

RULE PROPOSAL  
STANDARDS OF PERFORMANCE FOR NEW  
STATIONARY SOURCES AND EMISSION  
GUIDELINES FOR EXISTING SOURCES:  
SEWAGE SLUDGE INCINERATION UNITS

Amy Hambrick, staff contact

919-541-0964

[hambrick.amy@epa.gov](mailto:hambrick.amy@epa.gov)

EPA Office of Air Quality Planning & Standards

Sector Policy & Programs Division/Natural Resource & Commerce Group

# Purpose

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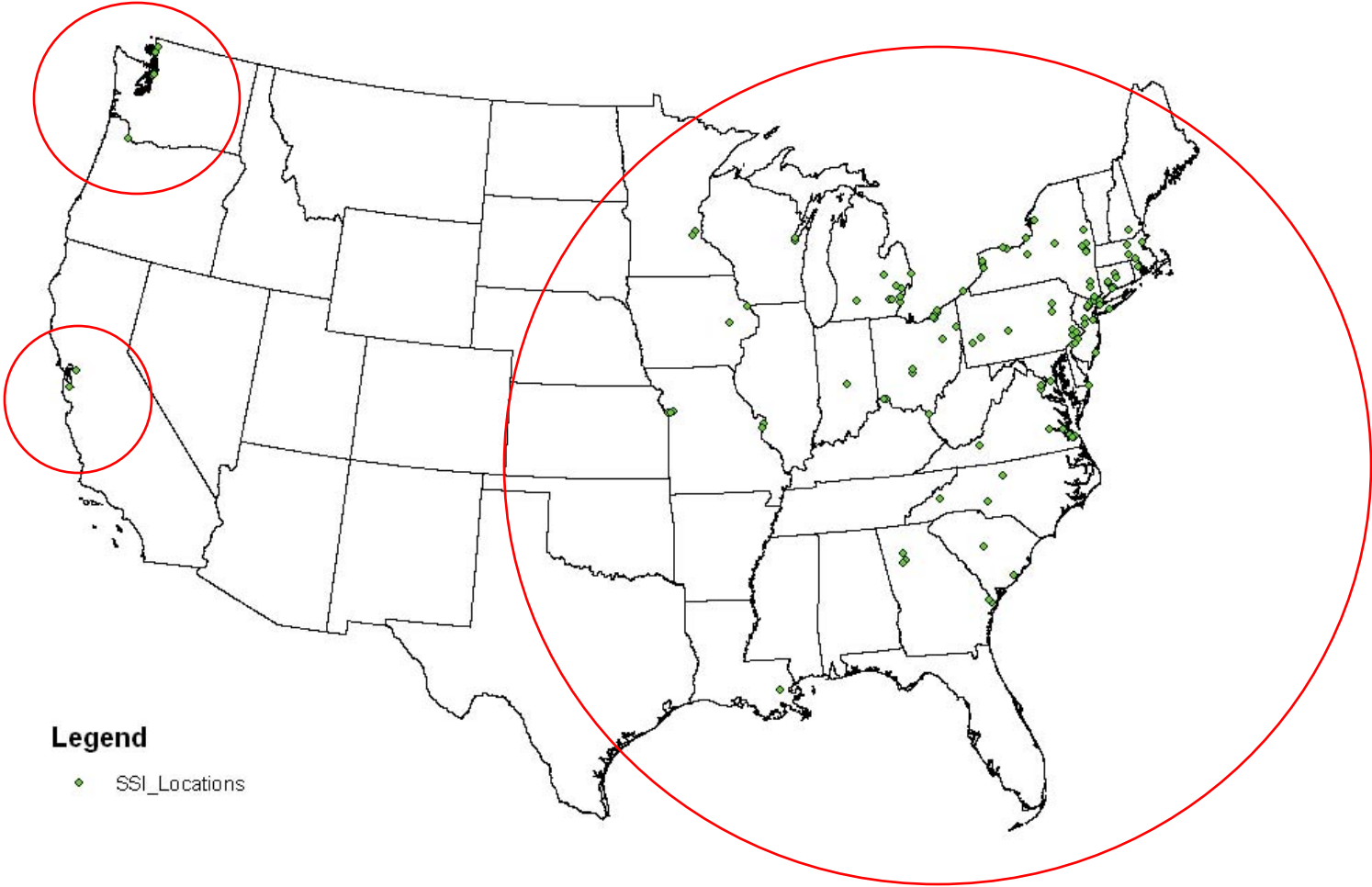
- To provide a summary of the proposed rules
- Highlight key issues we are particularly requesting comment on
- Highlight how to comment
- Answer clarifying questions on the proposal
- Note: this is not a forum to take comment

# Summary: Background

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- June 4, 2010 OSWER proposes new definition of solid waste
  - Sewage Sludge is a solid waste
  - SSI will be regulated under CAA section 129
    - SSI was separated from the Other Solid Waste Incinerator rule (OSWI)
    - Section 112(k)(3)(B)(ii) and 112(c)(3), Urban air toxics
  
- SSI units are also regulated under the Clean Water Act (CWA) part 503 risk based standards
  
- 218 units owned by 97 entities in 24 states across the U.S and Puerto Rico
  - Majority are publicly owned municipalities
  - 0, Indian Country
  - Regions, all but R8
  
- Types of Units
  - 55 Fluidized Bed (FB)
  - 163 Multiple Hearth (MH)

# Summary: Current SSI Locations



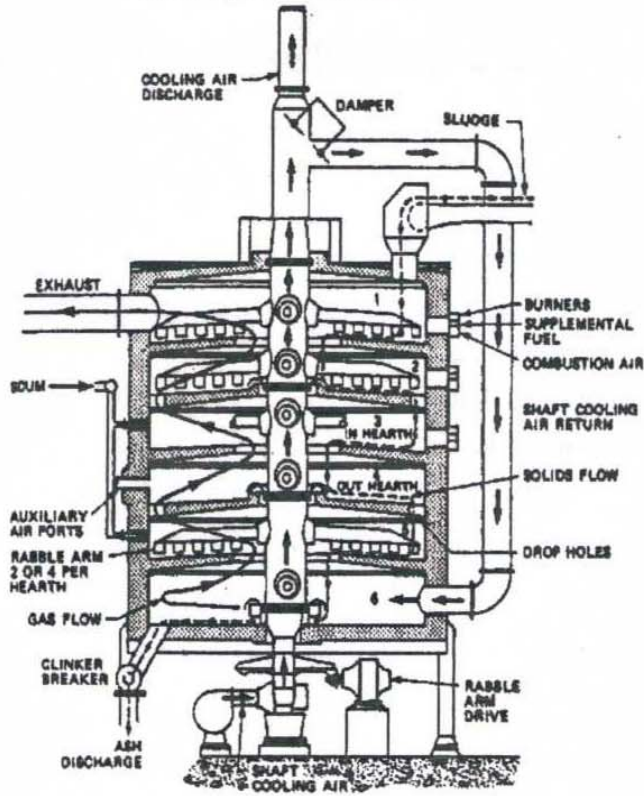
\*Map does not show: AK, PR

# Summary:

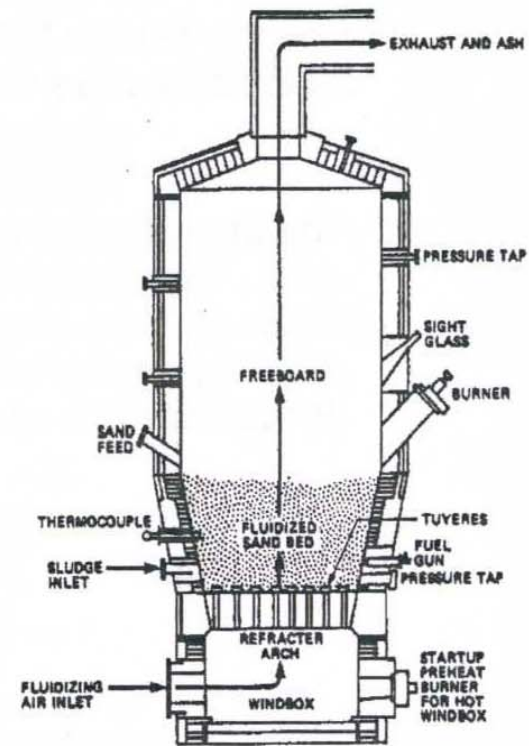
## Unit Types (Proposed Subcategories)

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### Multiple Hearth



### Fluidized Bed



# Summary: Proposed Standards

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- Recommended subcategories
  - Multiple Hearth (MH)
  - Fluidized Bed (FB)
  
- Proposed limits for 9 regulated pollutants for each subcategory including existing and new sources
  - Cadmium (Cd), Carbon Monoxide (CO), Dioxin/Furans (CDD/CDF TMB and TEQ), Hydrogen Chloride (HCl), Lead (Pb), Mercury (Hg), Oxides of Nitrogen (NO<sub>x</sub>), Particulate Matter (PM), Sulfur Dioxide (SO<sub>2</sub>), and Opacity
  
- No work practice standards
  
- No size distinctions (Area vs. Major)
  
- Maximum Achievable Control Technology (MACT) Floors
  - Existing Sources: Based on average emission limitations achieved by the best performing 12% of existing sources
  - New Sources: Based on emission limitations from the best controlled similar source
  - No work practice standards
  
- Technology: fabric filter (metals, PM), packed bed scrubber (acid gases), activated carbon injection (Hg, CDD/CDF)
  
- Beyond the floor emissions limits for mercury (Hg) for existing MH units

# Summary: Proposed Emission Limits

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Pollutant	Normalized Units (7% O <sub>2</sub> )	Existing Units		New Units	
		MH	FB	MH	FB
Cadmium (Cd)	mg/dscm	0.095	0.0019	0.00051	0.00051
Carbon Monoxide (CO)	ppmvd	3900	56	7.4	7.4
Dioxin/ Furans (D/F TMB)	ng/dscm	5.0	0.61	0.024	0.024
Dioxin/ Furans (D/F TEQ)	ng/dscm	0.32	0.056	0.0022	0.0022
Hydrogen Chloride (HCl)	ppmvd	1.0	0.49	0.12	0.12
Lead (Pb)	mg/dscm	0.30	0.0098	0.00053	0.00053
Mercury (Hg)	mg/dscm	0.02	0.0033	0.0010	0.0010
Oxides of Nitrogen (NO <sub>x</sub> )	ppmvd	210	63	26	26
Particulate Matter	mg/dscm	80	12	4.1	4.1
Sulfur Dioxide (SO <sub>2</sub> )	ppmvd	26	22	2.0	2.0
Opacity	%	10	0	0	0

# Summary: Proposed Testing, Monitoring, Record Keeping, and Reporting

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- Testing
  - Initial compliance tests
  - Annual performance tests or continuous emissions monitoring system (CEMS)
    - Allowance for less frequent testing (criteria)
  
- Monitoring
  - Process parameters (opacity, control calibration and monitoring, leak detection pressure drop, etc.)
  
- Recording Keeping and Reporting
  - Annual report
  - Deviation report
  - Qualified operator status report
  
- Continuous Compliance
  - Demonstrated by maintaining operating limits (process parameters)
  - Annual pollution control device inspections (self inspect)



# Summary: How are the Proposed EG Standards Implemented & Enforced?

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- EG are implemented and enforced through either
  - EPA-approved state plan ; or
  - Promulgated federal plan
  
- EPA-approved state plan
  - States are required to submit a plan to EPA no later than 1 year after EPA promulgates the EG
  - Must be as protective as the EG
  - Must be effective no later than 3 years after the state plan is approved or 5 years after the EG are promulgated, whichever is earlier
  
- EPA's procedures for submitting and approving state plans are set forth in 40 CFR part 60, subpart B
  - When a state plan is approved by EPA, the plan requirements become federally enforceable, but the state has primary responsibility for implementing and enforcing the plan
  
- Federal Plan
  - EPA is required to develop, implement, and enforce a federal plan for solid waste incineration units located in any state which has not submitted an approvable state plan within 2 years after the date of promulgation of the relevant EG
  - The federal plan must assure that each solid waste incineration unit subject to the federal plan is in compliance with all provisions of the EG not later than 5 years after the date the relevant guidelines are promulgated
  - EPA views the federal plan as a “place-holder” that remains in effect only until such time as a state without an approved plan submits and receives EPA approval of its state plan
  - Once an applicable state plan has been approved, the requirements of the federal plan no longer apply to solid waste incineration units covered by that state plan

# Highlight: EPA Requests Comments

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- EPA requests comments on many aspects of the proposal, notably the following:
  - Subcategories
    - Other combustor designs plus associated emissions data
  - Floor and beyond-the-floor analysis with associated cost analysis
    - Cost, technical, and other relevant information in support of any floor and beyond-the-floor alternatives
    - Variability analysis
  - Monitoring
    - Whether continuous monitoring of CO emissions should be required for all existing SSI
    - Appropriateness of using multi-metals CEMS instead of initial performance tests, coupled with PM CEMS and other surrogates
    - On an alternate initial accuracy determination procedure
    - Use of previously conducted performance tests
    - Ash handling
    - 4-hour rolling average time for compliance tests
    - Comply by monitoring sludge content
    - Need for a waste management plan
  - Impacts
    - Other potential impacts not considered by the proposed SSI standards
  - Other
    - Possible space constraints that would affect the feasibility and cost of installing air pollution control devices

# Highlight: How To Comment

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- Web: <http://www.regulations.gov>
  - Follow the on-line instructions for submitting comments for EPA-HQ-OAR-2009-0559
  
- E-mail
  - Send your comments via electronic mail to [a-and-r-Docket@epa.gov](mailto:a-and-r-Docket@epa.gov), Attention Docket ID No. EPA-HQ-OAR-2009-0559
  
- Facsimile
  - Fax your comments to (202) 566-9744, Attention Docket ID No. EPA-HQ-OAR-2009-0559.
  
- Mail
  - EPA Docket Center (EPA/DC), Environmental Protection Agency, Mailcode 6102T, 1200 Pennsylvania Ave., NW, Washington, DC 20460, Attention Docket ID No. EPA-HQ-OAR-2009-0559. Please include a total of two copies. We request that a separate copy also be sent to Amy Hambrick (919-541-0964)
  
- Hand Delivery
  - EPA Docket Center (EPA/DC), EPA West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC, 20460, Attention Docket ID No. EPA-HQ-OAR-2009-0559. Such deliveries are accepted only during the normal hours of operation (8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays) and special arrangements should be made for deliveries of boxed information.

# Schedule

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- Public Comment Period
  - ▣ October 14, 2010 to November 29, 2010
  
- Public Hearing at EPA (RTP, NC)
  - ▣ October 29, 2010
  - ▣ Contact Joan C. Rogers for scheduling questions
    - 919-541-4487
    - [rogers.joanc@epa.gov](mailto:rogers.joanc@epa.gov)
  
- Final Action (Court-Ordered)
  - ▣ January 14, 2011

# Further Information

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- Amy Hambrick
  - 919-541-0964
  - [hambrick.amy@epa.gov](mailto:hambrick.amy@epa.gov)
  
- Website
  - <http://www.epa.gov/ttn/atw/129/ssi/ssipg.html>

# Appendix A: CAA Section 129 vs. CWA Part 503

	129 Technology Based	503 Risk Based (1:10,000)
Numerical Emissions Limits	PM, <b>CO</b> , D/F, SO <sub>2</sub> , NO <sub>x</sub> , HCl, <b>Pb, Hg, Cd</b> , opacity	Be, <b>Hg</b> , THC or <b>CO</b>
Performance Based Numerical Emissions Limits (varies by unit)		As, <b>Cd</b> , Cr, Ni, <b>Pb</b>
Testing	<ul style="list-style-type: none"> <li>○ Initial</li> <li>○ Annual or CEMS w/ RATA</li> <li>○ 3 years allowance then less frequent</li> <li>○ Quarterly visible ash test</li> </ul>	<ul style="list-style-type: none"> <li>○ Initial unit performance base</li> <li>○ Quarterly- annual sludge content (prior to incineration)</li> <li>○ 2 years allowance then less frequent</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>○ Annual or CEMS w/ RATA</li> <li>○ Continuous for process parameters</li> </ul>	<ul style="list-style-type: none"> <li>○ CEMS for THC or alternative CO, O<sub>2</sub>, moisture content in stack, temperature</li> <li>○ Process parameters</li> </ul>
Record Keeping	<ul style="list-style-type: none"> <li>○ Maintain for 5 years</li> </ul>	<ul style="list-style-type: none"> <li>○ Maintain for 5 years</li> </ul>
Reporting	<ul style="list-style-type: none"> <li>○ Annual</li> <li>○ Deviation</li> <li>○ Qualified operator status</li> </ul>	<ul style="list-style-type: none"> <li>○ Annual</li> </ul>