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

- 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

- 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

Legend
- SSI Locations

*Map does not show: AK, PR
Summary:
Unit Types (Proposed Subcategories)
Summary: Proposed Standards

- **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\(_x\)), Particulate Matter (PM), Sulfur Dioxide (SO\(_2\)), 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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Normalized Units (7% O2)</th>
<th>Existing Units</th>
<th>New Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MH</td>
<td>FB</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>mg/dscm</td>
<td>0.095</td>
<td>0.0019</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>ppmvd</td>
<td>3900</td>
<td>56</td>
</tr>
<tr>
<td>Dioxin/ Furans (D/F TMB)</td>
<td>ng/dscm</td>
<td>5.0</td>
<td>0.61</td>
</tr>
<tr>
<td>Dioxin/ Furans (D/F TEQ)</td>
<td>ng/dscm</td>
<td>0.32</td>
<td>0.056</td>
</tr>
<tr>
<td>Hydrogen Chloride (HCl)</td>
<td>ppmvd</td>
<td>1.0</td>
<td>0.49</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>mg/dscm</td>
<td>0.30</td>
<td>0.0098</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>mg/dscm</td>
<td>0.02</td>
<td>0.0033</td>
</tr>
<tr>
<td>Oxides of Nitrogen (NOx)</td>
<td>ppmvd</td>
<td>210</td>
<td>63</td>
</tr>
<tr>
<td>Particulate Matter</td>
<td>mg/dscm</td>
<td>80</td>
<td>12</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>ppmvd</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Opacity</td>
<td>%</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>
Summary: Proposed
Testing, Monitoring, Record Keeping, and Reporting

- **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?

- 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
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

- 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, 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

- 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

- Final Action (Court-Ordered)
  - January 14, 2011
Further Information

- Amy Hambrick
  - 919-541-0964
  - hambrick.amy@epa.gov

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

<table>
<thead>
<tr>
<th></th>
<th>129 Technology Based</th>
<th>503 Risk Based (1:10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical Emissions Limits</td>
<td>PM, CO, D/F, SO(_2), NO(_x), HCl, Pb, Hg, Cd, opacity</td>
<td>Be, Hg, THC or CO</td>
</tr>
<tr>
<td>Performance Based Numerical Emissions Limits (varies by unit)</td>
<td></td>
<td>As, Cd, Cr, Ni, Pb</td>
</tr>
<tr>
<td>Testing</td>
<td>o Initial</td>
<td>o Initial unit performance base</td>
</tr>
<tr>
<td></td>
<td>o Annual or CEMS w/ RATA</td>
<td>o Quarterly- annual sludge content (prior to incineration)</td>
</tr>
<tr>
<td></td>
<td>o 3 years allowance then less frequent</td>
<td>o 2 years allowance then less frequent</td>
</tr>
<tr>
<td></td>
<td>o Quarterly visible ash test</td>
<td></td>
</tr>
<tr>
<td>Monitoring</td>
<td>o Annual or CEMS w/ RATA</td>
<td>o CEMS for THC or alternative CO, O(_2), moisture content in stack, temperature</td>
</tr>
<tr>
<td></td>
<td>o Continuous for process parameters</td>
<td>o Process parameters</td>
</tr>
<tr>
<td>Record Keeping</td>
<td>o Maintain for 5 years</td>
<td>o Maintain for 5 years</td>
</tr>
<tr>
<td>Reporting</td>
<td>o Annual</td>
<td>o Annual</td>
</tr>
<tr>
<td></td>
<td>o Deviation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Qualified operator status</td>
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