



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
INTERNATIONAL ACTIVITIES

November 6, 2000

Ms. Janine Ferretti
Executive Director
Secretariat
Commission for Environmental Cooperation
393, rue St-Jacques Ouest, Bureau 200
Montreal, Quebec
Canada, H2Y 1N9

Dear Ms. Ferretti:

This letter is in response to the Secretariat's request dated March 24, 2000 for additional information under Article 21(1)(b) of the North American Agreement on Environmental Cooperation (NAAEC) regarding the submission from Department of the Planet Earth et al. (SEM-98-003).

Attached you will find information about the Municipal Waste Combustors and Hospital/Medical/Infectious Waste Incinerators. The documents attached complement the information we submitted at the end of July about new municipal waste combustors (MWCs) and new hospital/medical/infectious waste incinerators (HMIWIs).

If you have any questions about this response, please contact Dr. Ana Corado of my staff at (202) 564-0140.

Sincerely,

(original signed)
William A. Nitze
Assistant Administrator

Enclosures

Great Lakes—Party's response Article 21(1)(b)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20004

ENFORCEMENT AND COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Final Response to the Commission for Environmental Cooperation Relating to the Compliance Status of Existing Hospital/Medical/Infectious Waste Incinerators and Municipal Waste Combustors with Respect to Dioxin/Furan and Mercury Emissions

FROM: James R. Edward, Director
Chemical, Commercial Services & Municipal Division
Office of Compliance

TO: William A. Nitze, Assistant Administrator
for International Activities

The Office of Compliance appreciates the opportunity to provide the final response to the Secretariat of the Commission for Environmental Cooperation's March 24, 2000, letter to you requesting additional information concerning how the United States Environmental Protection Agency (EPA) determines compliance for municipal waste combustors (MWCs) and hospital/medical/infectious waste incinerators (HMIWIs). This memorandum responds to the Secretariat's questions about existing large MWCs and existing HMIWIs. An earlier interim response provided information requested by the Secretariat on the compliance status of new large MWCs and new HMIWIs. The focus of both memoranda has been on the pollutants dioxins/furan and mercury, as these are the pollutants of concern in Submission on Enforcement Matters 98-003.¹

¹All dioxin and furan compounds, of which there are many, are "related" to each other in that they are all chlorinated benzene ring chemicals. Since dioxin and furan compounds are related, they are

Statutory Background

The United States Congress determined that the primary responsibility for air pollution prevention and control rests with the individual states, territories, and federally-recognized Indian tribes (“states”). As such the states have primary responsibilities for implementing, determining compliance with, and enforcing regulations under the Clean Air Act (CAA). For existing solid waste incinerators, sections 111 and 129 of the CAA, as amended, require EPA to establish “emission guidelines” for existing MWCs and existing HMIWIs. The CAA requires states with existing MWCs and HMIWIs to develop “State plans” for EPA approval to implement and enforce EPA’s emission guidelines. If states fail to develop approvable plans, EPA must develop, implement, and enforce Federal plans applicable to the MWC and HMIWI facilities in those states. State plans and the Federal plans must contain compliance schedules for MWCs and HMIWIs with compliance dates to ensure that the regulations are implemented in a reasonable time. If the compliance dates extend more than one year beyond the approval date of a State plan or Federal plan, then legally enforceable increments of progress (“increments”) toward compliance are required. Increments are designed to enable EPA, states, and affected MWCs and HMIWIs to track and ensure progress toward the applicable final compliance date. At a minimum, affected facilities must meet the following increments: (1) submit a final control plan; (2) award contracts for equipment; (3) begin onsite construction; (4) complete on-site construction; and (5) achieve final compliance (i.e., the final compliance date).

By the final compliance date, each existing large MWC and existing HMIWI must have the required air pollution control equipment installed and operating. Within 180 days of the final compliance date, each HMIWI and MWC must conduct an initial performance test to demonstrate that the emission limitations, including reductions in dioxins and mercury emissions, are achieved. EPA reviews and validates the performance test for compliance with the Federal plan, likewise the state for its State plan. Most existing large MWCs and HMIWIs do not have to come into compliance with the regulations, including the dioxins and mercury emissions limits, until their respective final compliance dates of December 19, 2000 and September 15, 2002. There are a few MWCs and HMIWIs that are subject to an earlier final compliance date as established by a state or subject to an earlier final compliance date that are discussed below.

often referred to as “dioxin/furans.” EPA has adopted a convention of referring to “dioxin/furans” as “dioxins,” and this memorandum also uses this convention.

After validating the initial performance test and confirming compliance, EPA and the state monitor for continued compliance through periodic performance tests, inspections, review of submitted reports, and/or compliance certifications from facilities. EPA and the state may use various factors in determining the frequency at which a facility is inspected. Some possible factors that EPA and states may consider are compliance history, density of other pollution sources, facility location, and monitoring equipment.

The CAA authorizes EPA, states, and citizens to enforce the emission guidelines and the enforceable provisions of the Federal plan or applicable State plan whenever violations occur, including violations of emission limits and monitoring requirements. When noncompliance occurs, EPA files civil administrative or judicial actions to enforce the regulations in accordance with the EPA *Clean Air Act Stationary Source Civil Penalty Policy*. Federal enforcement could involve, depending on the severity of the noncompliance, issuing a Finding of Violation, Administrative Compliance Order, Administrative Penalty Order, or a civil-judicial referral to the United States Department of Justice (DOJ). A Finding of Violation is commonly issued along with an Administrative Compliance Order to ensure that a violator returns to compliance. The Compliance Order may specify a compliance deadline that is different from the regulatory one and EPA could pursue a penalty for the period of noncompliance between the regulatory compliance deadline and the actual compliance date. The penalty for non-compliance is up to \$27,500 per day per violation. The CAA also authorizes states with an approved State plan to file civil administrative and judicial actions whenever violations occur. States may also file civil administrative and judicial actions under other applicable state laws. In addition, any person may commence a civil action when a violation of the CAA occurs. Citizen suits may be filed only after EPA, the affected state, and the alleged violator are provided prior notice and when neither EPA nor the state have commenced and is diligently prosecuting a civil action for the noncompliance. Finally, EPA and DOJ could pursue a criminal enforcement action for certain “knowing” violations of the CAA, including knowing violations of the emission guidelines and making false material statements. Criminal actions may also be filed for certain “negligent” violations of the CAA, including negligent emissions of listed and unlisted hazardous air pollutants. States could also pursue a criminal enforcement action if a violation qualifies as a criminal activity.

Large Municipal Waste Combustors

The *Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994*, 40 C.F.R. Part 60, Subpart Cb, was promulgated on December 19, 1995 (60 Fed. Reg. 65387) (EG Subpart Cb). Because of litigation, EPA re-proposed the portion of the emission guidelines that pertain to small MWCs on August 30, 1999 (64 Fed. Reg. 47233). The EPA Administrator signed the final emission guidelines for small MWCs on November 3, 2000. The emission guidelines for small MWCs will be published in the *Federal Register* in the upcoming weeks and available on the Internet at www.epa.gov/ttn/caaa. As a

result, our response to the Commission for Environmental Cooperation (CEC) concerning existing MWCs is limited to large MWCs and does not address small MWCs.

EPA has made various efforts to promote compliance among large MWCs under EG Subpart Cb. Since promulgating EG Subpart Cb, EPA headquarters and regional offices have held monthly conference calls to address concerns with implementing this regulation and to track the progress of the states and the large MWC facilities. In addition, EPA regional offices have worked with the states as they developed their State plans. EPA and the states have also worked with the MWCs on how to meet the requirements outlined in the State plans or the Federal plan.

EPA has approved State plans for large MWCs in fourteen states and for one local agency. (Attachment, Table 1). Large MWCs in nine other states are subject to the Federal plan, which was published on November 12, 1998 (63 Fed. Reg. 63191). (Attachment, Table 2). Thirty states declared that no MWCs will operate in their jurisdiction as of December 19, 2000 and submitted a “negative declaration” to EPA. (Attachment, Table 3). As such, these states are not required to submit a State plan to EPA.

EPA continues to collect information from states on the inspection and compliance status of the one hundred sixty-three existing large MWC units subject to EG Subpart Cb at sixty-five MWC plants. The vast majority of these units are currently being retrofitted, or have completed their retrofit, to ensure compliance on or before the final compliance date of December 19, 2000. Over two-thirds of the large MWCs are subject to the final compliance date of December 19, 2000. The remaining large MWCs are subject to a final compliance date before December 19, 2000. The final compliance dates of individual MWCs are part of an approved State plan or the Federal plan. An earlier final compliance date is required in EG Subpart Cb for existing MWCs constructed after June 26, 1986. In addition, a state and an MWC may negotiate final compliance date before December 19, 2000 if the facility is relatively new and had already installed some of the pollution control equipment necessary to meet the emission limitations required by EG Subpart Cb. Under those circumstances, the appropriate control technology is already in place and the MWC would need less time to complete additional retrofits to ensure compliance.

EPA and the states monitor the large MWCs to ensure that they remain in compliance with the applicable approved plan. Large MWCs must conduct an annual performance test for dioxins and mercury emissions. Those MWCs also must submit an annual report, which includes a list of dioxins and mercury emissions levels achieved during the most recent performance tests. Continuous monitoring is also required for a number of parameters (surrogates) to ensure that dioxins and mercury emissions remain below the emission limitations and that air pollution control equipment is operated at the same high-efficiency levels determined during the annual performance test. One group of these parameters is measured during the annual performance test and the levels measured during the test “self-define” the level that cannot be exceeded during the subsequent MWC operation without leading to a

violation of the regulation and possible enforcement action. The other group of parameters must be monitored continuously and also cannot be exceeded without leading to a violation. Finally, MWCs are required to maintain records, e.g., performance test results, concerning compliance information with applicable dioxins and mercury emission limits, or parameters. EPA and states can review the records during their periodic inspections.

As of September 1, 2000, EPA has determined that final compliance dates are already in effect for seventeen of the sixty-five MWC plants. By the final compliance date, these plants are required to have all control equipment installed and operating. Attachment Table 4 summarizes the compliance information for dioxins and mercury on these existing large MWC plants. All seventeen of these MWC plants were in compliance with the dioxins and mercury limitations during the April - June, 2000 quarter.

EPA has determined that six existing MWC plants are subject to emission limitations or monitoring requirements that are contained in applicable State Implementation Plans (SIPs). Of these six MWCs, five are large MWCs subject to the State plan for Pennsylvania with a final compliance date of December 19, 2000. The MWC units in the remaining plant are located in Utah; this plant is subject to a SIP and is not part of an approved State plan under section 111(d) and 129 of the CAA. The combustion units at that plant are classified as small MWCs under the proposed emission guidelines for small MWCs. Attachment Table 5 provides information on the compliance status of these six MWC plants.

As stated in EPA's December 1999 response to the CEC, EPA estimates that the New Source Performance Standard (NSPS) and EG Subpart Cb applicable to large MWCs, in combination with various EPA dioxins initiatives and MWC plant closures, will significantly reduce dioxins emissions from MWCs. The estimated reduction is ninety-nine percent from 1990 levels when the NSPS and EG Subpart Cb are fully implemented in December, 2000. The 1990 emissions from MWCs are calculated as 4,173 grams per year toxic equivalent quantity and the dioxins emissions levels after December 2000 are estimated as 41 grams per year. EPA estimates the NSPS and EG will bring about an eighty-eight percent reduction in mercury emissions from 1990 levels. This represents a decrease to 6.1 tons per year after December, 2000 from 51.2 tons per year in 1990.

Hospital/Medical/Infectious Waste Incinerators

The Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators, 40 C.F.R. Part 60, Subpart Ce, was promulgated on September 15, 1997 (62 Fed. Reg. 48348) (EG Subpart Ce). The status of existing HMIWIs differs significantly from that of existing MWCs. Because the emission guidelines for HMIWIs were promulgated later than the emission guidelines for MWCs, the final compliance dates for the existing HMIWIs are later than for MWCs. At the latest, existing HMIWIs must comply with EG Subpart Ce by September 15, 2002, while most existing large MWCs must comply with EG Subpart Cb by December 19, 2000. However, the date by

which any particular HMIWI unit must comply with the requirements in EG Subpart Ce may also depend on whether the unit is regulated by a State plan or by the Federal plan.

EPA and states are both responsible for implementing and enforcing EG Subpart Ce at existing HMIWIs. Twenty-five states developed and received EPA approval for State plans to regulate HMIWIs. (Attachment, Table 6). Nine states declared that no HMIWIs exist within their jurisdiction and submitted negative declarations to EPA. (Attachment, Table 7). As such, neither a State plan nor the Federal plan apply in these jurisdictions. Three states have submitted plans to EPA, which are still under review. As required by sections 111(d) and 129 of the CAA, EPA promulgated a Federal plan to regulate HMIWI in states that do not have approved plans in effect. The Federal plan was published on August 15, 2000 (65 Fed. Reg. 49868). The Federal plan applies in twenty-eight states.

Although the latest compliance date allowed under EG Subpart Ce is September 15, 2002, each State plan may establish an earlier compliance date. Only eleven states and one locality – Arizona, Delaware, Georgia, Indiana, Iowa, Illinois, Maryland, Missouri, New York, North Dakota, West Virginia, and Alleghany County, Pennsylvania – have established compliance dates earlier than September 15, 2002. The Federal plan and each State plan contain a number of specific “increments” designed to enable EPA, states, and affected HMIWIs to track and ensure progress toward the applicable final compliance date. EPA has established specific dates for these increments in the Federal plan. The first increment of progress under the Federal plan – submissions of final control plans – occurred on September 15, 2000. The first increment applies to HMIWIs that expect to operate after August 15, 2001. EPA regions are currently processing information received from these HMIWIs. (Attachment, Table 9).

States establish specific dates associated with the increments under a State plan. At the request of a state, EPA assists in monitoring whether existing facilities are meeting increments under a State plan. For example, EPA worked with the State of Indiana Department of Environmental Management on an enforcement strategy for seven existing HMIWIs to enable them to “catch-up” to meet missed increments and satisfy future increments. These HMIWIs were issued letters indicating that the source violated the increments of progress. An HMIWI that fails to correct this deficiency could receive a notice of violation from Indiana. The notice of violation would be a formal finding that the HMIWI did not meet the increment and would initiate formal enforcement action by Indiana. (Attachment, Table 10).

As of November 2, 2000, EPA has determined that final compliance dates are already in effect for eighteen HMIWIs. By the final compliance date, these facilities are required to have all control equipment installed and operating. Sixteen of the eighteen HMIWIs were in compliance from July - September 2000. Attachment Table 11 contains information on the compliance status of each facility and an explanation of the non-compliance status of two facilities.

EPA has determined that seven existing HMIWIs are subject to emission limitations or monitoring requirements that are contained in an applicable SIP that is not part of an approved State plan under sections 111(d) and 129 of the CAA. Each of these HMIWIs are located in the Commonwealth of Pennsylvania and are subject to the Federal plan. Attachment Table 12 contains information on the compliance status of these seven facilities.

Many HMIWIs plan to shut down rather than comply with EG Subpart Ce and a State plan or the Federal plan. These HMIWIs are not typically required to notify or report any information to a state or EPA prior to the date of closure. EG Subpart Ce requires HMIWIs to close either within one year after the effective date of a State plan or within one year after the promulgation date of the Federal plan. States and EPA may extend the closure date for an individual HMIWI if, for example, alternative waste disposal options are unavailable. Of course, neither EPA nor a state may extend the closure period beyond the final compliance date of September 15, 2002.

EPA identified approximately 1,862 existing HMIWIs in the July 28, 2000 interim response to the CEC. The universe of existing HMIWIs continues to decrease as the effective dates of State plans and the Federal plan occurs. EPA now estimates that approximately 764 HMIWIs will continue to operate after the final compliance date established under State plans or the Federal plan. This decline is on top of the one-third decrease reported in EPA's December 1999 response to the CEC. The continued closure of existing HMIWIs corresponds to a significant reduction in dioxins and mercury emissions.

EPA and states continue to monitor plant progress toward the applicable final compliance date. By the final compliance date, each existing HMIWI must have the required air pollution control equipment installed and operating. HMIWIs are required to maintain records on a number of factors that monitor dioxins and mercury emissions, including the amount of waste charged, concentrations of dioxins and mercury, and the amount and type of dioxin/furan sorbent used during each hour of operation. Similar to MWCs, HMIWIs must conduct and submit annual reports of facility emission rates or operating parameters and any problems associated with operation in compliance with EG Subpart Ce. Semi-annual reports are required when emission rates or operating parameters are not obtained. EPA expects, when the emissions guidelines are fully implemented, to achieve a reduction of HMIWI dioxins and mercury emissions by ninety-seven percent and ninety-five percent, respectively.

Conclusion

The Office of Enforcement and Compliance Assurance and the EPA regional offices continue to monitor the compliance status of large existing MWCs and HMIWIs and will continue to work with you to address issues of concern to the CEC. If you require clarification of the information supplied, please contact Joyce Chandler at 202-564-7073.

Great Lakes—Party's response Article 21(1)(b)

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Attachment

Great Lakes—Party's response Article 21(1)(b)

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ATTACHMENT

**Final Response to Commission for
Environmental Cooperation
Submission on Enforcement Matters 98-003
Request for Additional Information on
Existing Municipal Waste Combustors and
Hospital/Medical/Infectious Waste
Incinerators**

Commission for Environmental Cooperation Question 2:

The response indicates that EPA issued emission guidelines for existing MWCs on December 19, 1995. These are effective as expeditiously as practicable after approval of a State plan. At the latest, these requirements become effective three years after EPA's approval of a State plan or five years after the date the standards are promulgated, whichever is earlier. 42 U.S.C. § 7429(f)(2). Please indicate whether these guidelines and monitoring requirements are in effect for any existing MWCs, including whether EPA has approved any such State plans (and, if so, the dates of approval). Please also (1) explain the efforts EPA has made to determine the compliance status of facilities (if any) covered by an approved plan, and (2) indicate the actual compliance status of such facilities. In addition, please indicate whether any existing MWCs are subject to any emission limitations or monitoring requirements contained in applicable state implementation plans (SIPs) that are not part of an approved State plan under §129 of the Clean Air Act. If so, please (1) explain the efforts EPA has made to determine the compliance status of such MWCs with applicable requirements, and (2) indicate the actual compliance status of any such MWCs.

Environmental Protection Agency Response to Commission for Environmental Cooperation Question 2:

- Table 1..... State Plans for Large Existing Municipal Waste Combustors
- Table 2..... States Subject to the Federal Plan for Large Existing Municipal Waste Combustors
- Table 3..... Negative Declarations for Large Existing Municipal Waste Combustors
- Table 4..... Compliance and Enforcement History for Dioxins and Mercury Emissions from Municipal Waste Combustors
- Table 5..... Compliance and Enforcement History for Dioxins and Mercury Emissions from Municipal Waste Combustors Subject to State Implementation Plans

Table 1
State Plans for Large Existing Municipal Waste Combustors

State	Federal Register Publication Date	Number of Facilities	Effective Date
Connecticut	4/21/00	5	6/20/00
Maine	12/11/98	3	2/9/99
New York	8/4/98	8	10/5/98
Maryland	4/23/99	2	6/22/99
Pennsylvania	8/23/99	6	10/22/99
Alabama	11/18/98	1	1/19/99
Florida	11/13/97	10	1/12/98
Georgia	5/19/98	1	7/20/98
South Carolina	7/27/98	1	9/25/98
Nashville, Tennessee	12/18/98	1	2/16/98
Illinois	12/29/97	1	3/1/98
Indiana	11/18/99	1	1/18/00
Minnesota	8/12/98	4	10/11/98
Oklahoma	11/6/98	1	1/5/99
Oregon	6/24/97	1	8/24/97
Total Number of Facilities Subject to State Plans		46	

Table 2
States Subject to the Federal Plan for Large Existing Municipal Waste Combustors

Municipal Waste Combustors (MWCs) in the following nine states are subject to the Federal plan which was published in the Federal Register on November 12, 1998 (63 Fed. Reg. 63191) and became effective December 14, 1998. If a state or locality did not have a State plan approved by the publication date of the Federal plan, then MWCs in the state or locality are subject to the Federal plan. If EPA subsequently approves a State plan, then the affected MWCs become subject to the State plan.

State	Number of Facilities
Massachusetts	7
New Hampshire	1
Virginia	3
New Jersey	4
North Carolina	1
Michigan	3
Ohio	1
California	3
Washington	1
Total	24

Table 3
Negative Declarations for Large Existing Municipal Waste Combustors

The following thirty states and localities submitted “negative declarations” to EPA. A negative declaration is a letter from a state or local authority certifying that there are no MWC units subject to the *Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators* (62 Fed. Reg. 48348) in its jurisdiction. A negative declaration letter is submitted to EPA in lieu of a State plan and application of the Federal plan.

Rhode Island	Vermont	Puerto Rico
U.S. Virgin Islands	Delaware	District of Columbia
West Virginia	Kentucky	Mississippi
Wisconsin	Arkansas	Louisiana
Iowa	Texas	New Mexico
Kansas	Missouri	Nebraska
Colorado	Montana	North Dakota
Wyoming	Utah	South Dakota
American Samoa	Arizona	Nevada
Commonwealth of the Northern Mariana Islands	Alaska	Idaho

Table 4
Compliance and Enforcement History for Dioxins and Mercury Emissions
from Municipal Waste Combustors

Plant Name and Location	Final Compliance Date	Compliance Status April - June 2000	Inspections as of Compliance Date
Maine Energy Recovery Biddeford, Maine	12/11/99	In compliance with dioxins and mercury	1
Penobscot Energy Recovery Bangor, Maine	12/11/99	In compliance with dioxins and mercury	1
Babylon Resource Recovery Facility (RRF) West Babylon, New York	7/9/00	See discussion below	0
Hempstead RRF Westbury, New York	5/31/00	See discussion below	0
American Refuse/Niagara Falls Niagara Falls, New York	8/4/99	In compliance with dioxins and mercury	2
Onondaga County Resource Jamesville, New York	8/4/99	In compliance with dioxins and mercury	1
Montgomery County Resource Dickerson, Maryland	4/22/91	In compliance with dioxins and mercury	15
Huntsville Solid Waste Authority Huntsville, Alabama	5/31/00	See discussion below	0
Pasco County RRF Hudson, Florida	4/19/00	See discussion below	0
Lee County Energy Recovery Fort Myer, Florida	1/12/99	In compliance with dioxins and mercury	2
West Palm Beach Solid Waste West Palm Beach, Florida	1/12/99	In compliance with dioxins and mercury	1
Wheelabrator Pinnellas Co. RRF	6/19/00	See discussion below	0

St. Petersburg, Florida Unit #2			
Wheelabrator Pinellas Co. RRF St. Petersburg, Florida Unit #3	12/19/99	In compliance with dioxins and mercury	1
Plant Name and Location	Compliance Date	Compliance Status April - June 2000	Inspections as of Compliance Date
Savannah Energy Systems Savannah, Georgia	7/20/99	In compliance with dioxins and mercury	2
Nashville Thermal Transfer Corporation Nashville, Tennessee	5/1/99	In compliance with dioxins and mercury	1
Robbins RRF Robbins, Illinois	6/2/97	In compliance with dioxins and mercury	43
Hennepin Energy RRF Minneapolis, Minnesota	8/12/99	In compliance with dioxins and mercury	0
Marion County Solid Waste-to- Energy Brooks, Oregon	6/19/00	See discussion below	0

The MWCs located in New York, Alabama, Florida, and Oregon are required to conduct an initial performance test within 180 days of the final compliance date. New York, Alabama, Florida, and Oregon will use the initial compliance test to determine compliance with the emission limits. A facility that fails to complete the initial performance test within 180 days or fails to meet the emission limitations in the performance test is considered out of compliance and subject to enforcement action.

EPA used the On-line Targeting Information System (OTIS) to obtain the compliance and enforcement history for the facilities in this table. OTIS only reports inspection information covering the past five years. The final compliance date for some of the MWC facilities has occurred in the past few months, so inspections may not have been completed at such facilities.

Table 5
Compliance and Enforcement History for Dioxins and Mercury Emissions
from Municipal Waste Combustors
Subject to State Implementation Plans

The Commonwealth of Pennsylvania's State Implementation Plan requires that any stationary source constructed after July 1, 1972 must meet Best Available Technology (BAT) requirements. BAT is defined as equipment, devices, methods or techniques as determined by the Pennsylvania Department of Environmental Protection (PA DEP) which will prevent, reduce or control emissions of air contaminants to the maximum extent possible and which are available or may be made available. BAT is determined on a site-specific basis. PA DEP developed a comprehensive BAT guidance for MWCs in 1989, which is to be used for the determination of BAT for any new facility.

Five MWCs are required to meet the BAT emission limitations included in the 1989 guidance. BAT limitations include annual ambient concentration limits for dioxins and mercury. Over the past five years 48 inspections have been conducted at these five MWCs. The BAT requirement is a part of Pennsylvania's State plan.

One facility in the State of Utah is subject to a SIP and is not part of an approved State plan under sections 111(d) and 129 of the CAA. Performance tests have been conducted at the Wasatch Energy Resource Recovery Facility (Wasatch) with respect to the Utah's New Source Review permit. Violations of the permit's dioxins limits have been identified. Utah has reached a settlement agreement with the company for these past violations. EPA, however, suspects that Wasatch is not in continuous compliance due to the company's failure to show cause for highly variable dioxins emissions and failure to provide an adequate explanation for passing the last performance test. To monitor the facility's compliance status, EPA recently issued a CAA section 114 letter to the facility to perform more frequent stack testing.

Plant Name and Location	Initiate Operation	Compliance Status April -June 2000	Inspections in Past 5 years
American Ref-Fuel/Delaware Co Chester, Pennsylvania	1991	In compliance with dioxins and mercury	17
Lancaster County RRF Bainbridge, Pennsylvania	1990	In compliance with dioxins and mercury	7
Montenay Montgomery Conshohocken, Pennsylvania	1991	In compliance with dioxins and mercury	2
Wheelabrator Falls	1994	In compliance with dioxins	5

Morrisville, Pennsylvania		and mercury	
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Plant Name and Location	Initiate Operation	Compliance Status April - June 2000	Inspections in Past 5 Years
York County RRF York, Pennsylvania	1989	In compliance with dioxins and mercury	17
Wasatch Energy RRF Layton, Utah	1988	In compliance with dioxins and mercury	5

EPA used the On-line Targeting Information System (OTIS) to obtain the compliance and enforcement history for the facilities in this table. OTIS only reports inspection information covering the past five years.

Commission for Environmental Cooperation Question 5:

EPA issued its emission guidelines for existing MWIs on September 15, 1997. 62 Fed. Reg. 48,282. The Clean Air Act provides that each unit subject to these guidelines shall be in compliance not later than three years after EPA's approval of a State plan or five years after the date the standards are promulgated. 42 U.S.C. § 7429(f)(2). EPA's response indicates that 28 states with MWIs have submitted plans to EPA. Thus, among other information, it would be relevant whether EPA has approved any such State plans, whether the guidelines for MWIs have become effective yet in any state with an approved plan, and whether these guidelines are in effect for any existing MWIs. If the guidelines are in effect for existing MWIs, please (1) explain the efforts EPA has made to determine the compliance status of any MWIs covered by these requirements, and (2) indicate the compliance status of such facilities. Please also explain whether any existing MWIs are subject to any emission limitations or monitoring requirements contained in applicable SIPs that are not part of an approved State plan under §129 of the Clean Air Act. If so, please (1) explain the efforts EPA has made to determine the compliance status of such MWI, and (2) indicate the actual compliance status of any such MWCs [SIC].

Environmental Protection Agency Response to Commission for Environmental Cooperation Question 5:

Table 6.....	State Plans for Hospital/Medical/Infectious Waste Incinerators Approval and Effective Dates
Table 7.....	Negative Declarations for Hospital/Medical/Infectious Waste Incinerators
Table 8.....	State Subject to the Federal Plan for Hospital/Medical/Infectious Waste Incinerators
Table 9.....	Hospital/Medical/Infectious Waste Incinerators Federal Plan Increments of Progress
Table 10.....	Examples of Hospital/Medical/Infectious Waste Incinerators Missing Increments of Progress Under a State Plan
Table 11.....	Compliance and Enforcement History for Hospital/Medical/Infectious Waste Incinerators with Final Compliance Dates in Effect
Table 12.....	Compliance and Enforcement History for Dioxins and Mercury Emissions from Hospital/Medical/Infectious Waste Incinerators Subject to a State Implementation Plan and Not Part of an Approved State Plan under Sections 111(d) and 129 of the Clean Air Act

Table 6
State Plans for Hospital/Medical/Infectious Waste Incinerators
Approval and Effective Dates and Number of Facilities

State or Locality	EPA Approval	Effective Date	Number of Facilities
New Hampshire	2/8/00	4/10/00	4
New York	8/9/99	10/8/99	8
Delaware	4/14/00	6/13/00	3
Maryland	9/5/00	10/20/00	30
Alleghany County, Pennsylvania	4/7/00	6/6/00	3
West Virginia	6/13/00	7/28/00	13
Alabama	4/10/00	6/9/00	32
Georgia	2/25/00	4/25/00	2
Mississippi	4/7/00	6/6/00	0
Illinois	7/7/99	9/7/99	13
Indiana	12/17/99	2/15/00	9
Louisiana	6/17/99	8/16/00	53
Oklahoma	6/2/00	7/3/00	17
Iowa	6/17/99	8/16/99	24
Kansas	7/14/00	9/12/00	62
Missouri	8/19/99	10/18/99	2
Nebraska	11/16/99	1/18/00	4
Colorado	6/22/00	8/21/00	12
Montana	6/22/00	8/21/00	5
North Dakota	5/13/99	7/12/99	38

South Dakota	6/22/00	8/21/00	1
Utah	6/22/00	8/21/00	15
Wyoming	6/22/00	8/21/00	34
State or Locality	EPA Approval	Effective Date	Number of Facilities
Arizona ²	6/22/00	8/21/00	10
Idaho	4/21/00	6/20/00	15
Total Number of HMIWI Facilities Subject to State Plans			409

²To avoid double counting, Arizona is included in the list of states with approved State plans. Within Arizona, two counties and areas under the jurisdiction of federally-recognized Indian tribes are subject to the Federal plan and not the Arizona State plan. 10 HMIWIs are covered by Arizona's State plan and 5 HMIWIs are covered by the Federal Plan.

Table 7
Negative Declaration for Hospital/Medical/Infectious Waste Incinerators

The following nine states and localities submitted “negative declarations” to EPA. A negative declaration is a letter from a state or local authority certifying that there are no HMIWI facilities subject to the *Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators* (62 Fed. Reg. 48348) in its jurisdiction. A negative declaration letter is submitted to EPA in lieu of a State plan and application of the Federal plan.

Vermont	District of Columbia	Huntsville, Alabama
Nashville, Tennessee	Jefferson County, Kentucky	Forsyth County, Georgia
New Mexico	Nevada	Oregon

Table 8
States Subject to the Federal Plan
for Hospital/Medical/Infectious Waste Incinerators

HMIWIs in the following states are subject to the Federal plan which was published in the Federal Register on August 15, 2000 (65 FR 49739) and became effective September 14, 2000. If a state did not have a State plan approved by the publication date of the Federal plan, then HMIWIs in the state are subject to the Federal plan. If EPA subsequently approves a State plan, then the affected HMIWIs become subject to the State plan. An “*” indicates that a State plan is currently under review by EPA.

State	HMIWI Facilities
Connecticut	4
Maine	2
Massachusetts	3
Rhode Island*	3
New Jersey	13
Puerto Rico	4
U.S. Virgin Islands	3
Pennsylvania*	41
Virginia	10
Florida	29
Kentucky	0
North Carolina	17
South Carolina	3
Tennessee	12
Michigan	31
Minnesota	3
Wisconsin	1

Ohio	30
Arkansas	7
State	HMIWI Facilities
Texas*	101
Arizona ³	5
American Samoa	0
California	14
Commonwealth of the Northern Mariana Islands	0
Guam	3
Hawaii	5
Alaska	6
Washington	5
Total Facilities Subject to the Federal Plan	355

³To avoid double counting, Arizona is included in the list of states with approved State plans. Within Arizona, two counties and areas under the jurisdiction of federally-recognized Indian tribes are subject to the Federal plan and not the Arizona State plan. 5 HMIWIs are covered by the Federal Plan and 10 HMIWIs are covered by Arizona's State plan.

Table 9
Hospital/Medical/Infectious Waste Incinerators Federal Plan Increments of Progress

Increments of Progress	Date
#1 Submit final control plan to EPA	September 15, 2000
#2 Award contracts for equipment	April 15, 2001
#3 Provide operator training and meet qualification requirements ⁴	August 15, 2001
#4 Begin onsite construction of control technology and system changes	December 15, 2001
#5 Complete onsite construction	July 15, 2002
#6 Achieve final compliance with emission guidelines	September 15, 2002

⁴Providing operator training is not technically an increment of progress. The emission guidelines for existing HMIWIs require that each facility have at least one trained and qualified HMIWI operator that is either on-duty or on-call while the HMIWI is operating. EPA included this requirement in Table 5 because a properly trained and qualified HMIWI operator can ensure correct operation of the pollution control technology necessary to meet the emission limitations. In addition, a qualified operator could enable an HMIWI to reduce emissions below the levels specifically required in the emission limitations.

Table 10
Examples of Hospital/Medical/Infectious Waste Incinerators
Missing Increments of Progress Under a State Plan

Facility Name and Location	State Plan Effective Date	Increment Missed	State Response
Bloomington Hospital, Bloomington, Indiana	2/15/00	2nd Award contracts for emission control systems . . . no later than March 31, 2000.	Letter to facility finding violation of increment of progress. If the facility fails to correct the deficiency, Indiana will issue a formal notice of violation and initiate formal enforcement action.
Greater Lafayette Health Services Home Hospital, Lafayette, Indiana	2/15/00	2nd Award contracts for emission control systems . . . no later than March 31, 2000.	Letter to facility finding violation of increment of progress. If the facility fails to correct the deficiency, Indiana will issue a formal notice of violation and initiate formal enforcement action.
Henry County Memorial Hospital, New Castle, Indiana	2/15/00	2nd Award contracts for emission control systems . . . no later than March 31, 2000	Letter to facility finding violation of increment of progress. If the facility fails to correct the deficiency, Indiana will issue a formal notice of violation and initiate formal enforcement action.
South Bend Medical Foundation, South Bend, Indiana	2/15/00	2nd Award contracts for emission control systems . . . no later than March 31, 2000.	Letter to facility finding violation of increment of progress. If the facility fails to correct the deficiency, Indiana will issue a formal notice of violation and initiate formal enforcement action.

Facility Name and Location	State Plan Effective Date	Increment Missed Date Missed	State Response
Wishard Memorial, Indianapolis, Indiana	2/15/00	2nd Award contracts for emission control systems . . . no later than March 31, 2000.	Letter to facility finding violation of increment of progress. If the facility fails to correct the deficiency, Indiana will issue a formal notice of violation and initiate formal enforcement action.

Table 11
Compliance and Enforcement History for Hospital/Medical/Infectious Waste Incinerators with
Final Compliance Dates in Effect

Plant Name and Location	Final Compliance Date	Emission Guidelines Compliance Status July - September 2000	Inspections as of Compliance Date
State University of New York, Stony Brook Stony Brook, New York	8/9/00	In Compliance	0
St. Catherine of Siena Medical Center Smithtown, New York	8/9/00	In Compliance	0
Nyack Hospital Nyack, New York	8/9/00	In Compliance	0
St. Joseph's Hospital Syracuse, New York	8/9/00	In Compliance	0
Buffalo General Hospital Buffalo, New York	8/9/00	In Compliance	0
Women's Christian Association Hospital Jamestown, New York	8/9/00	In Compliance	0
Sisters of Charity Hospital Buffalo, New York	8/9/00	In Compliance	0
University of Pittsburgh Medical Center Alleghany County, Pennsylvania	9/1/00	In compliance. Initial performance test required by 3/1/01.	Not Applicable
Suburban Hospital Alleghany County, Pennsylvania	9/1/00	In compliance. Initial performance test required by 3/1/01.	Not Applicable
Shadyside Hospital Alleghany County, Pennsylvania	9/1/00	In compliance. Initial performance test required by 3/1/01.	Not Applicable

Central Georgia Ancillary Health Systems Macon, Georgia	3/15/00	Notice of Violation. See discussion below.	0
Plant Name and Location	Final Compliance Date	Emission Guidelines Compliance Status July - September 2000	Inspections as of Compliance Date
Dekalb Medical Center Decatur, Georgia	3/15/00	Failed to meet compliance deadline. See discussion below.	0
Good Samaritan Hospital, Downers Grove, Illinois	9/15/00	In compliance. Initial performance test due by 11/15/00.	Not Applicable
Evanston Hospital Evanston, Illinois	9/15/00	In compliance. Initial performance test due by 11/15/00.	Not Applicable
Hinsdale Hospital Hinsdale, Illinois	9/15/00	In compliance. Initial performance test due by 11/15/00.	
Passavant Area Hospital Jacksonville, Illinois	9/15/00	In compliance. Initial performance test due by 11/15/00.	Not Applicable
St. Louis University Energy Center St. Louis, Missouri	9/1/00	In compliance	0
Stericycle Facility St. Louis, Missouri	9/1/00	In compliance	0

Pennsylvania and Illinois are awaiting initial performance tests from seven facilities. The facilities are required to conduct the initial performance test within 180 days of the final compliance date. The initial performance test is used to determine compliance with the emission limits. A facility that fails to complete the initial performance test within 180 days or fails to meet the emission limitations in the performance test is considered out of compliance and subject to enforcement action.

The state of Georgia issued a Notice of Violation to Central Georgia Ancillary Health Systems for failing the initial performance test performed in January, 2000. The initial performance test indicated

that the facility failed to meet the hydrochloric acid emission limitation. To address this result, the facility immediately increased the sorbet injection rate by twelve percent (ninety-five percent lime and five percent carbon). The facility conducted a re-test in April, 2000 which the state refused to certify because of procedural problems in the test. Before another re-test could occur, a fire in the incinerator's loader-hopper occurred in June, 2000 and caused the incinerator to shut down. After repairing and re-starting the incinerator, the facility conducted a re-test in October, 2000. The facility has thirty days to submit the data to Georgia. Upon reviewing the data, Georgia will determine whether further enforcement action is appropriate.

The DeKalb Medical Center failed to meet the March 15, 2000 final compliance date. The facility failed to meet the compliance date because the new type of air pollution control equipment being installing did not arrive in time. As a result, the facility ceased to operate on March 11, 2000 in order to complete the required retrofit using the new pollution control equipment. After completing the retrofit, the facility conducted their initial performance test in May 2000. The test results showed that the facility did not meet the particulate matter and cadmium emission standards. After the air pollution control equipment manufacturer made improvements to the system and performed testing, the final design was approved and repeat emission testings for particulate matter and cadmium were performed in October, 2000. The facility has thirty days to submit the results to Georgia. Upon reviewing the data, Georgia will determine what action is appropriate.

EPA used the On-line Targeting Information System (OTIS) to obtain the compliance and enforcement history for the facilities in this table. OTIS only reports inspection information covering the past five years. Finally, the final compliance date for some of these facilities has occurred in the past few months, so inspections may not have been completed at such facilities.

Table 12
Compliance and Enforcement History
for Dioxins and Mercury Emissions from Hospital/Medical/Infectious Waste Incinerators

EPA has determined that seven existing HMIWIs are subject to emission limitations or monitoring requirements that are contained in an applicable State Implementation Plan (SIP) and that are not part of an approved State plan under sections 111(d) and 129 of the Clean Air Act. The Commonwealth of Pennsylvania's SIP requires any stationary sources constructed after July 1, 1972 meet Best Available Technology (BAT). BAT is defined as equipment, devices, methods or techniques, as determined by the Pennsylvania Department of Environmental Protection (PA DEP), which will prevent, reduce, or control emissions of air contaminants to the maximum extent possible and which are available or may be made available. BAT is determined on a site-specific basis. PA DEP developed a comprehensive BAT guidance for HMIWIs in 1989. This guidance is used to determine BAT for any new facility.

Seven HMIWIs located in Pennsylvania are required to meet the BAT emissions limitations included in the 1989 guidance. BAT limitations include annual ambient concentration limits for dioxins and mercury. Over the past five years 32 inspections have been conducted at the seven facilities in Pennsylvania subject the SIP's BAT requirements. The BAT requirement may be included in Pennsylvania's State plan under sections 111(d) and 129 of the CAA. Source-specific BAT requirements are federally enforceable under construction and operating permits issued under the authority of the SIP. Until EPA approval of that State plan, however, these seven facilities are subject to the Federal plan with a final compliance date of September 15, 2002.

Plant Name and Location	Best Available Technology Compliance Status	Inspections in Past Five Years
Merck and Company West Point, Pennsylvania	In compliance with dioxins and mercury	8
Southern Chester County Medical Center West Grove, Pennsylvania	In compliance with dioxins and mercury	1
Riddle Memorial Hospital Media, Pennsylvania	In compliance with dioxins and mercury	3
Community Hospital of Lancaster Lancaster, Pennsylvania	In compliance with dioxins and mercury	5
Geisinger Wyoming Valley Medical	In compliance with dioxins and	5

Center Wilkes-Barre, Pennsylvania	mercury	
Plant Name and Location	Best Available Technology Compliance Status	Inspections in Past Five Years
Rhone-Poulenc Rorer Pharmaceutical Collegeville, Pennsylvania	In compliance with dioxins and mercury	3
Hamot Medical Center Erie, Pennsylvania	In compliance with dioxins and mercury	7

EPA used its “On-line Targeting Information System” (OTIS) to obtain the information for the facilities in this table. OTIS only contains inspection information for the past five years.