Updates Concerning Recent RTR Rulemakings Impacting Industrial Coating Operations
11/2019
HAP Regulations
(Hazardous Air Pollutants)
Industrial Surface Coating MACT Rules

- Rules apply to Major Sources of Hazardous Air Pollutants (HAPs)
- HAP limits for industrial surface coatings (shop applied or factory applied coatings)
- Major or source - coating application facilities that emit or have the potential to emit 10 tons per year of a single HAP or 25 tons combined HAP
- Hazardous Air Pollutants - 187 pollutants - [https://www.epa.gov/haps(initial-list-hazardous-air-pollutants-modifications](https://www.epa.gov/haps(initial-list-hazardous-air-pollutants-modifications)
- Commonly found in coatings: toluene, xylene, glycol ethers, methyl isobutyl ketone (MIBK), ethyl benzene, and methanol
- EPA promulgated Surface Coating MACT standards from 1995 - 2004
Surface Coating MACT Rules

- Shipbuilding and Repair (12/15/95)
- Wood Furniture MACT (12/7/95)
- Aerospace Coatings (9/1/95)
- Boat Manufacturing (8/22/01)
- Metal Coil (6/10/2002)
- Large Appliances (7/23/02)
- Paper and other Web (12/4/02)
- Fabric, Printing and Dyeing (5/29/03)
- Wood Building Products (5/28/03)
- Metal Furniture (5/23/03)
- Metal Can (11/13/03)
- Miscellaneous Metal Parts and Products (1/2/04)
- Automobile and Light Duty Truck (4/26/04)
- Plastic Parts and Products (4/19/04)
Residual Risk and Technology Review (RTR)

- **Clean Air Act**
  - EPA is required to review the promulgated MACT standards within 8 years to see if more stringent standards are needed
  - EPA missed review deadlines – “sue and settle” – court ordered deadlines

- **Residual Risk**
  - EPA completes a risk assessment of potential downwind receptors, could result in more stringent standards to reduce risk

- **Technology Review**
  - EPA also reviews advancements in control technology and if cost effective, can increase the stringency of the rule
  - EPA can also set additional MACT standards for sources currently not regulated or that were “exempted”
General RTR Trends

- In general, EPA has found the residual risk associated with the surface coating HAP limits to be protective and/or not cost effective to decrease the limits.
- EPA has not lowered the HAP limits.
- Wood Furniture - imposed 1% Formaldehyde limit.
- Aerospace - added 55 Specialty Coatings VOC limits (from Ventura County Air Quality Management District).
- Additional changes:
  - Prohibit the use of conventional spray guns in certain rules.
  - Increase add-on control monitoring, recordkeeping and recently retest every 5 years.
  - Removed Start-up, Shut-down and Malfunction provisions - facilities must now comply with standards at all times.
- Electronic submittals or reports, notifications.
- Remove reference to OSHA 0.1/1.0% - EPA include a table of HAPs that are potentially carcinogens.
Completed RTRs

- Shipbuilding and Repair 11/21/2011
- Wood Furniture 11/21/2011 (1% formaldehyde limit, prohibit conventional spray guns)
- Aerospace 12/7/2015 (added 55 Specialty Coatings categories and limits, high efficiency spray guns)
- Fabric, Printing and Dyeing 3/15/2019 (high efficiency spray guns)
- Large Appliance and Metal Furniture 3/15/2019
Proposed RTRs (must be promulgated by 9/19/2019)

- Metal Can and Metal Coil - proposed 6/4/2019
- Boat Manufacturing - proposed 5/17/2019
  - Spray gun training requirements
- Auto and Light Duty Truck; Miscellaneous Metal Parts; Plastic Parts - proposal 11/1/2019
- Paper and other Web - proposal 9/19/2019
VOC Regulations
Ozone Standard

- Nonattainment States will look for VOC reductions
- Lower VOC limits (AIM and \textit{factory applied coatings})
- More stringent coatings manufacturing facility permits
  - Solvent use restrictions (cleaning)
  - Process tank covers
  - Add-on controls
- More stringent \textit{coating application facility permits}
  - Expand applicability to smaller facilities
  - More stringent add-on control requirements
  - Solvent use restrictions (cleaning)
  - More efficient spray guns
EPA Control Technique Guidelines

- EPA issues Control Technology Guidelines (CTGs) in lieu of federal regulations to control VOC emissions from industrial surface coating application facilities.
- Typically based on South Coast Air Quality Management District (SCAQMD) and Bay Area Air Quality Management District (BAAQMD) rules.
- States that need additional emission reductions for their Ozone implementation plans adopt more stringent requirements:
  - Miscellaneous Metal and Plastic Parts
  - Auto and Light Duty Truck
  - Fiberglass Boats
  - Industrial Adhesives
  - Metal Furniture
  - Large Appliance
- Lower VOC Limits; work practices; more stringent control requirements.
- Recent state adoptions – DE, IL, (Chicago, Metro East), IN, OH, NH, CT, NC, GA, ME, UT, NY, MD, PA, Maricopa County, NJ, MA, VT
- More states will adopt CTG’s in the future.
South Coast Air Quality Management District (SCAQMD) 2016 Air Quality Management Plan

Rule 1168 Adhesives ( Adopted October 6, 2017)

Future Rulemakings:

- Rule 1106/Rule 1106.1 Marine Coating and Pleasure Craft
- Rule 1124 Aerospace
- Rule 1128 Paper, Fabric and Film
- Rule 1107 Metal Parts
- Rule 1136 Wood Product Coatings
- Rule 1171 Solvent Cleaning Operations
- **Remove exemptions, lower applicability, lower limits, add new VOC methods**
EPA Method 24 is the current test method to determine VOC content of coatings

Below 150 g/l – Method 24 can be problematic

SCAQMD added Method 313 and ASTM D6886 to the AIM Rule 1113, and Rule 1168

SCAQMD intends to add these methods to all Industrial Surface Coatings rules in the future

Method 313 Problem - “methyl palmitate VOC marker” - semivolatile compounds that would not be VOCs under Method 24 could be VOCs under Method 313

These test methods will spread to other districts and States - for example DC proposed to adopt in 2017

Consider testing your products - especially if you have coatings that are close to the limit, may want to run D6886 method with methyl palmitate added - since few labs run Method 313
EPA developed Industrial Solvent Cleaning Control Technique Guidelines (CTGs) back in 2006

Generally apply to facilities that have potential or actual emissions of 15 lbs. per day or three (3) tons or more of volatile organic compounds (VOCs) from industrial cleaning solvents, on a twelve-month rolling total basis

Require 50 g/l or maximum composite vapor pressure of eight (8) millimeters of mercury (mmHg) at 20 degrees Celsius

OH, IN, IL, MD, WI, DE, TX, MO, NC, VA, GA, UT, PA, NY