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Miscellaneous Surface Coating at Area Sources: Summary of New Air Regulations & Permitting Requirements

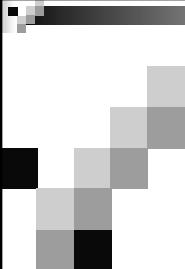
Iowa Department of Natural Resources
Iowa Waste Reduction Center

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

Overview

- What is the new federal rule and why is this rule needed?
- Affected Sources
- Exempted Sources
- Operations & activities not affected by the new rule
- Important compliance dates
- Rule requirements
- Iowa plans for rule implementation
- Q & A on presentation information
- **Post-presentation:** Add'l Q & A and open discussion

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What is the New Federal Rule and Why is This Rule Needed?

What is the New Rule?

- On January 9, 2008, the U.S. EPA published in the Federal Register a new regulation impacting certain surface coating operations
- National Emissions Standards for Hazardous Air Pollutants (NESHAP): Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR Part 63, Subpart HHHHHH) – we call it 6H, for short
- Rule, background documents and compliance tools are available at www.epa.gov/ttn/atw/area/arearules.html

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Why the Need for this Rule?

- The federal Clean Air Act (CAA) requires EPA to reduce exposure to air toxics, also known as hazardous air pollutants (HAP), because these chemicals are known or suspected to cause cancer or other serious health effects

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Why the Need for this Rule?

- EPA required to identify and list the “area source” categories that represent 90% of the emissions of urban air toxics
- Area sources are generally small in size but are also large in number
- Collectively, area sources may pose health risks

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Why the Need for this Rule?

- Auto body refinishing and miscellaneous surface coating are two of the 70 listed area source categories
- Data from paint suppliers has shown that coatings used in auto body and other surface coating operations contain lead, chromium, cadmium, manganese, and nickel compounds (these are called **Target HAP** in the 6H rule)

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NESHAP Affected Sources

Affected Sources

- The "6H" NESHAP applies to certain surface coating operations performed at *area sources*, sometimes called *minor sources*, that emit hazardous air pollutants (HAP)
 - An *area source* has potential emissions of less than 10 tons per year (TPY) of any one HAP, and less than 25 TPY of all combined HAP
 - In contrast, a *major source* has potential HAP greater than or equal to these thresholds, and is regulated under other NESHAP, sometimes called MACT

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“6H” NESHAP: Three Source Categories

- Paint stripping operations
- Motor vehicle/mobile equipment (auto body refinishing)
- Miscellaneous surface coating

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Affected Sources – Paint Stripping

- Will not be covered in this presentation
 - 6H NESHAP covers operations that use Methylene Chloride (MeCl) to remove dried paint from wood, plastic, metal or other
 - At this time, the DNR is not aware of any paint stripping operations that would be affected
 - **Fact Sheet available** – Please review if you think your facility may be an affected source

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Affected Sources – Auto body

- Motor vehicle and mobile equipment surface coating operations
 - Includes mobile repair operations
 - Does not include individuals coating two (2) or fewer vehicles in a year, as long as no compensation is received

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Important Definitions

- *Motor vehicle* means any self-propelled vehicle, including automobiles, light duty trucks, golf carts, vans, and motorcycles
- *Mobile equipment* means any device that may be drawn and/or driven on a roadway including, but not limited to, heavy-duty trucks, bulldozers, motor homes, and other recreational vehicles (including camping trailers and fifth wheels)

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Affected Sources – Miscellaneous

- Metal or plastic parts or products surface coating operations
 - The rule only applies if coatings contain *Target HAP*:
 - Lead (Pb)
 - Manganese (Mn)
 - Nickel (Ni)
 - Cadmium (Cd)
 - Chromium (Cr)

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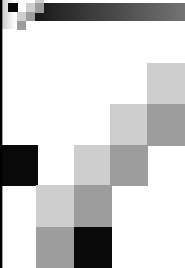
Target HAP Containing Coatings

- Coatings are considered Target HAP containing coatings if:
 - The coating contains lead, nickel, cadmium, or chromium compounds at a concentration greater than 0.1 percent by mass and/or,
 - The coating contains manganese compounds at a concentration greater than 1.0 percent by mass

The concentrations are different because manganese is the only Target HAP covered by this rule that is not an OSHA-defined carcinogen

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Sources Exempted from NESHAP

Important Distinction

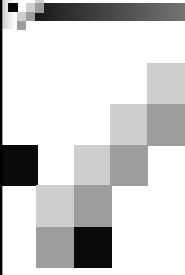
- Metal or plastic parts or products surface coating operations that don't use Target HAP are automatically exempt from this rule
- Motor vehicle and mobile equipment surface coating operations that don't use Target HAP must petition the Administrator (EPA, state, or local program) for an exemption

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Sources Exempt From this Rule

- Armed Forces, NASA, or National Nuclear Security Administration operations performing surface coating
- Surface coating performed on military munitions or equipment for use by Armed Forces
- Surface coating performed by individuals on personal vehicles, possessions, or property as a hobby or maintenance, or done by individuals for others without compensation (as long as no more than two cars are coated per year)

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Operations & Activities NOT covered under the NESHAP

Operations NOT affected

- Research and laboratory activities
- Quality control activities
- Activities covered under any other area source NESHAP
- Motor vehicle and mobile equipment spray-applied surface coating operations who successfully petition the Administrator for exemption, demonstrating that no target HAPs used in any coatings
- Facility maintenance

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Facility Maintenance

- *Facility maintenance* includes the refinishing of mobile equipment in the field or at the site where they are used in service, such as farm equipment that cannot feasibly be moved to a refinishing facility
 - Such mobile equipment also includes items, such as fork trucks, that are used in a manufacturing facility and which are refinished in that same facility
- *Facility maintenance* also includes the application of coatings to stationary structures at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs

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Activities Not Subject to Rule

- Spray applied applications using a hand-held device with a cup capacity no more than 3.0 fluid ounces
- Powder coating
- Hand-held, non-refillable aerosol containers
- Non-atomizing technology
 - Brushes, rollers, hand wiping
 - Coating techniques – flow, dip, electrode position, web, coil
 - Touch up markers or marking pens
- Thermal spray operations using solid metallic or non-metallic materials

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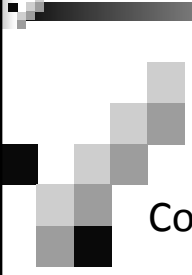
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Coatings Not Subject to Rule

- Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination
- Paper film or plastic film that may be pre-coated with adhesive
- Adhesives, sealants, maskants, or caulking materials
- Temporary protective coatings, lubricants, or surface preparation materials
- In-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts

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NESHAP Compliance Dates

When Do I Have to Comply?

- New sources by January 9, 2008 or whenever you start operating the new equipment, whichever is later

- Existing sources have until January 10, 2011

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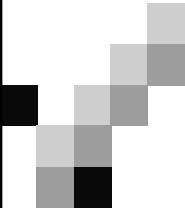
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New or Existing Source?

- New Sources
 - Began construction of source after September 17, 2007
 - Except for construction of new paint booths, enclosed spray gun cleaners, or spray guns to comply with the rule
 - Include any new affected equipment where the source was not previously engaged in the activity
 - Reconstructed
- Existing Sources = not new

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NESHAP Requirements

Operations Included

- Any one of the following:
 - Mixing rooms and equipment
 - Spray booths, ventilated prep stations, curing ovens and associated equipment
 - Spray guns and associated equipment
 - Spray gun cleaning equipment
 - Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- 1: Painters must be certified as completing training in proper spray application of surface coatings, setup and maintenance of spray equipment
 - Except students of accredited surface coating training program who are under the direct supervision of an instructor who is certified

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- 2: Spray-applied coatings must be applied in spray booth, preparation station, or mobile enclosure that meets a and either b, c or d:
 - a: Fitted with filter system demonstrated to have 98% collection efficiency, using vendor provided test data, or using water wash spray booths operated to manufacturer's specs

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

■ 2: Spray booths or prep stations

- b: Booths and prep stations for complete motor vehicles or mobile equipment must
 - Have full roof and four walls or side curtains, and operate and negative pressure; OR
 - Use downdraft booth operated at up to, but no more than, 0.05 inches w.g. positive pressure

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

■ 2: Spray booths or prep stations

- c: Booths or prep stations for miscellaneous coating or vehicle subassemblies
 - Have full roof, at least 3 complete walls or side curtains, and ventilated so air is drawn into the booth
 - Roof and walls may have openings for conveyors

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

■ 2: Mobile enclosures

- d: Mobile enclosures for spot repairs must enclose and seal against the surface being coated so that overspray is retained in enclosure and directed to the filter

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- 3: Spray-applied coatings must be applied with one of the following gun technologies:
 - High volume, low pressure (HVLP)
 - Electrostatic
 - Airless
 - Air-assisted airless
 - With written approval from Administrator, other spray technology demonstrated to achieve equivalent transfer efficiency

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- 4: Spray gun cleaning operation should prevent atomized mist or avoid spraying cleaning solvent and paint residue outside container used to collect waste solvent
 - Acceptable options include:
 - Hand cleaning of disassembled gun
 - Flush gun with solvent, without spraying
 - Use fully enclosed gun cleaner
 - Combination of non-atomizing methods

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- Train all personnel, including contractors, who spray apply coatings
 - Initial Training
 - New facility - within 180 days of hire date or July 7, 2008, whichever is later
 - Existing facility - within 180 days of hire date or January 10, 2011, whichever is later
 - Existing personnel can use training that took place up to five years prior to the "180 days" date, if it met elements of training program required in the rule
 - Refresher training, at least once every five years following initial training date

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- Training program must include:
 - Spray gun equipment selection, set up, and operation (measuring viscosity; selecting proper tip or nozzle; proper spray pattern, air pressure and volume, and fluid delivery rate)
 - Best spray technique for different types of coatings to improve transfer efficiency and minimize overspray (spray gun distance and angle to the part; proper banding and overlap; reducing lead and lag spraying)
 - Routine booth and filter maintenance, filter selection and installation
 - Compliance with requirements of the NESHAP

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Requirements for Motor Vehicle, Mobile Equipment and Misc Surface Coating

- Owner or operator must certify training of each person was completed
- Certification must include:
 - List of personnel who are required to be trained, with name and job description
 - Hands-on and classroom instruction, covering elements of training program at a minimum
 - Description of methods used at completion of initial or refresher training to demonstrate successful completion

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Recordkeeping

- Surface Coating
 - Painter training certification
 - Documentation of filter efficiency
 - Copies of all notifications and reports required
 - Records of any deviations from requirements in the rule, including date and time period it occurred, a description of deviation, and corrective actions taken
 - If spray gun does not meet definition of acceptable technologies and has cup capacity at least 3.0 oz, documentation from spray gun manufacturer that Administrator has determined equivalent transfer efficiency

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Notification and Reporting

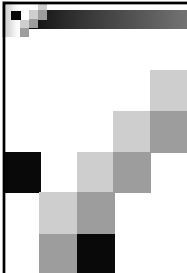
- **Initial Notification**
 - Existing sources must submit this notification by January 11, 2010
 - New sources must submit this notification no later than 180 days after initial startup or July 7, 2008, whichever is later
 - Initial Notification form can be found in the 6H Implementation Guide at:
http://www.iowadnr.gov/air/prof/NESHAP/files/HHHHHH_Guide.pdf

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Notification and Reporting

- **Notification of Compliance Status**
 - New sources must certify compliance at the same time they submit the initial notification
 - Existing sources may certify compliance in the initial notification; otherwise, a notification of compliance status must be submitted by March 11, 2011
 - The form referenced on the previous slide can also be used to fulfill this requirement
- **Annual Notification of Changes Report**
 - Sources must submit report annually prior to March 1 if any previously reported information changed during the previous year (for example, a change in ownership)

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**NESHAP
Adoption &
Implementation**

Iowa Permitting Programs

- **State-Wide Program**

 - Iowa Department of Natural Resources – Air Quality Bureau

- **Local Programs**

 - Polk County Public Works – Air Quality Division (Des Moines Area)

 - Linn County Public Health – Air Quality Division (Cedar Rapids Area)

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NESHAP Implementation

- The “Administrator” implements and enforces – means EPA or the State or local agency granted delegation
- Iowa DNR has taken delegation of 6H NESHAP and updated PBR requirements
- Rulemaking process was started in August 2008, and DNR took “official” delegation in February 2009
- Linn and Polk County will adopt rules after DNR
- EPA always retains joint authority for implementation and enforcement

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General Contact Information

- **NESHAP questions**

 - Diane Brockshus - DNR Air Quality Bureau
diane.brockshus@dnr.iowa.gov or 515-281-4801

 - Christine Paulson - DNR Air Quality Bureau
christine.paulson@dnr.iowa.gov or 515-242-5154

- **Permitting questions (not in Linn or Polk County)**

 - Sarah Piziali – DNR Air Quality Bureau
sarah.piziali@dnr.iowa.gov or 515-281-3762
or 1-877-AIR-IOWA (hotline)

- **Technical air assistance for small businesses**

 - Dan Nickey – UNI IAEAP
daniel.nickey@uni.edu or 319-273-6588

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Questions?

Thank you!

