

Shipyard Regulatory Update

A presentation for the

NSRP Environmental Panel Meeting

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by

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Topics

- NESHAP Rulemakings
 - Boiler NESHAP
 - Surface Coatings NESHAP
 - Shipyard welding and blasting NESHAP
- Vessel General Permit
- CERCLA liability

Boiler NESHAPs

- 3/21/11 – EPA publishes Final Rules regulating Industrial, Commercial and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD)
 - One rule for Major Sources (> 10 TPY of single HAP or 25 TPY of all HAPs)
 - THIS RULE IS CURRENTLY STAYED PENDING RECONSIDERATION
 - One rule for Area Sources
 - THIS RULE IS EFFECTIVE – Check compliance dates

Boiler NESHAPs

Major Source Rule

- Exempt Boilers & Heaters
 - Hot water heater - < 120 gal capacity
 - Waste heat boiler
 - Autoclaves or process heaters that are used to provide comfort heat, space heat, or food preparation for on-site consumption.
 - Electric utility steam generating unit > 25 megawatts producing electricity for sale
 - Boilers subject to other NESHAP standards
 - Boilers that are used as control devices for other NESHAP-regulated equipment
 - Research and Development boilers
 - Temporary boilers
 - A recovery boiler or furnace covered by 40 CFR part 63 subpart MM
 - A refining kettle covered by 40 CFR part 63 subpart X
 - An ethylene cracking furnace
 - Blast furnaces

Boiler NESHAPs

Major Source Rule

- 15 types of boilers and process heaters – different requirements for each type
 - (a) Pulverized coal/solid fossil fuel units.
 - (b) Stokers designed to burn coal/solid fossil fuel.
 - (c) Fluidized bed units designed to burn coal/solid fossil fuel.
 - (d) Stokers designed to burn biomass/bio-based solid.
 - (e) Fluidized bed units designed to burn biomass/bio-based solid.
 - (f) Suspension burners/Dutch Ovens designed to burn biomass/bio-based solid.
 - (g) Fuel Cells designed to burn biomass/bio-based solid.
 - (h) Hybrid suspension/grate burners designed to burn biomass/bio-based solid.
 - (i) Units designed to burn solid fuel.
 - (j) Units designed to burn liquid fuel.
 - (k) Units designed to burn liquid fuel in non-continental States or territories.
 - (l) Units designed to burn natural gas, refinery gas or other gas 1 fuels.
 - (m) Units designed to burn gas 2 (other) gases.
 - (n) Metal process furnaces.
 - (o) Limited-use boilers and process heaters.
- Boilers burning solid waste are subject to separate rule

Boiler NESHAPs

Major Source Rule

- Rule establishes “Work Practice Standard” in lieu of emission limits for:
 - Natural gas fired units.
 - Units with heat input < 10 MBTU
 - “Limited Use” boilers
- Numeric emissions limits for all other existing and new boilers
 - Table 1 to Subpart DDDDD of Part 63 (76 Fed Reg 15687)

Boiler NESHAPs

Major Source Rule

- Initial Notification to EPA Required
- Monitoring requirements
 - Particle emissions (surrogate for lead & chromium)
 - Oxygen
 - Pollution controls performance monitoring
- Facility required to conduct an Energy Assessment

Boiler NESHAPs

Area Source Rule

- Exempt Boilers
 - Hot water heater - < 120 gal capacity
 - Gas-fired boilers
 - Boilers subject to other NESHAP standards
 - Boilers that are used as control devices for other NESHAP-regulated equipment
 - Research and Development boilers
 - Boilers subject to CAA Sec. 129 (commercial/industrial solid waste incineration units)

Boiler NESHAPs

Area Source Rule

- Covered boilers – those that burn coal, oil, biomass or other non-waste materials.
 - Boilers burning gaseous fuels or solid waste are not subject to Rule.
- Different Rules for large vs small boilers (> 10MBTU heat input capacity)
- Rules regulate emissions of mercury, particulates (surrogate for metals) and CO (surrogate for organic air toxics)

Boiler NESHAPs

Area Source Rule

- New Boilers

Type Boiler	Regulated Emissions
Large coal-fired boilers	Hg, PM, CO
Large biomass & oil-fired boilers	PM
Small boilers	Maintenance requirements

- Existing Boilers

Type Boiler	Regulated Emissions
Large coal-fired boilers	Hg, CO
Large biomass & oil-fired boilers Small coal fired boilers	No emission limits; work practice/maintenance standards
All facilities with boilers	Conduct energy assessment

Boiler NESHAPs Area Source Rule

- Compliance Dates

Type Boiler	Date Compliance is Required
New source	March 21, 2011 or upon startup
Existing boiler subject to work practice/maintenance standard	March 21, 2012
Existing boiler subject to emission standards or energy assessment requirement	March 21, 2014

Shipyard (Surface Coatings) MACT Rule

- Background
 - 1995 Final Rule (amended 6/18/96, 12/17/96)
 - Codified at 40 CFR 63.780
 - 2/27/07 – reopened public comment
 - 2008 Sierra Club v. EPA litigation
 - Required EPA to prepare RR&T Evaluation
 - 12/21/10 – Proposed Rule – Residual Risk & Technology Evaluation
- Residual Risk & Technology Review being conducted by EPA
 - Required every 8 years under CAA 112(d)(6)
 - To be completed by Oct 2011

Shipyard (Surface Coatings) MACT Rule

- Basic MACT Requirements - 40 CFR 63.780
 - Develop Implementation Plan –
 - Include coating compliance procedures; recordkeeping procedures; and transfer, handling and storage procedures.
 - Adhere to Emission Limits
 - No coatings may exceed the VOHAP content limit
 - Establish Work Practices
 - Minimize spills
 - Container and piping integrity
 - Keep Records – for 5 years
 - Submit Reports - every 6 months

Shipyard (Surface Coatings) MACT Rule RR&T Assessment Methodology

- Steps
 - Establishing the Nature and Magnitude of Actual Emissions and Identifying the Emissions Release Characteristics
 - Based on 2002 and 2005 NEI data from 85 facilities
 - Establishing the Relationship Between Actual Emissions and MACT–Allowable Emissions Levels
 - Conducting Dispersion Modeling, Determining Inhalation Exposures, and Estimating Individual and Population Inhalation Risks
 - Conducting Multi-Pathway Exposure and Risk Modeling
 - Conducting Other Risk-Related Analyses, Including Facility-Wide Assessments and Demographic Analyses
 - Considering Uncertainties in Risk Assessment

Shipyard (Surface Coatings) MACT Rule

Proposed Decisions

- Findings

- 4,000 people exposed to a cancer risk greater than 1-in-1 million due to emissions from the source category.
- 392,000 people exposed to an estimated cancer risk greater than 1-in-1 million due to facility-wide emissions.
- EPA concerned about facility-wide emissions

Shipyard (Surface Coatings) MACT Rule

Proposed Decisions

- Conclusions
 - Risks posed by MACT-compliant emissions are acceptable with adequate margin of safety
 - Not necessary to revise current MACT standards to require lower VOHAP coatings.
 - Propose to eliminate Startup, Shutdown & Malfunction (SSM) exemption in MACT standard
 - Add a requirement for performance tests.
 - Revise SSM-related recordkeeping
 - Add an affirmative defense to civil penalties for exceedances caused by malfunctions

Shipyard MACT Standards

- EPA Proposing to list welding and blasting operations at shipbuilding and ship repair facilities as separate major source category
 - Proposed Rule likely to come out in 2012.

6X Rule

40 CFR Part 63, Subpart XXXXXX

- Not applicable to shipyards and ship repair facilities in NAICS 663311
- Regulated activities
 - **Dry abrasive blasting**
 - **Welding**
 - Dry machining
 - Dry grinding and dry polishing with machines
 - Spray painting

Subpart 6X Abrasive Blasting Operations Standards and Management Practices

(1) Small totally-enclosed unvented blast chambers

- Management practices to minimize emissions
 - Minimize dust generation during emptying of abrasive blasting enclosures
 - Operate all dry abrasive blasting operations according to manufacturers instructions

(2) Products in chambers in vented enclosures

- Capture emissions and vent to filtration control device
- Management practices to minimize emissions
 - Minimize excess dust, as practicable
 - Enclose dusty abrasive material storage areas and holding bins, seal chutes, and conveyors that transport abrasive materials
 - Operate all dry abrasive blasting operations according to manufacturers instructions

Subpart 6X Abrasive Blasting Operations Standards and Management Practices

- (3) Objects greater than 8 feet and products not vented to a control device
- Management practices to minimize emissions
 - Minimize excess dust, as practicable
 - Enclose dusty abrasive material storage areas and holding bins, seal chutes, and conveyors that transport abrasive materials
 - Operate all dry abrasive blasting operations according to manufacturers instructions
 - Do not reuse blasting media unless contaminants have been removed and the blast media returns to its original size
 - Switch from high PM-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), whenever practicable
 - Visible emission monitoring (Method 22) in graduated schedule (Daily/Weekly/Monthly/Quarterly)

Subpart 6X Welding Standards and Management Practices

- Two welding categories:
 - Use $<2,000$ lb welding rod or wire*
 - Management practices only
 - Use $\geq 2,000$ lb welding rod or wire*
 - Management practices
 - Monitoring for visible emissions (VE) or opacity $\leq 20\%$ in graduated schedule (Daily/Weekly/Monthly/Quarterly)
 - 3-Tier compliance monitoring

* MFHAP-containing at levels 0.1/1% of metal.

Subpart 6X Welding Standards and Management Practices

- Management practices, as practicable to the type of welding/product, while maintaining required welding quality using sound engineering judgment
 - Use welding processes with reduced fume generation capabilities (*e.g.*, Gas metal arc welding (GMAW))
 - Use welding process variations (*e.g.*, pulsed GMAW, which can reduce fume generation rates)
 - Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation
 - Optimize welding process variables (*e.g.*, electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated
 - Use of fume capture and control system

Vessel General Permit

- Vessel General Permit (VGP) under NPDES issued 12/18/2008 – expires 12/19/2013
- Regulates
 - Ballast water discharges
 - Deck runoff and washdown
 - Graywater discharges
 - Bilgewater discharges

Vessel General Permit

- Environmental groups & Michigan challenged VGP
- 3/8/11 Settlement reached requiring EPA to study:
 - Numeric technology-based effluent limits for ballast water
 - Whether technology-based limits can meet state WQS
- Settlement requires EPA to:
 - Publish draft new VGP by 11/30/2011.
 - Issue new VGP by 11/30/2012
 - Express new WQ-based effluent limits for ballast water as numeric limits unless EPA determines such are “infeasible to calculate”
 - EPA cannot determine that numeric limits for both WQ-based and technology-based are infeasible – must have numeric limits in new VGP

Vessel General Permit

- Settlement requires EPA to request public comment on following numeric limits for ballast water:
 - No detectable living organism > 50 micrometers (μm) in min. dimension;
 - Less than .01 living organisms / ml that are between 10 μm and 50 μm in minimum dimension
 - For organisms < 10 μm in min. dimension, limits on concentrations of microbes per 100 ml of bacteria

CERCLA Update

- Hallmarks of CERCLA liability
 - Liable parties
 - Current Owners or operators of facility
 - Owner or operator at time of disposal of hazardous substance
 - Transporter who selected facility for disposal
 - Persons who arranged for disposal of hazardous substance (“Arranger liability”)
 - Retroactive Liability
 - Joint and Several Liability
 - Deep pockets pay more
 - Solvent parties pay for “orphan share”
- “Arranger” liability had been broadly applied

CERCLA Update

- Burlington Northern v. US – 2009 Supreme Court decision
 - 2 significant holdings:
 - In order to prove “arranger” liability under CERCLA, must prove an “intent to dispose” of hazardous substances.
 - “Joint and several” liability will not apply where there is a “reasonable basis to apportion liability”

CERCLA Update

- Intent as an element of arranger liability
 - “ ... [T]here does not need to be a specific intent that the substance end up in a landfill or in water; what matters is that the party had an intent to dispose of or discard the [hazardous substance].”
 - “knowledge alone” of leaks or discharges is not enough.
- Recent 2010 and 2011 decisions have followed this principle and relieved parties of liability where “intent to dispose” was not proved.
 - Sales of chemicals
 - Sale of “useful products” containing hazardous substances

CERCLA Update

- Apportioning Liability – possible factors
 - Time
 - Geography
 - Relative volume
 - Relative mass
 - Nature and extent of operations
 - Distinct harms
- Defendant has burden of proving divisibility of harm and ground for apportionment
- Courts so far have not routinely discarded joint and several liability in favor of divisibility
 - Defendants have a heavy burden to prove divisibility of harm