

New NESHAPs which may impact Shipyards

**NSRP - Environmental Panel Meeting
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Presentation Outline

- 1. Background on CAA NESHAP Program**
- 2. Reciprocating Internal Combustion Engines**
- 3. Boilers/Process Heaters**
- 4. Fiberglass Reinforced Plastic (FRP) Manufacturing**
- 5. Wood Furniture (Surface Coating)**
- 6. Metal Furniture (Surface Coating)**
- 7. Miscellaneous Metal Parts (Surface Coating)**
- 8. Summary**

NESHAP Program Background

- **CAA enacted in 1970**
- **Original NESHAPs (40 CFR Part 61)**
 - “risk-based” standards
 - pollutant specific
 - asbestos, radon, beryllium, benzene
- **EPA had to prove cancer risk first, then promulgate standards**
- **Long lengthy process (lab testing, etc.)**
- **EPA sued frequently by industry/trade groups**
- **Only 10-12 standards promulgated in 20 years**

NESHAP Program Background

- **1990 CAA Amendments**
- **New NESHAPs (40 CFR Part 63)**
 - known and/or suspected carcinogens
 - technology-based standards
 - industry/process specific (“source categories”)
- **Eliminates requirement for Agency to prove carcinogenicity (suspicion good enough)**
- **Greatly reduced number of lawsuits**
- **Approximately 180 standards in 15 years**
- **Original 10 year schedule**
- **Numerous standards promulgated “recently” (last 2-3 years)**

Reciprocating Internal Combustion Engines (RICE)

- **40 CFR Part 63, Subpart ZZZZ**
- **Applicability**
 - final rule issued 2/26/04
 - *stationary* RICE above 500 HP @ major sources
 - existing engines must comply within 3 years
 - new engines (built after 12/19/02) must comply within 6 months after startup

Reciprocating Internal Combustion Engines (RICE)

- **Pollutants: formaldehyde, acrolein, methanol, and acetaldehyde**
- **Control requirements**
 - existing and new 4SRB limited to 350 ppb formaldehyde
 - new 2SLB limited to 12 ppm CO
 - new 4SLB limited to 14 ppm formaldehyde
 - new CI engines limited to 580 ppb formaldehyde

Reciprocating Internal Combustion Engines (RICE)

- **Potential shipyard sources**
 - crane engines, air compressors, generators, water pumps,
 - provisions/exclusions included for *emergency use* and *limited use* (limits on annual hours of operation)
 - additional information
 - Sims Roy 919-541-5263
 - www.epa.gov

Boilers/Process Heaters

- **40 CFR Part 63, Subpart DDDDD**
- **Applicability**
 - final rule issued 9/13/04
 - boilers and process heaters @ major sources (subject to certain exemptions/exclusions)
 - existing units must comply within 3 years
 - new units (construction commenced after 1/13/03) must comply upon startup

Boilers/Process Heaters

- **Pollutants: hydrogen chloride (HCL), and the following seven HAP metals (arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium)**
- **Control requirements**
 - vary based upon fuel type (solid, liquid, gas)
 - vary based upon size (10 MMBTU/hr threshold)
 - different for new vs existing
 - example - New, Large, Gaseous Fuel Boiler must:
 - Control CO to 400 ppmv

Boilers/Process Heaters

- **Potential shipyard sources**
 - boilers, metal treatment furnaces, process heaters
 - provisions/exclusions included for *water heaters, temporary boilers, comfort heaters, space heaters, others*
- **Additional information**
 - Jim Eddinger 919-541-5426
 - www.epa.gov

Fiberglass Reinforced Plastic (FRP) Manufacturing

- **40 CFR 63, Subpart WWWW**
- **Applicability**
 - final rule issued 4/21/03
 - processes producing FRP composites from thermoset resins and/or gel coats which contain styrene
 - open molding, closed molding, other processes
 - mixing
 - cleanup
 - material storage
 - existing sources must comply within 3 years
 - new sources must comply upon startup

Fiberglass Reinforced Plastic (FRP) Manufacturing

- **Pollutants: styrene, other HAPS which may be present in cleanup solvents**
- **Control requirements**
 - material substitution (lower styrene content)
 - switching to newer less polluting processes (closed molding, non-atomized resin application)
 - work practice standards (keep containers, vats, tanks covered)
 - must NOT use HAP containing clean-up solvents
 - pollution control devices for certain large sources (>100 tpy total HAP emissions from FRP processes)

Fiberglass Reinforced Plastic (FRP) Manufacturing

- **Potential shipyard sources**
 - composite shops, carpentry shops, etc.
 - provisions/exclusions included for:
 - R&D facilities
 - facilities which only repair composites
 - facilities using less than 1.2 tons of styrene-containing materials per year
- **Additional information**
 - Keith Barnett 919-541-5605
 - www.epa.gov

Other Miscellaneous NESHAPS

- **Wood Furniture Surface Coating**
 - 40 CFR 63, Subpart JJ
 - frequently brought up by particular MDEQ compliance inspector during shipyard inspections
 - concept of *incidental* manufacturer (< 100 gallons/month usage)
- **Metal Furniture Surface Coating**
 - 40 CFR 63, Subpart RRRR
 - tell them we are subject to the Shipbuilding NESHAP
- **Miscellaneous Metal Parts and Products**
 - 40 CFR 63, Subpart RRRR
 - tell them we are subject to the Shipbuilding NESHAP

Summary

- Numerous shipyard processes generate HAPs
- Shipbuilding/Ship Repair NESHAP (40 CFR Part 63, Subpart II) not necessarily the end-all be-all
- *Major source* status already established for most yards
- Take a close look at all shipyard processes which generate HAPs
- Compare those processes to EPA's list of source categories
- Numerous new standards which may apply
- Do NOT panic
- There is probably still time to take action
- Additional information
 - EPA's OAQPS – Emission Standards Division
 - Sally Shaver, Director 919-541-5571
 - Penny Lassiter, Associate Director 919-541-0072