



Regulatory Update: Sewage Sludge Incinerator (SSI) Emissions Guidelines

SIPRAC

February 9, 2012

Requirements

Operator training and qualification

Performance testing

- Initial compliance
- Annual testing
- CT: Annual stack testing since 2001

Operating limits – site specific

Monitoring

Recordkeeping & reporting

Numeric emissions limits

Title V permit

- Only 1 SSI facility – the Metropolitan District (MDC)
– has a Title V permit (#075-0246)

Emissions Limits for Existing SSI

| Pollutant | Units | Emission Limit for MH Incinerators | Emission Limit for FB Incinerators |
|---|-----------------------------|---|---|
| Cd | mg/dscm @ 7% O ₂ | 0.095 | 0.0016 |
| PCDD/PCDF, TEQ ¹ | ng/dscm @ 7% O ₂ | 0.32 | 0.10 |
| PCDD/PCDF, TMB ¹ | ng/dscm @ 7% O ₂ | 5.0 | 1.2 |
| CO | ppmvd @ 7% O ₂ | 3,800 | 34 |
| HCl | ppmvd @ 7% O ₂ | 1.2 | 0.51 |
| Hg | mg/dscm @ 7% O ₂ | 0.28 | 0.037 |
| NOx | ppmvd @ 7% O ₂ | 220 | 150 |
| Pb | mg/dscm @ 7% O ₂ | 0.30 | 0.0074 |
| PM | mg/dscm @ 7% O ₂ | 80 | 18 |
| SO ₂ | ppmvd @ 7% O ₂ | 26 | 15 |
| Note 1: CDD/CDF = Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans, TEQ = Toxic Equivalency, TMB = Total Mass Basis | | | |

The limits apply at all times, including start-up, shut-down and malfunction

Existing SSI & Installed Controls

| | NSR Permit Number | SSI Type | Venturi/Impingement Tray Scrubber | Electrostatic Precipitator | Thermal Oxidation | On-Hearth Afterburner | Flue Gas Recirculation | Carbon Canister |
|----------------------------------|-------------------|-----------|-----------------------------------|----------------------------|-------------------|-----------------------|------------------------|-----------------|
| Mattabasset - Cromwell | 043-0007 | FB | ✓ | | | | | ✓ |
| Synagro Waterbury | 192-0140 | FB | ✓ | ✓ | | | | |
| Synagro New Haven | 117-0035 | MH | ✓ | ✓ | ✓ | | | |
| Veolia Waters - Naugatuck | 109-0081 | FB | ✓ | ✓ | | | | |
| MDC 1 – Hartford* | 075-0006 | MH | ✓ | | | ✓ | ✓ | |
| MDC 2 – Hartford* | 075-0007 | MH | ✓ | | | ✓ | ✓ | |
| MDC 3 – Hartford* | 075-0008 | MH | ✓ | | | ✓ | ✓ | |
| West Haven | 203-0014 | FB | ✓ | | | | | |

- Only 2 of the 3 MDC SSI may operate at any time

Next Steps

Emissions guidelines (CAA §129) do not apply directly to source owners/operators:

- DEEP or EPA must adopt a mechanism to control SSI emissions at a level at least as stringent as the emissions guidelines

Options DEEP is considering:

- Adopting a regulation and a state plan
- Accepting delegation of EPA's federal plan

Compliance dates:

- No later than 3 years from the date of approval of a state plan or March 21, 2016, whichever is sooner