IDEM’s Compliance & Technical Assistance Program (CTAP)

Automobile Refinishing

326 IAC 8-10
(Volatile Organic Compounds – VOCs)

40 CFR 63, Subpart HHHHHHHH (6H)
(Hazardous Air Pollutants – HAPs)

Mark Stoddard
Environmental Engineer

November 17, 2016
Clean Air Act Amendments of 1990

• Define area sources
• Establish list – Urban Air Toxics
  - 68 source categories
  - 30 of 187 hazardous air pollutants
  - Greatest threat to public health
  - In the largest number of urban areas
Not MACT, but GACT

• Generally Available Control Technology
• Commonly used technology & practices
Subpart 6H

- Paint Stripping
- Auto Body Refinishing
- Spray application of coatings to metal or plastic (*6H exempt if units subject to 6X*)
- Proposed initially September 17, 2007
- Federal rule correction February 13, 2008
6H HAP Reductions

- Cadmium, Chromium, Lead, Manganese, Nickel and Methylene Chloride
- Petition for **exemption** is an option
Environmental Results Project

• Region 5
• 2010 – 2013
  ➢ Measure baseline performance
  ➢ Develop self-certification checklist
  ➢ Indiana Auto Body Association presentations 2011 & 2013
  ➢ CTAP site visits
  ➢ EPA Region 5 inspections
  ➢ Final report September 2013
6H Exemptions

• 2 vehicles annually without compensation
• Armed Forces & military munitions
• Paint training center, *only training requirements*
• Research and laboratory
• Quality control
6H Exemptions by Definition

Coating does **not** include:

- Protective oils
- Adhesive
- Sealants, maskants or caulking
- Temporary or removable coatings for protection during fabrication & shipment
Also excluded

• Spray-applied coating using:
  - Paint cup capacity less than 3.0 fluid ounces or less (89 cubic centimeters)
  - Non-refillable aerosol cans
  - Thermal spray operations (Subpart 6W might apply)

• Surface coated/stripped parts that are not sold or moved off-site
3 ounce cup
Paint Manufacturers & Distributors

• Paint HAP
• Employee training
6H Surface Preparation Products

- Paint stripping using products containing Methylene Chloride must include a plan.
- The plan must:
  - Evaluate alternatives
  - Minimize evaporation
  - Minimize exposure
  - Ensure proper storage and disposal
- Written plan if usage is 150 gallons or more annually.
## SAFETY DATA SHEET

**Klean-Strip Aircraft Paint Remover**

Disorders; kidney, liver or pancreatic damage; insomnia; giddiness; and death. May cause additional symptoms listed under inhalation.

### Medical Conditions Generally
Diseases of the blood; skin; eyes; liver; kidneys; lungs; cardiovascular; pulmonary; and respiratory systems; alcoholism; and rhythm disorders of the heart.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-09-2</td>
<td>Dichloromethane  {Methylene chloride; R-30; Freon 30}</td>
<td>60.0 -100.0 %</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol  {Methyl alcohol; Carbinol; Wood alcohol}</td>
<td>5.0 -10.0 %</td>
</tr>
<tr>
<td>1336-21-6</td>
<td>Ammonium hydroxide  {Ammonia aqua; Ammonium liquor}</td>
<td>&lt; 5.0 %</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene (mixed isomers)  {Benzene, dimethyl-}</td>
<td>&lt; 5.0 %</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>Hydrotreated light distillate (petroleum)</td>
<td>&lt; 5.0 %</td>
</tr>
<tr>
<td>68132-50-3</td>
<td>Fatty acid soap</td>
<td>&lt; 5.0 %</td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene  {Ethylbenzol; Phenylethane}</td>
<td>&lt; 3.0 %</td>
</tr>
</tbody>
</table>

**Additional Chemical Information**
Specific percentage of composition is being withheld as a trade secret.
6H Permissible Spray Guns

- Electrostatic
- HVLP (High volume and low pressure)
- Airless
- Air assisted airless
6H Permissible Spray Guns

• HVLP equivalent
  – [www.epa.ohio.gov/dapc/regs/3745_21/hvlp_el ectro.aspx](http://www.epa.ohio.gov/dapc/regs/3745_21/hvlp_electro.aspx)
  – EPA approval letters, i.e., ANEST IWATA Supernova model WS400, January 15, 2013
Spray Gun Cleaning

• 8-10
  – Enclosed; optional ventilation of work space while adding or removing spray guns
  – Solvent recirculation
  – O&M manual

• 6H
  – Enclosed spray gun washer or
  – Cleaning without creating solvent mist
8-10/6H Written Training Program

- Can be provided by supplier or technical college
- Must include hands-on demonstration
6H Written Training Topics

• Spray gun selection and set up
  – Selection and set up
  – Usage
  – Maintenance

• Spray booth and filter maintenance

• Description of 6H requirements
8-10 Training

• May 1
• New employee or reassigned to this activity
  – Supervised by a trained employee
  – Training within 180 days
• Records
  – Date completed
  – List of persons, name & activity, and topics
  – Trainer certifies proficiency for each trainee
6H Training

• New employee or reassigned to this activity
  – Supervised by a trained employee
  – Training within 180 days

• Records for each technician
  – Date & location
  – Name and topics
  – Certificate of completion
6H Refresher Training

• Every 5 years
• For many, January 10, 2016, was the deadline
6H Reporting

• Initial notification
• Notification of compliance status – benefit of the ERP screening checklist
• Annual notification of changes report, if applicable, for changes in information previously submitted, prior to March 1
• Petition for exemption, optional
6H Record Keeping

• Initial notification
• Filter efficiency according to ASHRAE 52.1 (American Society of Heating, Refrigeration and Air Conditioning Engineers)
• “HVLP” stamped on the gun or other documentation
• Training certification for each employee
• Annual usage of paint strippers containing Methylene Chloride
Other 6H Requirements

• Spray booth
• Preparatory station – misc. parts & subassemblies
• Mobile enclosure
• Negative or positive pressure ventilation
• Dry filter system at least 98% efficient
• PM control required by 326 IAC 6-3-1 if coating application rate exceeds 5 gallons/day
Portable Prep Station
Portable Prep Station
Parts & Subassemblies
Fully Enclosed Positive Pressure

0.05 inches water gauge pressure or less
ERP Sampling Results

- Painting inside booth
- Ventilated enclosures
- 98% dry filters
- Completed training & records kept
- Records kept for MeCl usage
- Required notifications submitted
Areas for improvement

• Enhancing painter training
• Base rates of compliance were low
• Knowledge of coatings that contain HAP
• Communicating management practices where MeCl usage is very low
Region 5 complaint driven letters

• Form letter
• Mailed as recent as 2016
• Identifies where to seek assistance
• Identifies option to petition EPA for an exemption
How We Can Help

• Referrals
• Invitations
• Online - idem.IN.gov/ctap/2360.htm
• All of our services are free, voluntary & confidential
Internet Resources

Alternative Control Techniques Document: Automobile Refinishing, April 1994 -
www3.epa.gov/airquality/ctg_act/199404_voc_epa453_r-94-031_autobody_refinishing.pdf
Internet Resources

Reduction of Volatile Organic Compound Emissions from Automobile Refinishing, October 1988 -

www3.epa.gov/airquality/ctg_act/198810_voc_epa450_3-88-009_automobile_refinishing.pdf
Internet Resources

42 U. S. Code § 7412 - Hazardous air pollutants -
www.law.cornell.edu/uscode/text/42/7412
Internet Resources

• Paint Stripping & Miscellaneous Surface Coating Operations at Area Sources -
  www.epa.gov/stationary-sources-air-pollution/paint-stripping-and-miscellaneous-surface-coating-operations

• Collision Repair Campaign -
  www.epa.gov/collision-repair-campaign
Internet Resources

- Collision Repair/Auto Refinishing Shops - idem.IN.gov/ctap/2360.htm
- Autobody shop environmental compliance assistance - dnr.wi.gov/topic/SmallBusiness/Resources/AutoBodyShop.html
Internet Resources

Self-certification Checklist for Autobody Refinishing Shops -

idem.IN.gov/ctap/files/ctap_auto_collision_self-cert_checklist.doc
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