

US EPA ARCHIVE DOCUMENT

Clean Air Act Requirements Impacting Hospitals

U.S. Environmental Protection Agency
Region II



CAA Regulations Impacting Hospitals

- Title V Operating Permit/State Air Permits
- Boilers
- Asbestos
- Air conditioning and refrigeration
- Risk Management Plans
- Medical Waste Incinerators
- Other (spray paint booths, degreasers)



Title V State Operating Permits

- Applies to major sources
 - NO_x 100 TPY, VOC 50 TPY, SO₂ 100 TPY, CO 100 TPY, PM/PM₁₀ 100 TPY, HAPs 10/25 TPY
 - NYC Metropolitan Area and Philadelphia Metropolitan Area: Nox/VOC 25 TPY
- Five year permits
- Must address all emission points at facility
- Fees based on tons of emissions

Title V Permits



- Compliance Issues:
 - Annual Compliance Certifications not being sent to EPA (only the State) and many are incomplete
 - certify compliance for each individual term or condition (continuous or intermittent)
 - identify monitoring method(s) and other means used
 - Failure to submit timely Title V permit applications



Failure to Obtain Title V Permit

- \$15,000 (Doctor's Office on Staten Island)
- \$39,000 (Staten Island Hospital)
- \$46,000 (NY Presbyterian Hospital)

Boilers

- New Source Performance Standards (NSPS) for SO_2 , NO_x and PM: 40 CFR Part 60: Subpart Db or DC
- Specific Regulations Depend on:
 - Size of Unit (MMBTU/hr)
 - Date of Construction/Modification/Reconstruction



“Larger” Boilers - Subpart Db

- Construction, Modification, or Reconstruction After June 19, 1984
- Design Heat Input Capacity Greater than 29 MW (100 million BTU/hr)



“Small” Boilers - Subpart Dc

- Construction, Modification, or Reconstruction after June 8, 1989
- Design Heat Input Capacity:
 - > or = 2.9 MW (10 million BTU/hr) and
 - < 29 MW (100 million BTU/hr)



Boilers

- Emission Standards for Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_x) and Particulate Matter (PM)
 - Type of Fuel (coal, coal refuse, oil, wood)
 - Heat Capacity of Unit
- Opacity Limit of 20% for Boilers that have a design heat input capacity greater than 30 million BTU/hr



Boilers

- Performance Testing
- Emissions Monitoring for Nox, SO₂ and Opacity
- Recordkeeping and Reporting



Boilers



- Compliance Issues:
 - Reporting Inadequacies
 - Failure to Monitor Fuel for Sulfur Content
 - Opacity Monitors Not Installed/Not Working
 - Exceed Allowable Steam Production
 - Failure to Obtain Permits for Emergency Generators



Non-compliance with NSPS

- Puerto Rico Medical Center
 - 2 boilers; Subpart Dc; fired on No. 6 Fuel Oil
 - One boiler was a new boiler, second one was reconstructed.
 - Did not install opacity monitor; did not performance test; did not monitor sulfur content on an as fed basis.
 - Settled for \$ 175,000

Non-Compliance with NSPS

- Maimonides Medical Center in Brooklyn
 - Installed a 50 MMBTU/HR boiler without completing a new source review analysis and failed to comply with the notification and performance testing requirements of the NSPS.
 - Settled for \$35,000 with NYSDEC

Asbestos

- National Emission Standard for Hazardous Air Pollutant (NESHAP) 40 CFR Part 61, Subpart M
- Work Practices to Reduce Release During Demolition or Renovation
- Regulated Asbestos-Containing Material (RACM) Includes Friable and Non-Friable Forms



Asbestos

- One must notify EPA and the State that you are removing asbestos if the area being renovated ≥ 160 sq. feet (260 Linear Feet or 35 Cu. Ft)
- One must notify EPA of all demolition jobs regardless if there is asbestos or not.



Asbestos Notification Includes:

- Description of facility
- Name of facility owner
- Name of Asbestos Contractor
- Start/End Dates
- Description of how the waste is being disposed of and by whom;



Asbestos

- You must have a licensed contractor to remove the asbestos and each person working for the contractor must have individual asbestos certifications.
- Must keep documentation that all asbestos waste has been properly disposed of



Asbestos



- Compliance Issues:
 - Inventory
 - Work Practices / Management Issues
 - Notification / Reporting
 - Documentation / Recordkeeping
 - Training



Air Conditioning and Refrigeration

- Regulations found at 40 CFR Part 82 Subpart B for motor vehicle air conditioners and 40 CFR Part 82 Subpart F for other air conditioning and refrigeration equipment.
- Minimize releases of refrigerants into the environment during the servicing and disposal of air conditioning and refrigeration equipment
- No requirement to phase-out the use of ozone-depleting refrigerants only their production/importation.



Air Conditioning and Refrigeration

- Technician Certification
- Certified Recovery/Recycling Equipment
- Sales Restrictions
- Recordkeeping

Air Conditioning and Refrigeration

- Leak Repair is only required for equipment with more than 50 lbs of refrigerant and the following annual leak rates are exceeded:
 - 35% for commercial (cold storage) or industrial process refrigeration
 - 15% for other appliances (air conditioners, refrigerators, chillers, or freezers)



Ozone-Depleting Substances

- Leak Repairs --must be completed within 30 days to ensure leak rate is below the above criteria, unless plan to retrofit/retire the piece of equipment.
- Retrofit or Retirement Plans
 - Must be filed within 30 days, and sources have up to 1 year to replace/retrofit unit
 - keep dated copy of plan on-site



Air Conditioning and Refrigeration



- Compliance Issues:

- Proper Recovery/Recycling Equipment and Personnel
- Equipment with more than 50 lbs of refrigerant



Risk Management Plan Goals

- “.....is to prevent accidental releases of substances that can cause serious harm to the public and the environment from short-term exposures and to mitigate the severity of releases that do occur.”

Risk Management Plans

- Section 112(r) Reinforces EPCRA Provisions; Regulations at 40 CFR Part 68 Subpart G.
- Affected Facilities Submit Risk Management Plan by June 21, 1999
- Applicability Depends on Storage Thresholds for 140 Regulated Substances
 - 500 - 20,000 lbs. for Acutely Toxic
 - 10,000 lbs. for Flammables



RMPs....

- May affect Hospitals if they
 - Have refrigeration systems that have more than 10,000 pounds of ammonia
 - Have disinfecting systems that use more than 2,500 pounds of chlorine



Medical Waste Incinerators

- New Emissions Standards: September 15, 1997
 - Mercury, Lead, Cadmium
 - Sulfur Dioxide, Hydrogen Chloride, Nitrogen Oxides, Carbon Monoxide, Dioxins
 - PM, Opacity, Fugitive Fly Ash/Bottom Ash



Incinerators

- New Sources (Built after 6/20/96)
 - initial compliance test by 3/16/98 or 180 days after start up
 - Standards located: 40 CFR Part 60 Subpart Ec
- Existing Sources (Built before 6/20/96)
 - Within 1 year of approval of State Plan (New York approved August 1999, Puerto Rico approved July 2002)
 - Federal Plan Published in Federal Register on 8/15/00 (effective date 9/14/00) -- See 40 CFR Part 62 Subpart HHH



Incinerators

- Three Size Classes:

(Based on Max. Design Charge Rate per Hour or per Day):

- “Large” > 500 lbs/hr *or* 4,000 lbs/day
- “Medium” > 200 and 500 lbs/hr *or* 1,600-4,000 lbs/day
- “Small” < 200 lbs/hr *or* 1,600 lbs/day or less

- Small Rural Incinerators Criteria

- > 50 Miles from Standard Metropolitan Statistical Area
- < 2000 lb/wk



Incinerators

- Monitoring & Reporting
- Operator Training & Qualifications
- Waste Management Plans
- Inspections for Existing Incinerators (small, rural)
- Siting Restrictions for New Incinerators



Incinerators



- Compliance Issues:
 - CEM and COM
 - Stack Testing
 - Monitoring, Recordkeeping and Reporting
 - Synthetic Minor / Title V Issues



End

- Questions ???
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