



Maryland
Department of
the Environment

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Request for Delegation of Authority to Implement and Enforce the Federal Plan Requirements for Sewage Sludge Incinerators (SSI) Constructed on or Before October 14, 2010

ARMA Planning and Regulation Development Division
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I. Background

EPA is required to develop and adopt new source performance standards (NSPS) and emission guidelines (EG) for solid waste incineration units pursuant to the Clean Air Act (CAA) Sections 111 and 129. New sources (NSPS program) are regulated under Sections 111(b) and 129(a) of the CAA. Existing sources are regulated under Sections 111(d) and 129(b) of the CAA. The NSPS are directly enforceable Federal regulations, and under CAA Section 129(f)(1) become effective 6 months after promulgation. Under CAA Section 129(f)(2), the EG become effective and enforceable as expeditiously as practicable after EPA approves a State plan implementing the EG but no later than 3 years after such approval or 5 years after the date the EG are promulgated, whichever is earlier.

On March 21, 2011 EPA promulgated NSPS and EG for sewage sludge incinerator (SSI) units located at wastewater treatment facilities designed to treat domestic sewage sludge codified at 40 CFR part 60, subparts LLLL and MMMM, respectively. The EG became effective on May 20, 2011. These final rules set limits for nine pollutants under section 129 of the CAA: Cadmium (Cd), carbon monoxide (CO), hydrogen chloride (HCl), lead (Pb), mercury (Hg), nitrogen oxides (NOX), particulate matter (PM), polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDDs/ PCDFs), and sulfur dioxide (SO₂). The EG became effective on May 20, 2011.

Section 129 of the CAA calls upon states as the preferred implementers of the EG for existing SSI units. EPA's Federal Plan Requirements for Sewage Sludge Incineration Units Constructed on or Before October 14, 2010, 40 CFR 62, were published on April 29, 2016 and became effective on May 31, 2016. The SSI federal plan has emission standards, visible emissions limit for ash handling operations, requirements for annual inspections of emissions control devices, annual testing, monitoring, recordkeeping, and reporting requirements, procedures for test data submittal to EPA, schedule for compliance with the federal plan, Title V permit provisions, delegation of authority provisions.

Sewage sludge consists of solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incineration unit or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

SSI units are enclosed incinerators located at a wastewater treatment facility which

combust domestic sewage sludge for the purpose of reducing the volume of material by removing the combustible matter.

EPA has estimated a total emissions reduction of the regulated pollutants as follows: Acid gases (i.e., HCl and SO₂), about 450 tons per year (TPY); PM about 58 TPY; non-Hg metals (i.e., Pb and Cd) about 1.7 TPY; and Hg about 4 pounds per year. EPA also estimated that air pollution control devices installed to comply with the 2011 rule would also effectively reduce emissions of pollutants such as 7-polycyclic aromatic hydrocarbons, chromium, manganese, nickel, and polychlorinated biphenyls.

Maryland has one SSI facility. The Department is requesting full delegation of authority to implement the Federal Plan Requirements for SSI units.

II. Implementation of NSPS

COMAR 26.11.01 already incorporates all NSPS by reference. No further modification is required to make the SSI standards and requirements applicable to new sources within Maryland.

III. Implementation of the Emission Guidelines

A. General

The Maryland Department of the Environment (MDE) requests full delegation of authority to implement the “Federal Plan Requirements for Sewage Sludge Incinerators (SSI) Constructed On or Before October 14, 2010. This Federal Plan is in accordance with the requirements of Sections 111(d) and 129 of the Clean Air Act.

The delegation request includes demonstration that MDE has adequate resources and legal authority to administer and enforce the SSI Federal Plan (FP) promulgated on 04/29/2016. The submittal includes an emissions inventory of existing affected facilities in Maryland. The public hearing certification including notice published in the Maryland Register concerning the proposed delegation request and the public hearing shall also be provided. A Memorandum of Agreement shall be developed with EPA Region III upon receipt of this delegation request.

This request satisfies the requirements of 129(f)(3), which prohibits a plant from operating if it does not comply with the standard. The Department will notify the source that they are subject to the provisions of FP for SSI. The Department will track the schedule of submittals. Affected source must also comply with any other applicable Title V operating permit requirements promulgated under 40 CFR Part 70 which Maryland implements and has demonstrated the adequacy of resources.

B. The request for delegation includes the following:

1. Inventory of Affected Incineration Units

Name of Source

There is only one affected source in Maryland. The Western Branch Wastewater Treatment Plant (WWTP) is owned and operated by the Washington Suburban Sanitary Commission (WSSC). The plant treats primarily domestic wastewater and has a design capacity of 30.6 million gallons per day (gpd). It uses activated sludge process to treat the wastewater. The liquid treatment processes include high rate activated sludge (HRAS) treatment, 1st stage clarification, nitrification, 2nd stage clarification, denitrification, nitrogen stripping, final clarification, filtration, ultraviolet disinfection and aeration.

The plant has two (2) multiple hearth incinerators each equipped with a flue gas recycle system, venturi scrubber, wet electrostatic precipitator (WESP) and regenerative thermal oxidizer (RTO). The WESPs and RTOs are new additions replacing two previously existing afterburners, which were removed from each of the units. The final product from the solids handling processes is the ash resulting from the incineration of the dewatered sludge cake. This ash is transported to a local landfill.

2. Inventory of Emissions from Affected Incineration Units

The following table lists the rates and emissions from sources.

WSSC Western Branch Wastewater Treatment Plant (WWTP) 2009 Emissions

Emission		Emission Total	Annual
Year	Pollutant	(lb/day)	Emission (tpy)
2009	Acrylonitrile	.640000	.062880
2009	Arsenic (and Compounds)	.008400	.000833
2009	CO (Carbon Monoxide)	52.570000	3.788890
2009	Cadmium (and Compounds)	.042000	.004048
2009	Carbon Dioxide	36,516.270000	1,727.822125
2009	Chloroform	1.220000	.217595
2009	Dibenzofuran	.000038	.000004
2009	Lead	.084000	.008410
2009	Mercury (and Compounds)	.000000	.000000
2009	Methane	129.810000	11.850100
2009	Nitrogen Oxides	212.150000	12.528800
2009	Nitrous Oxide	.361000	.035603
2009	PM Condensables	3.240000	.295565

2009	PM10 (Particulate Matter - Filterable)	6.450000	.373490
2009	PM2.5 (Particulate Matter - Filterable)	3.640000	.332510
2009	PT (Particulate Matter)	46.910000	4.066085
2009	Sulfur Oxides (SOx)	11.120000	1.014825
2009	VOC (Volatile Organic Compounds)	11.110000	1.220700
2009	Vinyl Chloride	.142000	.013952

3. Public Hearing Requirements

Certification that a hearing on the delegation request was held, a list of witnesses and a summary of their comments will be provided. Records will be maintained for a minimum of 2 years and the record shall contain, as a minimum, a list of witnesses together with the text of each presentation in accordance with 40 C.F.R. §60.23(e). Public notice also will meet requirements of 40 C.F.R §60.23(d)(1)-(5).

This document has been made available for public review through posting at the Department's website. A hearing is scheduled for December 14, 2016.

4. Progress Reports to EPA

The Department will submit to EPA on an annual basis a report that meets the requirements of 40 C.F.R §60.25(e) and (f). The first progress report will be submitted to EPA one year after the EPA approval of the delegation request.

5. Demonstration of Adequate Resources

The Department has adequate resources and authority to administer the Federal Plan Requirements for Sewage Sludge Incineration Units Constructed on or Before October 14, 40 CFR 62. Title V Permits are issued to 119 sources in Maryland with the help of 22 employees including technical, administrative and support staff in Permits Program and inspected by Compliance Program with a staff of 39 employees.

6. Demonstration of the Department's Legal Authority

Under 40 CFR §60.26(a) Legal authority, MDE is required to demonstrate that it has authorities for the following:

- (1) adopt emission standards and compliance schedules applicable to designated facilities;
- (2) enforce applicable laws, regulations, standards and compliance schedules and seek injunctive relief;

- (3) obtain information necessary to determine whether designated facilities are in compliance with applicable laws, regulations, standards, and compliance schedules, including authority to require recordkeeping and to make inspections and conduct tests of designated facilities;
- (4) require owners or operators of designated facilities to install, maintain, and use emission monitoring devices and to make periodic reports to the State on the nature and amounts of emissions from such facilities; also authority for the State to make such data available to the public as reported and as correlated with applicable emission standards.

MDE has the authority to adopt and enforce regulations to implement this Plan.

Title 2 of the Environment Article, Annotated Code of Maryland, Section 2-103 assigns jurisdiction over emissions into the air to the Department. Section 2-301 authorizes the Department to adopt regulations for the control of air pollution in the State.

Under Environment Article, Title 2, Annotated Code of Maryland; COMAR 26.11.02 and .03, the Department has sufficient statutory and regulatory authority under its installation permit and operating permit programs to implement the Plan. The Department is authorized to revise any permit to incorporate applicable standards and regulations promulgated under the CAA after issuance of such permit.

Title 2 of the Environment Article, Annotated Code of Maryland, Section 2-602 authorizes the Department to issue enforcement orders to aid in the enforcement of the provisions or its implementing regulations. Such orders may include orders to cease unlawful activities and to take corrective action. The Department also has the authority for modifying, suspending, terminating, or revoking an installation permit or operating permit under Environment Article, §2-601 et seq., Annotated Code of Maryland, COMAR 26.11.02.05. In accordance with COMAR 26.11.02.13, no SSI unit is allowed to operate in Maryland without an operating permit. Thus, this requirement satisfies the requirements of 129(f)(3), which prohibits a plant from operating if it does not comply with the standards and requirements.

7. Memorandum of Agreement

The MDE commits to enter into a Memorandum of Agreement with the EPA Regional Administrator who sets forth the terms, conditions and effective date of the delegation and that serves as the mechanism for the transfer of authority, in accordance with 40 CFR § 62.14401.