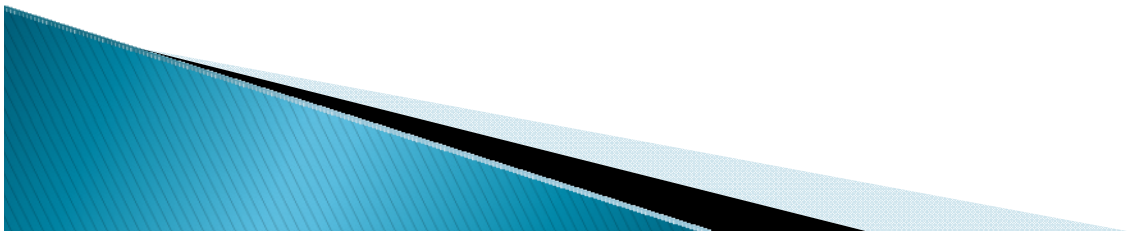
- ▶ Source is existing if commenced construction before April 3, 2008
  - ▶ Compliance date is July 25, 2011
  - ▶ Initial notification is to be submitted to the DNR by July 25, 2011
  - ▶ Notification of compliance status to be submitted to DNR by November 22, 2011
- ▶ Initial notification form available at:  
<http://www.iowadnr.gov/air/prof/NESHAP/>



# 6X applicability – next step

- ▶ If your facility is subject to 6X based on its SIC code, the next steps are to determine if it:
  - 1. Has one of the regulated activities or operations; and
  - 2. Emits a pollutant regulated by 6X.
- ▶ The pollutants regulated by 6X are compounds of:
  - Cadmium
  - Chromium
  - Lead
  - Manganese
  - Nickel

These pollutants are called metal fabrication and finishing HAPs (MFHAP).



# Next step

- ▶ Operations regulated at a 6X facility:
  1. Dry Abrasive Blasting
  2. Dry grinding & polishing with machines
  3. Dry Machining
  4. Spray painting
  5. Welding
- ▶ If the 6X facility has a regulated operation that emits a MFHAP or uses a material that contains cadmium, chromium, nickel or lead at  $\geq 0.1\%$  or contains manganese  $\geq 1.0\%$ , that operation is subject to standards and management practices.



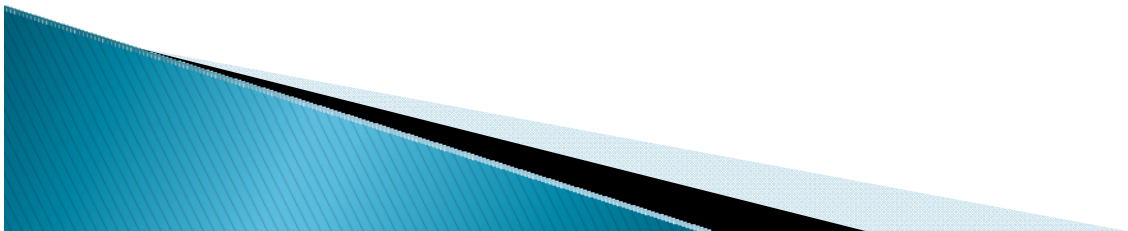
# 6X – applicability steps

- ▶ If a 6X facility does not use or emit an MFHAP, it has no requirements under the rule\*.
- ▶ If a 6X facility uses or emits an MFHAP but not from one of the 5 regulated processes, it has no requirements under the rule\*.
  - \* Initial notification is still required.
- ▶ Applicability or non-applicability of 6X can change, depending on:
  1. How facility is classified by SIC
  2. What type of materials are processed
  3. The type of processes



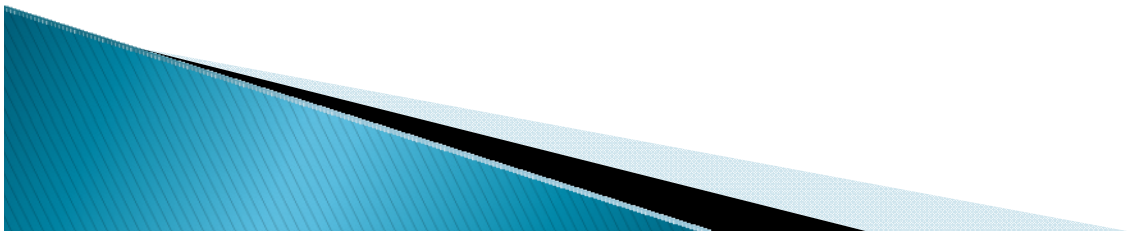
# 6X – applicability examples

- ▶ A 6X facility has an abrasive blasting machine for cleaning steel parts
  - Subject to 6X standards if either the blasting agent or the steel substrate contains an MFHAP
- ▶ A 6X facility has a wet paint booth for coating metal parts
  - ▶ Subject to 6X standards only if the paint contains a MFHAP
- ▶ A 6X facility welds steel parts
  - Subject to 6X standards if welding wire or rod contains an MFHAP.



# 6X – next step

- ▶ This concludes presentation on 6X applicability.
- ▶ Additional presentations will cover:
  - The regulated operations
  - Emission standards and management practices
  - Monitoring requirements
  - Recordkeeping requirements
  - Reporting requirements (including Notification of Compliance Status)



# General Contact Information

- ▶ NESHAP questions
  - John Curtin- DNR, Air Quality Bureau  
[john.curtin@dnr.iowa.gov](mailto:john.curtin@dnr.iowa.gov) or 515-281- 8012  
or 1-877-AIR-IOWA (hotline)
- ▶ Technical air assistance for small businesses
  - Dan Nickey - UNI, Iowa Waste Reduction Center  
[daniel.nickey@uni.edu](mailto:daniel.nickey@uni.edu) or 319-273-6588
- ▶ EPA guidance on 6X (including April, 2011 Question and Answer):
  - <http://www.epa.gov/ttn/atw/area/compilation.html>

