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Summary of New Air Emissions Regulations and Requirements

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Overview

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- Why is this rule needed?
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  - for miscellaneous surface coating
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What is the new federal rule?

- In January 2008, the U.S. EPA published a new regulation that applies to certain surface coating operations.
- The official name of this rule is:

  National Emissions Standards for Hazardous Air Pollutants (NESHAP): Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources
- The rule is written in the federal system at 40 CFR Part 63, Subpart HHHHHH – so it is also known as "Subpart 6H"

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Why is this rule needed?

- The federal Clean Air Act (CAA) requires the EPA to reduce exposure to air toxics.
- These substances are also known as hazardous air pollutants (HAP). These substances are known or suspected to have harmful effects on human health or the environment.
- EPA is required to identify and list the industry categories that represent 90% of the emissions of urban air toxics.
- These are generally small to medium sized businesses, but are also large in number. Collectively, area sources may pose health risks.

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Why is this rule needed?

- Auto body refinishing and miscellaneous surface coating are two of the 70 listed categories.
- Data from paint suppliers has shown that coatings used in auto body and other surface coating operations may contain:
  - Lead or lead compounds
  - Chromium or chromium compounds
  - Cadmium or cadmium compounds
  - Manganese or manganese compounds
  - Nickel or nickel compounds
- In the Subpart 6H rule, these compounds are called Target HAPs.

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What are 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 based on the OSHA definition of carcinogen. Manganese is the only Target HAP covered by this rule that is not an OSHA-defined carcinogen.

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What is a Source?

- A source is any building, factory or other facility that discharges to the outside air any substance that is an air toxic or hazardous air pollutant.
- Some sources are large, such as an automobile assembly plant or utility generator. These are called major sources.
- Others are small, such as automobile refinish shops or other small operations that coat metal or plastic parts. These are grouped together by industry category and are called area sources.
- This rule is an area source rule, specific to three industrial categories.

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What sources are covered by this rule?

- Subpart 6H NESHAP covers operations that do any of the following:
  - Perform paint stripping operations using methylene chloride.

    (These operations will not be addressed in this presentation since AkzoNobel does not supply methylene chloride.)
  - Spray apply coatings to motor vehicle and mobile equipment (traditional refinish)
  - Perform spray application of coating that contains a target HAP to a plastic or metal substrate on a part or product.

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What sources are exempted under this rule?

- 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),
- Facility or building maintenance,
- 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.

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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 (refinish) that do not use Target HAP must petition the Administrator (EPA, state, or local program) for an exemption.

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Other Exemptions from the Rule

- Spray applied applications using a hand-held device with a cup capacity no more than 3.0 fluid ounces
- Powder coatings
- 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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Other Exemptions from the 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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Rule Requirements – Paint Stripping

- Minimize use of methylene chloride (MeCl) containing paint strippers.
  - Use non or low MeCl based paint strippers
  - Mechanical stripping
  - Blasting (wet or dry media)
  - Thermal and cryogenic decomposition
- Reduce exposure of MeCl paint strippers to air
- Optimize use conditions to minimize evaporation
- Practice proper storage and disposal
- Maintain records of annual usage

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Rule Requirements – Paint Stripping

Additional requirements for shops that use more than 1 ton per year MeCl.

- Develop a written MeCl minimization plan
- Post placcards/signs outlining the plan in area where paint stripping activities are performed
- Retain a copy of the plan on site
- Review the plan annually and update as needed

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Rule Requirements – Surface Coating

Spray Booths

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
- 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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Rule Requirements – Surface Coating

Spray Booths (continued)

- c: Booths or prep stations for coating of miscellaneous parts 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
- 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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Rule Requirements – Surface Coating

Spray Equipment

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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Rule Requirements – Surface Coating

Spray Gun Cleaning

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, or
  - Combination of non-atomizing methods.

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Rule Requirements – Surface Coating

Painter Training

Painters must be certified as trained in proper spray application of surface coatings, setup and maintenance of spray equipment.

- Equipment selection, set up, and operation including:
  - measuring viscosity,
  - selecting proper tip or nozzle,
  - proper spray pattern,
  - air pressure and volume, and
  - and fluid delivery rate.

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Rule Requirements – Surface Coating

Painter Training (cont.)

- Best spray technique for different types of coatings to improve transfer efficiency and minimize overspray including:
  - spray gun distance and angle to the part,
  - proper banding and overlap, and
  - reducing lead and lag spraying.
- Routine booth and filter maintenance, filter selection and installation.
- Compliance with requirements of the NESHAP.

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Rule Requirements – Surface Coating

Painter Training (cont.)

Each owner or operator must certify training of each person was completed. Training program 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, and
- Description of methods used at completion of initial or refresher training to demonstrate successful completion of training.

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Rule Requirements – Surface Coating

Painter Training (cont.)

Train all personnel, including contractors, who spray apply coatings.

- Initial Training - Existing personnel can use training that took place up to five years prior to the "180 days" date, if training met elements of training program required in the rule.
  - Existing facility - within 180 days of hire date or January 10, 2011, whichever is later
- Refresher training, at least once every five years following initial training date.

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Rule Requirements – Surface Coating

Training Certification

Owners who can show by:

- documentation or certification that a painter's work experience and/or training is
- equivalent to that required in the rule,

are not required to provide the initial training.

This method is allowed for the initial training only.

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Rule Requirements – Surface Coating

Recordkeeping

- 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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Important Compliance Dates

- Initial Notification – Existing sources must submit this notification by January 11, 2010
- Notification of Compliance Status
  - Existing sources may certify compliance in the initial notification;
  - Otherwise, a notification of compliance status must be submitted by March 11, 2011.
- Annual Notification of Changes Report - Sources must submit a report annually prior to March 1 of each year if any previously reported information changed during the previous year (for example, a change in ownership).

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Where can I get more information?

- AN Car Refinishes Regulatory Affairs Department
  - Diane Nash 248.637.8532
- EPA has a website for the collision repair industry
  - www.epa.gov/collisionrepair/
- Most states have a Small Business Assistance Office that can help businesses comply. At the link below, select the state to access more information.
  - www.smallbiz-enviroweb.org/Contacts/sbosbeap.aspx