

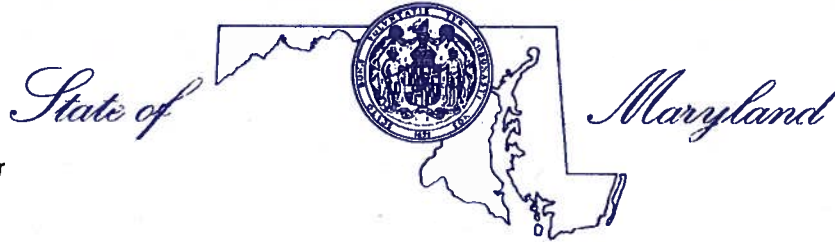
KEEP PERMIT AT SITE

CONTROL NO. B- 05757

Larry Hogan
Governor

Ben Grumbles
Secretary

Boyd Rutherford
Lieutenant Governor



DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

Construction Permit

Part 70
 Operating Permit

PERMIT NO. 24-510-2975

DATE ISSUED May 1, 2019

PERMIT FEE To be paid in accordance with COMAR 26.11.02.19B

EXPIRATION DATE January 31, 2024

LEGAL OWNER & ADDRESS
Baltimore Regional Medical Waste Incinerator
Curtis Bay Energy, Limited Partnership
3200 Hawkins Point Road
Baltimore, MD 21226
Attn: Mr. Kenneth Jackson, Director of Operations

SITE
Same
Baltimore City
Premises # 2975
AI # 439

SOURCE DESCRIPTION

Hospital Medical and Infectious Waste Incinerator (HMIWI) facility rated at 150 tons/day.

This source is subject to the conditions described on the attached pages.

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Program Manager

Director, Air and Radiation Administration

CURTIS BAY ENERGY, LIMITED PARTNERSHIP {AI# 439}
3200 HAWKINS POINT ROAD
BALTIMORE, MARYLAND 21226
PART 70 OPERATING PERMIT NO. 24-510-2975

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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Curtis Bay Energy, Limited Partnership (“Curtis Bay Energy”) owns and operates a medical waste incinerator facility located at 3200 Hawkins Point Road in Baltimore City. Medical Waste Associates, Limited Partnership was the original owner of the facility. Phoenix Services, Limited Partnership acquired ownership of the facility in 1995. Phoenix Services changed its name to Curtis Bay Energy, Limited Partnership in February 2005. The SIC code for the facility is 4953.

Curtis Bay Energy operates two identical incineration units (EU-1 and EU-2), which are permitted to incinerate a maximum of 150 tons per day total for the entire facility. The two incineration units share a common stack. Each incinerator has its own air pollution control system with a system of dampers that allow either air pollution control train to be used with either incinerator. Each incinerator is equipped with secondary and tertiary combustion chambers, heat recovery boiler, selective non-catalytic reduction (SNCR) for NOX control, a dry injection acid gas scrubber, a powder activated carbon injection (PAC) system, and a fabric filter with passive dioxins/furans emissions control. Each incineration unit is also equipped with an emergency stack for venting combustion gas in emergency situations such as electrical power outages. There is a Continuous Opacity Monitor (COM) and Continuous Emission Monitoring Systems (CEMS) for monitoring the carbon monoxide (CO) and hydrogen chloride (HCl), nitrogen oxides (NOX), carbon Dioxide CO2, and oxygen (O2) content of the stack exhaust gases.

2. FACILITY INVENTORY LIST

MDE Registration Number	Emissions Unit Number	Emissions Unit Name	Emissions Unit Description	Date of Installation
2-0279	EU-1	Unit 1	Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a dual train dry scrubber/Gore® Reactive catalyst fabric filter baghouse or equivalent control technology with prior approval from the Department and an activated carbon injection system.	1991
2-0279	EU-2	Unit 2	Consumat Medical Waste Incinerator equipped with a heat recovery boiler and a dual train dry scrubber/Gore® Reactive catalyst fabric filter baghouse or equivalent control technology with prior approval from the Department and an activated	1991

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			carbon injection systems	
2-0279	EU-3 EU-4	Storage Silos	Two storage Silos feeding alkaline sorbent material to either Unit 1 or Unit 2 dry scrubber.	2014

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SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
Cd	Cadmium
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
HCl	Hydrogen Chloride
Hg	Mercury
HWIWI	Hospital/Medical/Infectious Waste Incinerator
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O ₂	Oxygen
OTR	Ozone Transport Region
PAC	Powder Activated Carbon
Pb	Lead
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)

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RACT	Reasonable Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SNCR	Selective Noncatalytic Reduction
SO ₂	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

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6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;
- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;
- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or
- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

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8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.
- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.
- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

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12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:
 - (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;
 - (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
- e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

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- f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
- g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:
 - (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
 - (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
 - (a) Adding new requirements,
 - (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
 - (3) Does not require or modify a:
 - (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
 - (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has

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assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

- (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
- (5) Is not a Title I modification; and
- (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.
- b. Application for a Minor Permit Modification
- The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:
- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
 - (2) The proposed minor permit modification;
 - (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
 - (a) The proposed change meets the criteria for a minor permit modification, and
 - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
 - (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.
- c. Permittee's Ability to Make Change
- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

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- (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
 - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.
 - (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.
- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
 - (1) Be in writing;
 - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
 - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:

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- (1) Is a correction of a typographical error;
 - (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
 - (3) Requires more frequent monitoring or reporting by the Permittee;
 - (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
 - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
 - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
 - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
 - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
- d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.
- e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

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15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
 - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - (3) The change is not a Title I modification; and
 - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:
 - (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
 - (2) The emissions resulting from those changes.
- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

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- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
 - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;
 - (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

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- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
 - (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.
- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

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- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

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19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;

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- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

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The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

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- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing, standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;
- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

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- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its

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option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, Appendix A
- b. 40 CFR 51, Appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
 - (1) Familiar with each source for which the certifications forms are submitted, and
 - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

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- (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
- (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
- (3) Amounts, types and analyses of all fuels used;
- (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
- (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:
 - (a) Significant maintenance performed,
 - (b) Malfunctions and downtime, and
 - (c) Episodes of reduced efficiency of all equipment;
- (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
- (7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
 - (1) The identification of each term or condition of this permit which is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether the compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

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(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;

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- e. The analytical techniques and methods used; and
- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

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15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.
- e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.
- f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

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SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV – 1	
1.0	<p><u>Emissions Unit Number(s)</u></p> <p>EU-01: Unit 1 Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a SNCR and a dual train dry scrubber/ fabric filter bag house system.</p> <p>EU-02: Unit 2 Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a SNCR and a dual train dry scrubber/ fabric filter bag house system.</p>
1.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. Emission Standards. Note: Regulation COMAR 26.11.08.08-2, is now federally enforceable per EPA's approval of Maryland's §111(d)/129 Plan revisions, which became effective on <u>May 30, 2017</u>.</p> <p>(1) COMAR 26.11.08.08-2A, The emission standards and requirements of §B(1)—(7) of Regulation COMAR 26.11.08.08-2 apply to a person who owns or operates a large HMIWI subject to 40 CFR Part 60, Subpart Ce, as amended on <u>October 6, 2009</u>.</p> <p>(2) COMAR 26.11.08.08-2B(1) "A person who owns or operates a ... large HMIWI for which construction was commenced on or before June 20, 1996 or for which modification commenced on or before March 16, 1998 shall comply with the following emission limits. (<i>See Table of Applicable Emission Limits below</i>).</p>

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Table IV – 1			
	Pollutant	Units (7% oxygen, dry basis)	Emission Limits for Large HMIWIs
			COMAR 26.11.08.08-2 Subpart Ce, as amended, October 6, 2009
A1	Particulate Matter (PM)	milligrams per dry standard cubic meter (or per dry standard cubic foot)	25 (0.011)
A2	Opacity (Areas III & IV no visible emissions)	percent (6 minute block average)	10
A3	Carbon Monoxide (CO)	ppm by volume	11 (24-hr block average)
A4	Dioxins/Furans	nanograms per dry standard cubic meter total dioxins/furans (gr per billion dry standard cubic foot) or nanograms per dry standard cubic meter TEQ (gr per billion dry standard cubic foot)	9.3 (4.1) or 0.054 (0.024)
A5	Hydrogen Chloride (HCl).	ppm by volume	6.6 (24-hr block average)
A6	Sulfur Dioxide (SO ₂)	ppm by volume	9.0
A7	Nitrogen Oxides (NO _x)	ppm by volume	140 (24-hr block average)
A8	Lead (Pb)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.036 (0.016)
A9	Cadmium (Cd)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.0092 (0.0040)
A10	Mercury (Hg)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.018 (0.0079)

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1. The emissions limits apply at all times [Ref: 40 CFR §60.56c(a)]
2. Except where otherwise noted below, compliance with the above standards shall be determined by the average of three (3) stack test runs with a 1-hour minimum sample time per run, using test methods as specified in 40 CFR 60.56c(b)
3. Compliance with the dioxins/furans standards shall be determined by the average of three (3) stack test runs with a 4-hour minimum sample time per run;
4. Compliance with the CO 11 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(4)(i)]
5. Compliance with the HCl 6.6 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(5)(ii)].
6. Compliance with the NO_x 140 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(5)(ii)]

Additional Emission Limits

A2 Opacity

- (3) **COMAR 26.11.08.04B** – Visible Emissions. A person may not cause or permit the discharge of emissions from any incinerator or hazardous waste incinerator, other than water in an uncombined form, which is visible to human observers.
- (4) **COMAR 26. 11.08.04C** Exceptions. The requirements of [COMAR 26.11.08.04B] do not apply to emissions during start-up, or adjustments or occasional cleaning of control equipment if: (1) The visible emissions are not greater than 40 percent opacity; and (2) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

A2-1 Fugitive Emissions -

- (5) **40 CFR §60.52c(c)** Fugitive emissions. Beginning June 15, 2012, no owner or operator of an affected facility shall cause to be discharged into the atmosphere visible emissions of combustion ash from the ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 of appendix A-1 of 40 CFR Part 60, except as provided in paragraphs (d) and (e) of this section [Authority: COMAR 26.11.08.08-2B(4)(a)].

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40 CFR §60.52c(d). The emission limit specified in paragraph (c) of this section does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however the emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

40 CFR §60.52c(e). The provisions specified in paragraph (c) above do not apply during maintenance and repair of ash conveying systems. Maintenance or repair shall not exceed 10 operating days per calendar quarter unless the owner or operator obtains written approval from the State agency establishing a date whereby all necessary maintenance and repairs of ash conveying systems shall be completed.

A7 Nitrogen Oxides (NO_x)

- (6) **COMAR 26.11.09.08H(3)** NO_x RACT Requirement. NO_x emissions from hospital, medical, and infectious waste incinerators as defined in COMAR 26.11.08.01B(18) may not exceed the NO_x emission standards in COMAR 26.11.08.08-1A(2) (250 ppm 24-hour average) as applicable.

Note: Emission limit cited under Condition (6) above is superseded by the more stringent NO_x limit of 140 ppm (24-hour block average) requirement cited in COMAR 26.11.08.08-2B. {See Condition 1.1 A. (2), above}

B. Waste Management Plan

A person who owns or operates an HMIWI subject to this regulation shall prepare a Waste Management Plan that identifies the feasibility and the approach to solid waste segregation or material substitution to reduce the amount of toxics emissions. The Waste Management Plan shall meet the requirements of 40 CFR §60.55c, subpart Ec.” [Authority: COMAR 26.11.08.08-2B(3)]

C. Operator Training

- (1) “For approval, a State [111(d)/129] plan shall include the requirements for operator training and qualification at least as protective as those requirements listed in §60.53c of subpart Ec of this part. The State plan shall require compliance with these requirements according to the schedule specified in §60.39e(e).”
- (2) “No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within 1 hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.” [Authority: 40 CFR §60.53c(a)]

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(3) “Operator training and qualification shall be obtained through a State-approved program or by completing the requirements included in paragraphs (c) through (g) of this section....” [Authority: 40 CFR §60.53c(b)] .

(4) COMAR 26.11.08.09 – State Incinerator Operator Training Requirements.

“B. Certification and Operation. A person may not operate or allow an incinerator to be operated unless the owner certifies to the Department on a form provided by the Department that the incinerator operator:

“(1) Has completed an initial training course approved by the Department, which meets the requirements of §C or D of this regulation;

“(2) Annually, after initial certification, completes a review course approved by the Department; and

“(3) Is present at all times whenever the incinerator is in operation.”

“C. Training Course for Operator of Special Medical Waste or Industrial Waste Incinerators.

“(1) For any incinerator operator who operates a special medical waste incinerator or an industrial waste incinerator, the training course shall be the "Hospital Incinerator Operator Training Course" Volumes I—III (EPA-450/3-89-003, EPA-450/3-89-004, and EPA-450/3-89-010, respectively), Control Technology Center, March 1989, which is incorporated by reference, and "Operation and Maintenance of Hospital Medical Waste Incinerators" (EPA-450/3-89-002), Control Technology Center, March 1989, which is incorporated by reference.

“(2) For the operator of any special medical waste incinerator or an industrial waste incinerator, completing a training course means:

“(a) Completing an initial training course approved by the Department of at least 3 days (24 hours) duration; and

“(b) Passing a written test approved by the Department.

“(3) The certified operator shall, after initial training, complete and pass an annual review course approved by the Department of at least 1-day (8 hours) duration.

“(4) For an HMIWI subject to the requirements of this chapter, a person is qualified to operate an HMIWI if the person passes the training course required in §C(2) and (3) of this regulation and complies with the

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requirements in 40 CFR §60.53(c)(d).

“(5) An owner or operator of an HMIWI shall maintain documentation of training (operator training manual) on site and update the documentation annually at the time of the annual review course. The documentation shall be as specified in 40 CFR §60.53c(h).”

D. Equipment Inspection Requirements [Authority: COMAR 26.11.08.08-2D and 40 CFR §60.36e]

(1) Each HMIWI shall undergo annual inspections that at a minimum include the following [Authority: COMAR 26.11.08.08-2D(1)]:

- (a) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot flame sensor, as necessary;
- (b) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;
- (c) Inspect hinges and door latches, and lubricate as necessary;
- (d) Inspect dampers, fans, and blowers for proper operation;
- (e) Inspect HMIWI door and door gaskets for proper sealing;
- (f) Inspect motors for proper operation;
- (g) Inspect primary chamber refractory lining; clean and repair or replace lining as necessary;
- (h) Inspect incinerator shell for corrosion or hot spots, or both;
- (i) Inspect secondary/tertiary chamber and stack and clean as necessary;
- (j) Inspect mechanical loader, including limit switches, for proper operation, if applicable;
- (k) Visually inspect waste bed (grates), and repair or seal, as appropriate;
- (l) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;
- (m) Inspect air pollution control device or devices for proper operation, if applicable;
- (n) Inspect waste heat boiler systems to ensure proper operation, if applicable;

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	<ul style="list-style-type: none"> (o) Inspect bypass stack components; (p) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and (q) Generally observe that the equipment is maintained in good operating condition. <p>(2) Within 10 operating days following an equipment inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department for a different date to complete all necessary repairs [Authority: COMAR 26.11.08.08-2D(2)].</p> <p>(3) Each HMIWI shall undergo an equipment inspection annually (within 12 months following the previous annual equipment inspection), in accordance with the requirements of §D(1) of this regulation [Authority: COMAR 26.11.08.08-2D(3)].</p> <p>(4) The control device of HMIWI shall undergo an inspection annually (within 12 months following the previous annual inspection), in accordance with the requirements of §D(4) of this regulation, as follows:</p> <ul style="list-style-type: none"> (a) Inspect air pollution control device(s) for proper operation, if applicable; (b) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment; (c) Generally observe that the equipment is maintained in good operating condition; and (d) Within 10 operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department establishing a date whereby all necessary repairs of the designated facility shall be completed. [Authority: COMAR 26.11.08.08-2D(5)] <p>E. Operational Standards</p> <p>The total waste burned in both incinerators shall not exceed 150 tons per day [Authority: condition (5), Part D, Permit to Construct #510-2975-2-0279 M, issued on April 1, 2008]</p>

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1.2 Testing Requirements:

A. Emission Standards

A2. Opacity

- (1) The Permittee shall determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using EPA Reference Method 9 of appendix A. [Authority: COMAR 26.11.03.06C and COMAR 26.11.08.08-2B(4), which references 40 CFR §60.56c; §60.56c(b)(9)]

A2-1 Fugitive Emissions

- (2) The Permittee shall determine compliance with the visible emissions limits for fugitive emissions from fly ash/bottom ash storage and handling by conducting a performance test using EPA Reference Method 22 of appendix A-7 on an annual basis (no more than 12 months following the previous test) [Authority: COMAR 26.11.08.08-2B(4)(a), which references 40 CFR 60.56c(c)(3)].

A1, A3 – A10.

Pollutant	Reference	Reference Method (40 CFR Part 60, Appendix A)
A1. Particulate Emissions (PM)	§60.56c(b)(6)	Method 5, Appendix A-3, or Method 26A, Appendix A-8, or Method 29, Appendix A-8.
A3. Carbon Monoxide (CO)	§60.56c(b)(10)	Method 10 or 10B, Appendix A-4
A4. Dioxins/Furans	§60.56c(b)(11)	Method 23, Appendix A-7.
A5. Hydrogen Chloride (HCl)	§60.56c(b)(12)	Method 26 or 26A, Appendix A-8.
A6. Sulfur Dioxide (SO ₂)	§60.56c(b)(8)	Method 6 or 6C, Appendix A-4
A7. Nitrogen Oxides (NO _x)	§60.56c(b)(7)	Method 7 or 7E, Appendix A-4
A8. Lead (Pb) A9. Cadmium (Cd) A10. Mercury (Hg)	§60.56c(b)(13)	Method 29, Appendix A-8

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- (3) The Permittee shall determine compliance with the emission limits for the pollutants cited above by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test shall be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test shall invalidate the performance test. If the Permittee operates a certified CEMS for the pollutants CO, HCl, and NO_x, the performance of an annual Relative Accuracy Test Audit (RATA) satisfies the performance (stack) test requirement for those pollutants
[Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].
- COMAR 26.11.08.08-1A(5) “ Compliance and Performance Testing. A person who owns or operates an HMIWI subject to this regulation shall complete the initial and subsequent tests using procedures, conditions, the test methods in 40 CFR §60.56c, Subpart Ec, excluding the fugitive emissions testing requirements under 40 CFR §60.56c(b)(12) and (c)(3).”
- COMAR 26.11.08.08-2B(4)(a) “ A person who owns or operates an HMIWI subject to §B of this regulation shall complete the initial and subsequent tests which shall meet the conditions and requirements using the test methods and procedures listed under 40 CFR §60.56c(b)(1) to (b)(6) and (b)(9) to (b)(14), except for annual fugitive and CO emissions testing requirements, which shall comply with 40 CFR §60.56c(c)(3) and (4).”
- COMAR 26.11.08.08-2B(4)(b) “ In addition to the specified test method, compliance with the emission limits in §B may be demonstrated by use of CEMS or any approved alternative non-EPA test methods allowed under 40 CFR §60.56c(b).”
- COMAR 26.11.0808-2E(1)(b) requires the Permittee to complete the initial compliance testing for the October 6, 2009 standards within 180 days of the final compliance date, October 6, 2014.
- (4) The Permittee shall determine the maximum charge rate in accordance with 40 CFR §60.51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].
- (5) The Permittee shall determine the minimum secondary chamber temperature in accordance with 40 CFR §60.51c, which is 90 percent of the highest 3-hour average secondary chamber temperature (taken, as a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, CO, dioxin/furan, and NO_x

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	<p>emissions limits, or, for NOx and CO, some other representative period approved by the Department for which certified CEMS are operational and demonstrate compliance [Authority:... 40 CFR §60.56c(d), COMAR 26.11.03.06C(3)]</p> <p>(6) The Permittee shall determine the <u>minimum Hg sorbent flow rate</u> in accordance with 40 CFR §60.51c by the following: 90 percent of the highest 3-hour average Hg sorbent flow rate (taken at a minimum , once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].</p> <p>(7) The Permittee shall determine the <u>minimum HCl sorbent flow rate</u>, which, in accordance with 40 CFR §60.51c, shall be 90 percent of the highest 3-hour average HCl sorbent flow rate (taken at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit or some other representative period approved by the Department for which certified HCl CEMS are operational and demonstrate compliance [Authority: ... 40 CFR §60.56c(d); 40 CFR §60.57c(a); COMAR 26.11.03.06C(3)].</p> <p>(8) For the selective non-catalytic reduction (SNCR) system, the Permittee shall establish the <u>maximum charge rate</u>, the <u>minimum secondary chamber temperature</u>, and the <u>minimum reagent flow rate</u> as site specific operating parameters during the most recent performance tests to determine compliance with the October 6, 2009 emissions limit for NOx or during some other representative period approved by the Department for which NOx CEMS are operational and demonstrate compliance [Authority: ... 40 CFR §60.56c((h)(1)].</p> <p>B. Waste Management Plan C. Operator Training. D. Equipment Inspection Requirements E. Operational Standards</p> <p style="text-align: center;">{No emissions testing requirements under paragraphs B. - E.}</p>
1.3	<p><u>Monitoring Requirements:</u></p> <p>A. Emission Standards</p> <p>A1. – A10.</p> <p>(1) The Permittee shall comply with the monitoring requirements in 40 CFR §60.57c, subpart Ec as amended by the EPA Alternative Monitoring Approval (See Table 3- Summary of Curtis Bay Energy Operating</p>

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Parameter Monitoring and Records Requirements Deviation Request Approval) [Authority: COMAR 26.11.08.08-1A(6) and .08-2B(5), 40 CFR 60.57c and EPA's November 22, 2006 Alternative Monitoring Approval, as amended on August 09, 2007]

- (2) The Permittee shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 2 of this Permit [Authority: ... 40 CFR §60.57c(a) and (c)(d)].
- (3) The Permittee shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration [Authority: ... 40 CFR §60.57c(c)].
- (4) The Permittee shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: ... 40 CFR 60.57c(e)]

COMAR 26.11.08.08-1A(6) "Monitoring Requirements. A person who owns and operates an HMIWI subject to this regulation shall comply with the monitoring requirements under 40 CFR §60.57c of Subpart Ec."

COMAR 26.11.08.08-2B(5) "Monitoring Requirements. A person who owns and operates an HMIWI subject to this regulation shall comply with the monitoring requirements under 40 CFR §60.57c of Subpart Ec."

- (5) Facilities using a CEMS to demonstrate compliance with any of the emission limits under §60.33e(a), shall:
 - (a) In keeping with §60.37e(a)(1), for any of the emission limits under §60.33e(a)(1) (i.e., the emission guidelines as promulgated on September 15, 1997) determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours [Authority:40 CFR 60.56c(c)(3) and (c)(4)(i)]
 - (b) In keeping with §60.37e(a)(2), for any of the emission limits under §60.33e(a)(2) (i.e., the emission guidelines as amended on October 6, 2009) determine compliance with the appropriate emission limit(s) using a 24-hour block average, calculated as specified in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR part 60 [Authority:40 CFR 60.56c(c)(4)(i) - (5)(ii)]

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(c) Operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR 60. [Authority:40 CFR 60.56c(c)(4)(ii) and (c)(5)(iii)]

A1. Particulate Emissions - conditions (16) – (17) below.

A2. Opacity

(6) The Permittee shall continuously monitor opacity of the stack gases using a continuous opacity monitor (COM) that is certified in accordance with 40 CFR Part 60, Appendix B and meets the quality assurance criteria of the Department's Air and Radiation Administration's (MDE-ARA) Technical Memorandum 90-01 "Continuous Emission Monitoring (CEM) Policies and Procedures" (October 1999; amended), which is incorporated by reference. [Authority: condition E(15), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].

A2-1. Fugitive Emissions - See **§1.2 A** Testing Requirements.

A3. Carbon Monoxide (CO)

A5. Hydrogen Chloride (HCl)

(7) The Permittee shall develop and maintain a preventive maintenance plan for implementing the recommendations in the Carbon Monoxide Control and Hydrogen Chloride Control Evaluation Reports. The plan shall describe the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance that was performed [Authority: COMAR 26.11.03.06C].

(8) The Permittee shall continuously monitor and record CO and O₂ using Continuous Emissions Monitors that are certified in accordance with 40 CFR Part 60, Appendix B and meets the quality assurance criteria of the Department's Air Management Administration Technical Memorandum 90-01 "Continuous Emission Monitoring (CEM) Policies and Procedures" (October 1990), which is incorporated by reference [Authority: condition E(16), Permit to Construct 510-02975-2-0279 M, issued on April 1, 2008]

(9) During periods of temporary malfunction of the CO CEMS, the Permittee shall comply with the monitoring requirements with respect to the minimum secondary chamber temperature and maximum charge rate (each measured on a 3-hour rolling average) of §60.56c(d)(2), §60.56c(e)(1), and §60.57c(a), which references Table 3 of Subpart Ec of Part 60 [Authority: **COMAR 26.11.03.06C(3)**].

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- (10) The Permittee shall continuously monitor and record HCl using a Continuous Emissions Monitor that is installed, operated and maintained in conformance with §60.13 Monitoring requirements including Performance Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources in Appendix B and the quality assurance procedures specified in Appendix F to Part 60 **[Authority: 40 CFR 60 Appendix B]**.
- (11) During periods of known or suspected malfunction of the HCl CEMS, the Permittee shall maintain the 3-hour rolling average HCl sorbent flow rate (taken at a minimum, once every hour) above the minimum HCl sorbent flow rate, as determined in accordance with paragraph **§1.2 A(9)** above **[Authority: COMAR 26.11.01.11B(4) and COMAR 26.11.03.06C(3)]**.

A4. Dioxins/Furans

- (12) The Permittee shall install, calibrate (to manufacturer's specifications), maintain the fabric filter inlet temperature device and operate the incinerators with the fabric filter inlet temperature at no less than 330°F and no greater than 479°F based on a rolling 3-hour average **[Authority: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007]**.
- (13) On approval from the Department and the EPA, the Permittee may establish alternative upper and lower temperature limits by submitting confirmatory test data, manufacturer equipment specifications, vendor guarantees, and, on approval by the Department and, the EPA, by conducting subsequent performance tests **[Authority: ...40 CFR §60.56c(j) -(k)]**.
- (14) The Permittee shall maintain the incinerator carbon monoxide (CO) emissions at no greater than 11 parts per million by volume, adjusted to 7 percent (%) oxygen measured on a dry basis at standard conditions (ppmdv), based on a 24-hour block average **[Authority: COMAR 26.11.03.06C and EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007]**.

A10. Mercury

- (15) The Permittee shall operate the powdered activated carbon (PAC) injection system at a feed rate no lower than 90% of the highest PAC feed rate based on a 3-hour rolling average (readings taken at least once every hour) measured during the most recent performance test demonstrating compliance with the mercury emission limit The Permittee will utilize only PAC engineered for mercury control (i.e. containing a mercury oxidizing chemical additive such as bromine or mechanically engineered to increase mercury capture). **[Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007]**

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The Permittee shall evaluate potential mercury process monitors, select and install a mercury process inlet monitor, and operate the monitor continuously to be able to detect sudden increases in mercury concentration and automatically increase the PAC feed rate accordingly to prevent exceedances of the mercury emission limit. The mercury process monitor will operate continuously except during periodic calibration and maintenance and/or repair in accordance with manufacturer's specifications. Mercury process monitor implementation schedule:

- Select and purchase monitor within 120 days of issuance of this permit;
- Install, start-up and test monitor within 180 days of issuance of this permit;
- Commence operation of monitoring and automatic PAC feed control within 240 days of issuance of this permit.

[Authority: COMAR 26.11.03.06C].

- | | |
|------------------------|--------------|
| A1. Particulate Matter | A9. Cadmium |
| A4. Dioxins/Furans | A10. Mercury |
| A8. Lead | |

(16) The Permittee shall maintain an opacity of 10 percent or less based on a 3-hour rolling average as determined by a continuous opacity monitoring system (COMS). The COMS shall be operated and maintained in accordance with applicable COMAR requirements and Technical Memorandum 90-01. The operational limit is not applicable during periods of start-up, shutdown or malfunction [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

(17) Exceedance of the 3-hour rolling average 10 percent opacity operational limit shall require the Permittee to immediately initiate an evaluation of bags for possible mechanical or other failure, and expeditious replacement of failed bag(s) [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

A6. Sulfur Dioxide (SO₂) - No additional monitoring requirements.

Compliance with the HCl standard and the annual stack test for SO₂ assure compliance with the emission standard for SO₂.

A7. Nitrogen Oxides (NO_x)

(18) In lieu of continuous NO_x reactant injection rate monitoring required by 40 CFR §60.56c(h), the Permittee, may continuously monitor and record NO_x using a Continuous Emissions Monitor that is installed, operated and maintained in conformance with §60.13 Monitoring requirements, including Performance Specification 2- Specifications and Test Procedures for SO₂ and NO_x Continuous Emission Monitoring Systems in Stationary Sources in Appendix B and the quality assurance procedures specified in Appendix F to

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Part 60 [Authority: ... 40 CFR §60.56c(c)(5)(ii) and §60.56c(j)].

(19) The Permittee shall install and maintain a NO_x CEMS with feedback control of the SNCR reagent flows to each incinerator. Upon certification and operation of the NO_x CEMS, compliance with §60.57c(b)(2) –(3) and §60.56c(h)(2)-(3) cited by condition (21) below is not required, except as noted in condition (20) below [Authority: ... 40 CFR §60.56c(c)(5)(ii)-(iii) and §60.56c(j)].

(20) During periods of temporary malfunction of the NO_x CEMS, the Permittee shall comply with the requirements of §60.57c(b)(2) –(3) and §60.56c(h)(2)-(3) cited by condition (21) below [Authority: COMAR 26.11.01.11B(4)].

(21) The Permittee shall install, calibrate (to manufacturers' specifications) maintain and, except as provided above, operate devices (or establish methods) for monitoring the operating parameters listed in §60.56c(h) such that such devices (or methods) measure and record values of the operating parameters at all times. Operating parameter values shall be measured and recorded at the following minimum frequencies [Authority: 40 CFR §60.57c(b)]:

§60.57c(b)(1) Maximum charge rate shall be measured continuously and recorded once each hour;

§60.57c(b)(2) Minimum secondary chamber temperature shall be measured continuously and recorded once each minute; and

§60.57c(b)(3) Minimum reagent flow rate shall be measured hourly and recorded once each hour.

§60.56c (h)(2). Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature or the minimum reagent flow rate measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times. Operating parameter limits do not apply during performance tests.

§60.56c(h)(3). Except as provided in paragraph (i) of this section, operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum reagent flow rate simultaneously shall constitute a violation of the NO_x emissions limit.

- B. Waste Management Plan
- C. Operator Training
- D. Equipment Inspection Requirements

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	<p style="text-align: center;">{See §1.4 B. - D. Record Keeping Requirements}</p> <p>E. Operational Standards</p> <p>(1) The net weight of each individual charge to each incinerator shall be accurately determined [Authority: condition D(4), Permit to Construct 510-2975-2-0295 M, issued on April 1, 2008].</p> <p>(2) Plan for Compliance Requirements - See § 1.4 E. <u>Record Keeping Requirements</u></p>
1.4	<p><u>Record Keeping Requirements:</u></p> <p>A. Emission Standards for Large HMIWIs</p> <p>A1- A10</p> <p>(1) The Permittee shall maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:</p> <p style="padding-left: 40px;">§60.58c(b)(1): Calendar date of each record;</p> <p style="padding-left: 40px;">§60.58c(b)(2): Records of the following data:</p> <p style="padding-left: 80px;">(i) Concentrations of any pollutant listed in §60.52c or measurements of opacity as determined by the continuous emission monitoring system;</p> <p style="padding-left: 80px;">(ii) Results of fugitive emission (by EPA Reference Method 22) tests;</p> <p style="padding-left: 80px;">(iii) HMIWI charge dates, times, and weights and hourly charge rates;</p> <p style="padding-left: 80px;">(iv) Fabric filter inlet temperature during each minute of operation;</p> <p style="padding-left: 80px;">(vi) Amount and type of Hg sorbent used during each hour of operation;</p> <p style="padding-left: 80px;">(vii) Amount and type of HCl sorbent used during each hour of operation, during periods of HCl CEMS maintenance or malfunction.</p> <p style="padding-left: 80px;">(viii) Amount and type of NOx reagent used during each hour of operation, during periods of NOx CEMS maintenance or malfunction;</p> <p style="padding-left: 80px;">(ix) In keeping with §60.56c(d) and (h), the secondary chamber temperature during each minute of operation.,</p>

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	<p>(xv) Records indicating use of the bypass stack, including dates, times and durations;</p> <p>(xvi) For affected facilities complying with complying with §60.56c(j) and §60.57c(d), the owner or operator shall maintain all operating parameter data collected;</p> <p>(xix) Concentrations of CO as determined by the continuous emission monitoring system:</p> <p>§60.58c(b)(3) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (b)(2) of §60.58c, as amended by EPA’s November 22, 2006 Alternative Monitoring Approval, have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.</p> <p>§60.58c(b)(4) Identification of calendar days, times and duration of malfunctions, a description of the malfunction and the corrective action taken.</p> <p>§60.58c(b)(5) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (b)(2) of §60.58c, as amended by EPA’s November 22, 2006 Alternative Monitoring Approval, exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.</p> <p>§60.58c(b)(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.</p> <p>§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c), as amended by EPA’s November 22, 2006 Alternative Monitoring Approval.</p> <p>(2) The Permittee shall maintain for a period of at least 5 years records of the 6-minute and 3-hour rolling average opacity records [Authority: EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].</p> <p>(3) The Permittee shall maintain for a period of at least 5 years records of the date and time of identified bag failures including the date and time that failed bags were replaced [Authority:40 CFR §60.58c(b)(4) and EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].</p> <p>(4) Permittee shall keep for a period of at least 5 years, records of the results of the initial, annual and any subsequent performance (stack) tests conducted</p>
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to determine compliance with the emission limits and/or to establish or re-establish operating parameters, as applicable , and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable [Authority: COMAR 26.11.03.06C; 40 CFR §60.58c(b)(6)].

Additional Requirement

- A2. Opacity
- A3. Carbon Monoxide
- A5. Hydrogen Chloride
- A7. Nitrogen Oxides

(5) The Permittee shall maintain all records necessary to comply with the data reporting requirements of COMAR 26.11.01.10 and .11 [Authority: COMAR 26.11.03.06C].

A10. Mercury

- (6) Permittee shall keep for at least 5 years, records of customer outreach activities intended to ensure that mercury is excluded from waste sent to the facility, including:
- information sheets sent quarterly, advising waste generators about source separation, waste exclusion, packaging, and labeling requirements (generator rules); and
 - specific communications with generators about violations of generator rules

B. Waste Management Plan

The Permittee shall keep a current copy of the Waste Management Plan on site and shall make it available to authorized MDE or EPA inspectors upon request [Authority: COMAR 26.11.03.06C]

C. Operator Training

The Permittee shall keep the following records:

§60.58c(b)(8) Records showing the names of the HMIWI operators who have completed review of the information in §60.53c(h) as required by § 60.53c(i), including the date of the initial review and all subsequent annual reviews.

§60.58c(b)(9) Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of training.

§60.58c(b)(10) Records showing the names of the HMIWI operators who have

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	<p>met the criteria for qualification under § 60.53c and the dates of their qualification.</p> <p>D. Equipment Inspection Requirements</p> <p>The Permittee shall keep records of the annual air pollution control device inspection, any required maintenance, and any repairs not completed within 10 days of an inspection or the time frame established by the Department or EPA [Authority: 40 CFR § 60.58c(b)(2)(xvii)]</p> <p>E. Operational Standards</p> <p>(1) The following apply:</p> <p style="padding-left: 40px;">(a) The Permittee shall maintain records of the charge dates, times, and weights and hourly charge rates [Authority: 40 CFR §60.58c(b)(2)(iii)] .</p> <p style="padding-left: 40px;">(b) The net weight of each individual charge to each incinerator shall be accurately determined [Authority: condition D(4), Permit to Construct 510-2975-2-0295M, issued on April 1, 2008].</p> <p>(2) <i>Plan for Compliance.</i> The Permittee shall keep all of the test result records necessary to establish evidence of compliance with the milestone dates.</p>
<p>1.5</p>	<p><u>Reporting Requirements:</u></p> <p>A. Emission Standards</p> <p>A1. through A10.</p> <p>(1) The Permittee shall submit a test protocol to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: COMAR 26.11.03.06C and condition F(7), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008]</p> <p>(2) The Permittee shall submit the following reports. These reports shall include all the operating parameters identified in Table 2 of EPA’s November 22, 2006 Alternative Monitoring Request and the following information [Authority: ... 40 CFR 60.58c and EPA’s November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:</p> <p>§60.58c(c) The Permittee shall submit the information specified below no later than 60 days following the initial performance test. All reports shall be signed by the facilities manager:</p>

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The initial performance test data as recorded under § 60.56c(b)(1) through (14), as applicable.

The values of the site specific operating parameters established pursuant to §60.56c(d), (h) or (j) as applicable.

§60.58c(d) An annual report shall be submitted 1 year following the submission of the information in paragraph (c) of 40 CFR 60.58c and subsequent reports shall be submitted no more than 12 months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), (h), or (j), as applicable.

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to §60.56c(d), (h), or (j), as applicable.

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to §60.56c(d), (h), or (j) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for

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malfunction, and corrective action taken.

§60.58c(d)(9) See **§1.5 D. Equipment Inspection Requirements** below.

§60.58c(d)(11) Concentrations of CO as determined by the continuous emissions monitoring system.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

Additional Pollutant Specific Reporting Requirements from Permit to Construct

- A2. Opacity
- A3. Carbon Monoxide
- A5. Hydrogen Chloride
- A7. Nitrogen Oxides

- (3) The Permittee shall report all COMS or CEMS downtime that lasts or is expected to last more than 24 hours to the Department by telephone before 10 a.m. of the first regular business day following the breakdown. The system breakdown report required by COMAR 26.11.01.10D(1)(a) or 26.11.01.11E(1)(b) shall include the reason, if known, for the breakdown and the estimated period of time that the COMS or CEMS will be down. The owner or operator of the CEMS shall notify the Department by telephone when an out-of-service CEMS is back in operation and producing valid data [Authority: condition F(3), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008; COMAR 26.11.03.06C(3)].
- (4) The Permittee shall submit a quarterly summary report to the Department not later than 30 days following each calendar quarters. The report shall be in a format approved by the Department, and shall include the following [Authority: condition F(4), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008].:
 - (a) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

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- (b) The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;
- (c) The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the validity of emission data;
- (d) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;
- (e) Quarterly quality assurance activities; and
- (f) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and
- (g) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.”

B. Waste Management Plan

The Permittee shall submit a revised waste management plan meeting the requirements of 40 CFR §60.55c within 60 days of completion of the required initial compliance tests under regulation COMAR 26.11.08.08-2 [Authority: COMAR 26.11.08.08-2B(3)].

C. Operator Training

The Permittee shall report as required under Section III, Part 4, of this Permit, *Report of Excess Emissions and Deviations*.

D. Equipment Inspection Requirements.

The Permittee shall include in the annual report required under §60.58c(d) records of the annual air pollution control device inspection, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by Department or the EPA Administrator [Authority: ... 40 CFR §60.58c(d)(9)].

E. Operational Standards

HMIWI waste monitoring requirements. The Permittee shall include in the (semi-) annual report required by § 60.58c(d) of this permit any exceedance of the 150 ton per day limit [Authority: COMAR 26.11.03.06C]

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EPA has approved alternative monitoring requests from Curtis Bay Energy. Table 1 details the Alternative Surrogate Compliance Indicators for dioxins/furans and other emissions.

Table 2 summarizes the approved Alternative Operating Parameter Monitoring and Records Requirements to which Curtis Bay Energy is subject.

Table 1- Alternative Surrogate Compliance Indicators for CDD/CDF and Other Emissions

<i>If the Curtis Bay Energy incinerator unit...</i>	<i>Then Curtis Bay Energy is in violation of...</i>
Operates fabric filter inlet temperature below 330°F or above 479°F (3-hour rolling average) or operates fabric filter inlet temperature outside other limits approved by EPA..	CDD/CDF limit
<i>2b. For compliance with the <u>October 6, 2009 limits</u> operates above the maximum charge rate (3-hour rolling average), above the CO emission limitation of 11 ppmdv (7% O₂, 24-hour block average) and above the 10% opacity operational limit (3-hour rolling average) simultaneously during any 3-hour period</i>	CDD/CDF, PM, and CO limits
3. Operates above the maximum charge rate (3-hour rolling average) and below the minimum Hg sorbent flow rate (3-hour rolling average), simultaneously.	Hg limit
4. Operates the bypass stack	PM, CDD/CDF, HCl, Pb, Cd, and Hg limits

Notes:

1. The above operating parameter limits/restrictions do not apply during performance tests for demonstrating compliance.
2. Curtis Bay Energy may conduct a performance test within 30 days of a violation of the above operating limits/restrictions in order to demonstrate that its HMIWI unit is not in violation of an emission limit(s)
3. CO and HCl compliance is determined directly from certified CEMS and stack test data.
4. The primary compliance methods are the performance tests, as stipulated in the 111(d)/129 Plan.

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Table 2. Summary of Curtis Bay Energy Operating Parameter Monitoring and Records Requirements Deviation Request Approval

	Data Measurement	Data Recording
Waste feed charge rate* (3-hour rolling average)	Continuously	1 x hour
Fabric filter inlet temperatures*** (3-hour rolling average)	Continuously	1 x minute
Oxygen concentration (3-hour rolling average)	Continuously	1 x minute
Carbon monoxide concentration* (12-hour rolling average or 24-hour block average as applicable)	Continuously	1 x minute
Mercury sorbent (PAC) flow rate** (3-hour rolling average)	Continuously	1 x hour
HCl concentration* (12-hour rolling average or 24-hour block average as applicable)	Continuously	1 x minute
Percent opacity * (6-minute and 3-hour rolling average)	Continuously	1 x minute
Use of bypass stack	Continuously	1 x minute

Notes:

* Maximum operating limit applies

** Minimum operating limit applies

***Both maximum and minimum operating limit applies

O₂, CO, and HCl concentrations are determined at 7% O₂ and dry standard conditions.

[Authority: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007]

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2.0	<u>Emissions Unit Number(s)</u> EU-03 and EU -04: Storage Silos feeding alkaline sorbent material to either Unit 1 or Unit 2 dry scrubber.
2.1	<u>Applicable Standards/Limits:</u> A. Visible Emissions COMAR 26.11.06.02C(2) - A person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

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	<p>B. Particulate Emissions COMAR 26.11.06.03B(2) - A person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 gr/SCFD (68.7 mg/dscm).</p>
2.2	<p><u>Testing Requirements:</u></p> <p>A. and B. See Monitoring Requirements</p>
2.3	<p><u>Monitoring Requirements:</u></p> <p>A. The Permittee shall perform a visual observation of the exhaust from the baghouse, when the silo is being filled, at least one minute once per month to determine if there are any visible emissions. If visible emissions are observed, the Permittee shall perform the following [Authority: COMAR 26.11.03.06C]:</p> <ol style="list-style-type: none"> (1) Inspect all process and/or control equipment that may affect visible emissions; (2) Perform all necessary repairs and/or adjustments to all processes and/or control equipment, within 48 hours, so that visible emissions in the exhaust gases are eliminated; (3) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and (4) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions. <p>B. The Permittee shall develop and maintain a preventative maintenance plan for the baghouse that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates that maintenance was performed. [Authority: COMAR 26.11.03.06C]</p>
2.4	<p><u>Record Keeping Requirements:</u></p> <p>A. The Permittee shall maintain records of the results of the monthly inspections for at least five (5) years and make them available to the Department upon request [Authority: COMAR 26.11.03.06C]</p>

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	B. The Permittee shall maintain the log of inspection and maintenance records on site for at least five (5) years and make it available to the Department upon request. [Authority: COMAR 26.11.03.06C]
2.5	<u>Reporting Requirements:</u> A. and B. See Record Keeping Requirements

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SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (4) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

- (16) Containers, reservoirs, or tanks used exclusively for:
 - (d) No. 12 Storage of lubricating oils;

- (25) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

- (29) ✓ Laboratory fume hoods and vents;

For the following, attach additional pages as necessary:

- (31) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimis” levels listed in COMAR 26.11.02.10X (list and describe units):
 - No. 1 300 gallon diesel oil above ground tank

 - No. Varies Propane bottles used to power lift trucks

- (32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):
 - (None listed in the application)

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:
 - (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
 - (b) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
 - (c) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Operating Conditions:
 - (a) Except as otherwise provided in this part, the HMIWIs shall be operated in accordance with specifications included in the application and any operating procedures recommended by equipment vendors unless the Department provides written approval for alternative operating procedures.
 - (b) The Permittee shall keep the incinerator and associated process equipment, air pollution control equipment, instrumentation and controls, gauges, monitors, and recorders properly maintained, calibrated, and operated in accordance with the manufacturer's recommendations and specifications so as to accurately indicate and assure proper operating conditions and maintain continuous compliance with all applicable requirements.
 - (c) The Permittee shall properly calibrate and operate instruments to continuously monitor and record the furnace zone exit temperatures; the solid waste feed rate; the pressure drop across the baghouse system; and the inlet temperature of the dry scrubber system. [Reference: Condition E (12), Permit to Construct #510-2975-2-0279 M issued on April 1, 2008].
 - (d) The Permittee is prohibited from burning hazardous waste as defined in COMAR 26.13.03.
 - (e) The net weight of each individual charge to each incinerator shall be accurately determined.
 - (f) The total waste burned in both incinerators shall not exceed 150 tons per day.
 - (g) The maximum charge rate shall be determined in accordance with 40 CFR §60.51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.
 - (h) Ash shall be visually inspected periodically during each operating day to assure the complete combustion of the waste.

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- (i) Only natural gas or No. 2 fuel oil shall be used as auxiliary fuel.
- (j) All incinerator operators must be trained in accordance with the requirements of COMAR 26.11.08.09.
- (k) The Permittee shall operate in compliance with the Department's Waste Management Administration's Refuse Disposal Permit #2005-WMI-0036 and any subsequent permits issued.

3. Monitoring

The Permittee shall maintain a daily log book containing the following records:

- (a) Hours per day of operation of each furnace;
- (b) Maintenance of the air pollution control system;
- (c) Malfunction and repair of equipment items;
- (d) Quantity of refuse received and charged to incinerator.

4. Record Keeping and Reporting:

- (a) The Permittee shall maintain the daily log book at the facility. The most recent 3 years of data shall be readily available for the Department inspection.
- (b) The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:
 - (i) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (ii) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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BACKGROUND

Curtis Bay Energy, Limited Partnership (“Curtis Bay Energy”) owns and operates a medical waste incinerator facility located at 3200 Hawkins Point Road in Baltimore City. Medical Waste Associates, Limited Partnership was the original owner of the facility. Phoenix Services, Limited Partnership acquired ownership of the facility in 1995. Phoenix Services changed its name to Curtis Bay Energy, Limited Partnership in February 2005. The SIC code for the facility is 4953.

Curtis Bay Energy operates two identical incineration units (EU-1 and EU-2), which are permitted to incinerate a maximum of 150 tons per day total for the entire facility. The two incineration units share a common stack. Each incinerator has its own air pollution control system with a system of dampers that allow either air pollution control train to be used with either incinerator. Each incinerator is equipped with secondary and tertiary combustion chambers, heat recovery boiler, selective non-catalytic reduction (SNCR) for NO_x control, a dry injection acid gas scrubber, a powder activated carbon injection (PAC) system, and a fabric filter with passive dioxins/furans emissions control. Each incineration unit is also equipped with an emergency stack for venting combustion gas in emergency situations such as electrical power outages. There is a Continuous Opacity Monitor (COM) and Continuous Emission Monitoring Systems (CEMS) for monitoring the carbon monoxide (CO) and hydrogen chloride (HCl), nitrogen oxides (NO_x), carbon dioxide CO₂, and oxygen (O₂) content of the stack exhaust gases.

The following table (Table 1) summarizes the actual emissions from Curtis Bay Energy.

Table 1: Actual Emissions

Year	NO _x (TPY)	SO _x (TPY)	PM 10 (TPY)	CO (TPY)	VOC (TPY)	HCl (TPY)
2017	40.7	2.3	0.8	1.4	0.0	0.3
2016	31.5	1.4	0.9	1.7	0.1	0.07
2015	39.6	0.6	2.5	1.2	0.2	4.4
2014	42.9	3.1	1.5	4.4	5.0	10.5
2013	41.4	1.9	0.9	11.9	5.1	10.9

The major source threshold for triggering Title V permitting requirements in Baltimore City is 25 tons per year for VOCs or NO_x, and 100 tons per year for any other criteria pollutant, 10 tons per year of any single hazardous air pollutant (HAP) or 25 tons per year of any combination of HAPs. As a major source of NO_x emissions, Curtis Bay Energy is also required to obtain a Title V operating permit in accordance with COMAR 26.11.08.08D which requires all owners of hospital, medical, and infectious waste incinerators (HMIWIs) to submit a complete application for a Part 70 (Title V) operating permit not later than July 15, 2000.

The Department received a Part 70 renewal application on February 1, 2012. An administrative completeness review was conducted and the application was deemed to be administratively complete. A letter was sent granting Curtis Bay Energy an application shield.

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Applicable Source-Specific Federal Requirements

On September 15, 1997, EPA promulgated New Source Performance Standards (NSPS) 40 CFR part 60, "Subpart Ec—Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996." and Emission Guidelines (EG) 40 CFR part 60, "Subpart Ce - Emissions Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators [HMIWI]." Since the facility's incinerators commenced construction in 1991, prior to the effective date of the NSPS, the installations were, and continue to be, only subject to the provisions of the Emission Guidelines, Subpart Ce. The regulations required compliance with the September 15, 1997 requirements no later than March 15, 2001. Maryland Regulations COMAR 26.11.08.08-1 and .08-2 were adopted in order to implement Maryland's 111(d)/129 plan which incorporates Subpart Ce emission guidelines. COMAR 26.11.08.08-1 and .08-2 reference paragraphs of 40 CFR Part 60, Subpart Ec, "Standards of Performance for Hospital/Medical/Infectious/Waste Incinerators." The facility is not subject to Subpart Ec directly and is subject only to those paragraphs in Subpart Ec that are incorporated by reference in COMAR 26.11.08.08-1 or .08-2.

On October 6, 2009, the EPA promulgated revisions to both Subparts Ec and Ce. The revisions included more stringent standards for all regulated pollutants originally addressed by the rules, including particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, mercury, and lead. A revised State 111(d)/129 plan addressing the changes was required to be submitted to EPA for approval by October 6, 2011. The Department amended regulations COMAR 26.11.08.08-1 and initially adopted regulation COMAR 26.11.08.08-2 effective April 2, 2012 to implement the new federal requirements. Regulation COMAR 26.11.08.08-2 was further amended effective July 4, 2012 to modify the Plan for Compliance requirements.

EPA - Approval and Promulgation of Air Quality Plans; State of Maryland; Control of Emissions from Existing Hospital/Medical/Infectious Waste Incineration Units {REF.: FINAL RULE – FR – Published 04/28/2017}

"On November 28, 2016 (81 FR 85457), EPA published a notice of proposed rulemaking (NPR) for the State of Maryland. In the NPR, EPA proposed approval of Maryland's revised CAA section 111(d)/129 State plan for existing HMIWI units. The formal State plan revision (MD Submittal #12-11) was submitted by Maryland on January 10, 2013."

"EPA has reviewed the revised Maryland section 111(d)/129 plan submittal in the context of the requirements of 40 CFR part 60, subparts B, Ec and Ce, and part 62, subpart A. EPA has determined that the submitted revised section 111(d)/129 plan meets the above-cited requirements for State plans for existing units covered by the emission guidelines for that source category. Thus, EPA is approving Maryland's State plan in this action."

"EPA is approving the revised Maryland section 111(d)/129 plan for HMIWI units submitted pursuant to 40 CFR part 60, subpart Ce because the plan is at least as stringent as requirements in 40 CFR part 60, subpart Ce for existing HMIWI units. Therefore, EPA is amending 40 CFR part 62, subpart V to reflect this approval action. The scope of the approval of the section 111(d)/129 plan is limited to the provisions of 40 CFR parts 60 and 62 for existing HMIWI units, as referenced in the emission guidelines at 40 CFR part 60, subpart Ce."

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Regulation COMAR 26.11.08.08-2, has been incorporated into the Maryland SIP and is now federally enforceable per EPA’s approval of Maryland’s § 111(d)/129 Plan revisions, which became effective on May 30, 2017.

“COMAR 26.11.08.08-2 Emission Standards and Requirements for HMIWIs Under 40 CFR 60 Subpart Ce as Revised October 6, 2009.

A. Applicability and Emission Standards. Notwithstanding the requirements of Regulation .08-1 of this chapter, the emission standards and requirements of §B(1)—(7) and §C(1)—(6) of this regulation apply to a person who owns or operates an HMIWI subject to 40 CFR Part 60, Subpart Ce, as revised, October 6, 2009.”

Compliance Assurance Monitoring (CAM) Applicability

The Permittee is not required to submit a Compliance Assurance Monitoring plan under 40 CFR Part 64. Each pollutant or surrogate parameter falls into one of the allowed exempt categories provided in the rule. The exemptions fall into at least one of the following categories:

1. §64.2(b)(1)(i) Emission limits found in post-1990 regulation (40 CFR Part 60, Subpart Ec or Subpart Ce), (a post 1990 regulation which has been incorporated into Maryland Regulation COMAR 26.11.08.08).
2. §64.2(b)(1)(vi) Title V permit specifies a continuous compliance determination method (CEM, COM, or PEM).
3. §64.2(a)(2) No add-on control device was used to achieve compliance.
4. §64.2(a)(3) The uncontrolled potential-to-emit of the pollutant in question was below major source thresholds.

GREENHOUSE GAS (GHG) EMISSIONS

Curtis Bay Energy reported the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate almost entirely from the combustion of hospital, medical and infectious solid waste.

Table 2: Greenhouse Gases Emissions Summary

GHG	2014	2015	2016	2017
Total GHG, tpy CO ₂ e	26238	25238	25802	26100

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EMISSIONS UNIT IDENTIFICATION

MDE Registration Number	Emission Unit Number	Emissions Unit Name	Emission Unit Description	Date of Installation
2-0279	EU-1	Unit 1	Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a SNCR and a dual train dry scrubber/ fabric filter bag house system	1991
2-0279	EU-2	Unit 2	Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a SNCR and a dual train dry scrubber/fabric filter bag house system.	1991
2-0279	EU-3 EU-4	Storage Silos	Storage Silos feeding alkaline sorbent material to either Unit 1 or Unit 2 dry scrubber.	2014

OVERVIEW OF THE PART 70 PERMIT

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emission unit for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

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Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

EU-01: Unit 1 Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a scrubbing system a bag house, and a selective non-catalytic reduction system to be installed in 2014.

EU-02: Unit 2 Consumat Medical Waste Incinerator equipped with a heat recovery boiler and controlled by a scrubbing system, a bag house, and a selective non-catalytic reduction system to be installed in 2014.

A permit to construct was issued to Medical Waste Associates for this facility on September 8, 1989. The permit was modified on February 24, 1999 to upgrade the filter to PTFE catalyst bags for additional control of dioxins and furans. The permit was modified again on April 1, 2005 for the installation of a dual train activated carbon injection system for the control of mercury. Finally, permit to construct 510-2975-2-0279 M was issued on April 1, 2008 that superseded the previously issued permits to construct for Curtis Bay Energy. The permit to construct was issued at the same time as the 2008 Title V renewal permit was issued in order to establish permit requirements consistent with the EPA Emission Guidelines as well as Maryland's amended air quality regulations for HMIWI .

On April 28, 2006, Curtis Bay Energy submitted three (3) separate alternative monitoring requests to the U.S. Environmental Protection Agency (EPA):

1. "Request for Regulatory Deviation/Alternative Determination- Control of Carbon Monoxide";
2. "Request for Regulatory Deviation/Alternative Determination- Control of Hydrogen Chloride"; and
3. "Request for Regulatory Deviation/Alternative Determination- Control of Dioxin/Furans".

On July 13, 2006, EPA Region III partially approved Curtis Bay Energy's request for alternative monitoring requirements for carbon monoxide. On August 7, 2006, EPA Region III partially approved Curtis Bay Energy's request for alternative monitoring requirements for hydrogen chloride. On November 22, 2006, EPA partially approved Curtis Bay Energy's "Request for Regulatory Deviation/Alternative Determination- Control of Dioxins/Furans."

The specifics of the alternative monitoring request partial approvals are discussed in detail under Sections A3- Carbon Monoxide, A4- Dioxin/Furans, and A5- Hydrogen Chloride. Additionally, a summary of these documents is given in the Appendix to the fact sheet. These

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documents, as well as, permit to construct 510-2975-2-0279 M issued on April 1, 2008, as well as the current Title V permit, reference the Department's Air Management Technical Memorandum TM 90-01, "Continuous Emission Monitoring (CEM) Policies and Procedures (October 1990)." This document is being discontinued and references to it in Maryland's Air Quality Regulations have been removed. However, it is currently part of the State Implementation Plan (SIP) and is therefore included in the current Title V permit. Amended regulations COMAR 26.11.01.10 -.11 and COMAR 26.11.31 that address the relevant portions TM 90-01 will eventually be submitted to EPA for incorporation into the SIP.

Regulation COMAR 26.11.08.08-2E requires Curtis Bay Energy to comply with the October 6, 2009 Emissions Guidelines requirements by June 15, 2012, or request approval of an alternate compliance schedule with proposed measurable enforceable incremental steps of progress, including milestones for procurement, installation, and testing of new control equipment to ensure compliance with the new limits by no later than October 6, 2014. Curtis Bay Energy was required to submit a Plan for Compliance to the Department and EPA by December 15, 2011 to address those standards that could not be achieved by June 15, 2012. Curtis Bay Energy submitted a Plan for Compliance initially on June 1, 2011. Revisions to the Plan for Compliance were submitted to the Department on February 1, 2012 and on July 6, 2012.

COMPLIANCE UPDATE

CBE Responses to the quarterly CEM violations:

Hydrogen Chloride (HCl)

One of the primary causes of HCl control problems is maintaining dry alkaline sorbent flow. This has been greatly improved by Curtis Bay Energy switching from dry lime to trona. Curtis Bay Energy is also actively working to blend waste feed to compensate for materials known to have higher chlorine content that would generate more HCl on combustion.

CBE Response to failed mercury tests:

Curtis Bay Medical Waste services has notified all waste suppliers of excluded wastes and the importance of those items not being sent to the facility. Curtis Bay will continue to conduct an aggressive outreach program with the customer base, including solid waste worker training, to ensure that waste generators are aware of the waste exclusion regulations, as well as the options available for safe mercury disposal. This will remain an ongoing action.

CBE has discussed the mercury removal issue with multiple activated carbon suppliers to investigate any changes that could be made in the reagent that would improve the mercury capture rate. Activated carbon does not capture elemental mercury as efficiently as other forms of mercury. Multiple companies have additives that oxidize elemental mercury and improve capture rates. CBE shall utilize only PAC engineered for mercury control (i.e. containing a mercury oxidizing chemical additive such as bromine or mechanically engineered to increase mercury capture).

CBE has conducted a trial using a mercury analyzer made by AMETEK. The data from the analyzer was compared to the mercury readings from the manual samples. The analyzer has tracked favorably with the manual test methods. CBE plans to purchase an analyzer to facilitate periodic verification that the mercury control remains adequate. This analyzer should provide a

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method of isolating suppliers that are sending waste containing mercury that causes emissions problems at the facility. The offending suppliers will be notified and will be billed a surcharge, or if repeatedly found to be a source of mercury, they will be barred from sending waste to the facility.

Results of Most Recent Stack Tests & CEM Data (Unit 1):

The emission limits from the October 6, 2009 rule, and recent emissions performance test results, are summarized in the following table.

Emission	March/ May 2018	Re-Test Oct. 2018	Emissions Limits Per COMAR 26.11.08.08-2
Opacity	0%		10%
Particulate Matter (gr/dscf)	< 0.004		0.011
Carbon Monoxide (ppmdv)	—		11* (24-hr block avg)
Dioxins/Furans (ng/dscm TEQ)	0.014		0.054
Dioxins/Furans (ng/dscm, total)	1.02		9.3
Hydrogen Chloride (ppmdv)	—		6.6* (24-hr block avg)
Sulfur Dioxide (ppmdv)	< 2		9.0
Nitrogen Oxides (ppmdv)	—	—	140* (24-hr block avg)
Lead (mg/dscm)	0.013		0.036
Cadmium (mg/dscm)	0.0006		0.0092
Mercury (mg/dscm)	0.053 (F) (Fail)	0.002 (Pass)	0.018

Note*: Compliance for Carbon Monoxide, Hydrogen Chloride, and Nitrogen Oxides is through use of CEMs. The facility submits quarterly CEM reports.

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APPLICABLE STANDARDS and LIMITATIONS

Emission Standards for Large HMIWIs.

COMAR 26.11.08.08-2 Emission Standards and Requirements for HMIWIs Under 40 CFR 60 Subpart Ce as Revised October 6, 2009.

B. Emission Limits and Requirements for Small, Medium, and Large HMIWIs.

(1) A person who owns or operates a small, medium, or large HMIWI for which construction was commenced on or before June 20, 1996 or for which modification commenced on or before March 16, 1998, shall comply with the following emission limits:

Note: Regulation COMAR 26.11.08.08-2, is now federally enforceable per EPA's approval of Maryland's §111(d)/129 (SIP) Plan revisions, which became effective on May 30, 2017.

Each emission standard covered under the large HMIWI regulation is discussed in detail below. In addition to the HMIWI requirements, where applicable, COMAR, permit to construct and/or Plan for Compliance requirements are detailed.

	Pollutant	Units (7% oxygen, dry basis)	Emission Limits for Large HMIWIs
			COMAR 26.11.08.08-2 Subpart Ce, as amended, October 6, 2009
A1	Particulate Matter (PM)	milligrams per dry standard cubic meter (or per dry standard cubic foot)	25 (0.011)
A2	Opacity (Areas III & IV no visible emissions)	percent (6 minute block average)	10
A3	Carbon Monoxide (CO)	ppm by volume	11 (24-hr block average)
A4	Dioxins/Furans	nanograms per dry standard cubic meter total dioxins/furans (gr per billion dry standard cubic foot) or nanograms per dry standard cubic meter TEQ (gr per billion dry standard cubic foot)	9.3 (4.1) or 0.054 (0.024)
A5	Hydrogen Chloride (HCl).	ppm by volume	6.6 (24-hr block average)

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A6	Sulfur Dioxide (SO ₂)	ppm by volume	9.0
A7	Nitrogen Oxides (NO _x)	ppm by volume	140
A8	Lead (Pb)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.036 (0.016)
A9	Cadmium (Cd)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.0092 (0.0040)
A10	Mercury (Hg)	milligrams per dry standard cubic meter (gr per thousand dry standard cubic foot)	0.018 (0.0079)

1. The emissions limits apply at all times [Ref: 40 CFR §60.56c(a)]
2. Except where otherwise noted below, compliance with the above standards shall be determined by the average of three (3) stack test runs with a 1-hour minimum sample time per run, using test methods as specified in 40 CFR 60.56c(b)
3. Compliance with the dioxins/furans standards shall be determined by the average of three (3) stack test runs with a 4-hour minimum sample time per run;
4. Compliance with the CO 11 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(4)(i)]
5. Compliance with the HCl 6.6 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(5)(ii)].
6. Compliance with the NO_x 140 ppmv standard shall be determined by CEMS 24-hour block average [Authority: COMAR 26.11.08.08-2, which references 40 CFR §60.56c; §60.56c(c)(5)(ii)]

- A1 Particulate Matter**
- A8. Lead (Pb)**
- A9. Cadmium (Cd)**

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Particulate Matter (PM) emissions to 25 milligrams per dry standard cubic meter (0.011 grains per dry standard cubic foot), corrected to 7% oxygen, dry basis;

Lead (Pb) emissions to 0.036 milligrams per dry standard cubic meter (0.016 grains per thousand dry standard cubic foot), corrected to 7% oxygen, dry basis;

Cadmium (Cd) emissions to 0.0092 milligrams per dry standard cubic meter (0.0040 grains per thousand dry standard cubic foot), corrected to 7% oxygen, dry basis;

The Permittee has shown that the facility is currently in compliance with the PM, Pb, and Cd emission limits per the most recent stack tests conducted in March and May of 2018.

Compliance Demonstration

Testing requirements

Permit condition **§1.2 A(3)** requires the Permittee to determine compliance with the emission limits for PM, Pb, and Cd by conducting an annual performance (stack) test on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test [Authority: **COMAR 26.11.03.06C, COMAR 26.11.08.08-2B(4)**].

Permit condition **§1.2 A(6)** requires that the Permittee determine the maximum charge rate in accordance with 40 CFR §60.51c by the following : For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008]

Permit condition **§1.2 A(7)** requires the Permittee to determine the minimum secondary chamber temperature in accordance with 40 CFR §60.51c, which is 90 percent of the highest 3-hour average secondary chamber temperature (taken, as a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, CO, dioxin/furan, and NOx emissions limits [Authority:... 40 CFR §60.56c(d)].

Rationale. Secondary chamber temperature monitoring is an important surrogate parameter for PM as well as CO and dioxins/furans compliance.

Monitoring Requirements

Permit condition **1.3 A(4)** requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: ... 40 CFR 60.57c(e)]

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Permit condition **§1.3** A(16) requires that the Permittee maintain an opacity of 10 percent or less as measured by a 3-hour rolling average [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Permit condition **§1.3** A(17) requires that exceedance of the 3-hour rolling average 10 percent opacity operational limit shall require the Permittee to immediately initiate an evaluation of bags for possible mechanical or other failure, and expeditious replacement of failed bag(s) [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Permit condition **§1.3** A(3) requires that the Permittee shall install, calibrate, (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration [Authority: 40 CFR§60.57c(c)] .

Rationale: Conditions A(4) and A(16) relate to bag house integrity necessary to maintain compliance with the PM standard and would likely lead to an exceedance of the Pb and Cd standards as well. Operation of the bypass stack of sufficient duration would also likely lead to an exceedance of PM, Cd, and Pb .

Recordkeeping and Reporting Requirements

Permit condition **§1.4** A(1) requires the Permittee to "... maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c, and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

 “(i) Measurements of **opacity** as determined by a continuous emission monitoring system;

 “(iii) HMIWI charge dates, times, and weights and hourly charge rates;

 “(xv) Records indicating use of the **bypass stack**, including, dates, times, and durations;

§60.58c(b)(3) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval, **have not been obtained**, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken;.

§60.58c(b)(5) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c, as amended by EPA's November 22, 2006

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Alternative Monitoring Approval, **exceeded** the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b)(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c), as amended by EPA's November 22, 2006 Alternative Monitoring Approval.

Permit condition **§1.4** A(2) requires the Permittee to maintain for a period of at least 5 year records of the 6-minute and 3-hour rolling average opacity record [Authority: EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007 .

Permit condition **§1.4** A(3) requires the Permittee to maintain for a period of at least 5 years records of the date and time of identified bag failures including the date and time that failed bags were replaced. [Authority:40 CFR §60.58c(b)(4) and EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].

Permit condition **§1.4** A(4) requires the Permittee to maintain for a period of at least 5 years records of the results of the initial, annual and any subsequent performance (stack) tests conducted to determine compliance with the emission limits and/or to establish or re-establish operating parameters, as applicable , and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable [Authority: COMAR 26.11.03.06C and 40 CFR §60.58c(b)(6)].

Permit condition **§1.5** A(1) requires that a test protocol be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee must submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: Permit to Construct #510-2975-2-0279 M issued on April 1, 2008] .

Permit condition **§1.5** A(2) requires the Permittee to submit several reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR 60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), ... (lowest 3-hour average charge rate during the initial performance test rating demonstrating compliance with the October 6, 2009 standard and the lowest 3-hour average charge rate during the most recent performance test for any pollutant under §60.52).

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§60.58c(d)(2) The highest maximum operating parameter and...., for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(d) *The following operating parameters apply*

1. *highest 3-hour average charge rate during the current calendar year;*
2. *highest 3-hour average opacity as recorded by the COMS during the current calendar year, excluding periods of startup, shutdown, and malfunction*

§60.58c(d)(3) The highest maximum operating parameter ... for each operating parameter recorded pursuant to § 60.56c(d), for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period. *for the previous calendar year.*

1. *highest 3-hour average charge rate during the previous calendar year;*
2. *highest 3-hour average opacity as recorded by the COMS during the previous calendar year, excluding periods of startup, shutdown, and malfunction.*

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

*Missing operating parameter data,
Occurrence and duration of malfunctions
Exceedances of operating parameter limits*

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

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§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

Permit condition **§1.4 A(5)** specifies that the Permittee must maintain all records as necessary to comply with the data reporting requirements of COMAR 26.11.01.10 and .11 [Authority: COMAR 26.11.03.06C].

Permit condition **§1.5 A(3)** requires the Permittee to report all COMS downtime that lasts or is expected to last more than 24 hours to the Department by telephone. *See discussion under CO for further information*

Permit condition **§1.5 A(4)** requires the Permittee to submit a **quarterly summary report** to the Department not later than 30 days following each calendar quarters. *See quarterly summary report requirements discussion under CO for summary report requirements.*

A2. Opacity

COMAR 26.11.08.08-2B(1)- Emission Standards for HMIWIs, which establishes an emission standard for opacity of 10 percent or less, based on 6-minute block averages, as determined by a COMS.

COMAR 26.11.08.04B – Visible Emissions. “A person may not cause or permit the discharge of emissions from any incinerator or hazardous waste incinerator, other than water in an uncombined form, which is visible to human observers.”

Exceptions. “Section B(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, start-up, or occasional cleaning of control equipment if:

- (a) The visible emissions are not greater than 40 percent opacity; and
- (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.”

Compliance Demonstration

Testing Requirements.

40 CFR §60.56c(c)(1) requires the Permittee to determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using EPA Reference Method 9 of appendix A.

Monitoring Requirements

Permit condition **§1.3 A(6)** requires the Permittee to continuously monitor opacity of the stack gases using a continuous opacity monitor (COM) that is certified in accordance with 40 CFR Part 60, Appendix B and meets the quality assurance criteria of Department’s Air Management

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Administration Technical Memorandum 90-01 "Continuous Emission Monitoring (CEM) Policies and Procedures" (October 1990), which is incorporated by reference [Authority: condition E(15), Permit to Construct #510-2975-2-0279 M issued on April 1, 2008].

Permit condition **§1.3 A(3)** requires that the Permittee shall install, calibrate, (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration [Authority: ... 40 CFR §60.57c(c)] .

Permit condition **§1.3 A(4)** requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: ... 40 CFR §60.57c(e)]

Recordkeeping and Reporting Requirements

Permit condition **§1.4 A(1)** requires the Permittee to maintain the following information under §60.58c(b) relating to compliance with the opacity standards for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6)]:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

“(i) Measurements of **opacity** as determined by a continuous emission monitoring system;

...

“(xv) Records indicating use of the **bypass stack**, including, dates, times, and durations;

§60.58c(b)(3) Identification of calendar days for which opacity data or data on use of the bypass stack **have not been obtained**, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken;.

§60.58c(b)(5) Identification of calendar days for which the opacity **exceeded** the applicable limit (including use of the bypass stack) with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b)(6) The results of the annual and any subsequent performance tests to determine compliance with the opacity limit in accordance with §60.56c(c)(1) using EPA Reference Method 9 of appendix A..

§60.58c(b) (11) Records of calibration of the COMS and the device for monitoring the bypass stack

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Permit condition **§1.4** A(2) requires the Permittee to maintain for a period of at least 5 years records of 6-minute and 3-hour rolling average opacity record [Authority: EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007] .

Permit condition **§1.5** A(2) requires the Permittee to include the following information related to opacity in the semiannual and quarterly reports identified below:

§60.58c(d) requires a semiannual report signed by the facilities manager that include the information specified in paragraphs below that apply to opacity:

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If the annual Method 9 performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction , and corrective action taken.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

The Permittee must maintain all records and report as necessary to comply with the data reporting requirements of COMAR 26.11.01.10D and .11E that apply to COMS and CEMS [Authority: conditions E(13) and F(3), Permit to Construct #510-2975-2-0279 M issued on April 1, 2008] See Recordkeeping and Reporting Requirements under A3. Carbon Monoxide below for further detail

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A2-1 Fugitive Emissions

40 CFR §60.52c(c) Fugitive emissions. Beginning June 15, 2012, no owner or operator of an affected facility shall cause to be discharged into the atmosphere visible emissions of combustion ash from the ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 of appendix A-1 of 40 CFR Part 60, except as provided in paragraphs (d) and (e) of this section [Authority: COMAR 26.11.08.08-2B(4)(a)].

40 CFR §60.52c(d). The emission limit specified in paragraph (c) of this section does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however the emission limit does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

40 CFR §60.52c(e). The provisions specified in paragraph (c) above do not apply during maintenance and repair of ash conveying systems. Maintenance or repair shall not exceed 10 operating days per calendar quarter unless the owner or operator obtains written approval from the State agency establishing a date whereby all necessary maintenance and repairs of ash conveying systems shall be completed.

The requirement to do an initial fugitive emissions test only was added with the October 6, 2009 amendments to 40 CFR Part 60, Subpart Ce. See §, 60.37e(a) The facility is subject to §60.56c(b)(14), the requirement to perform an initial fugitive emissions test, but not §60.56c(c)(3) which addresses the requirement to perform the fugitive emissions test annually.

40 CFR §60.37e(a) “Except as provided in paragraph (b) of this section, for approval, a State plan shall include the requirements for compliance and performance testing listed in §60.56c of subpart Ec of this part, with the following **exclusions**.”

“(1) For a designated facility as defined in **§60.32e(a)(1)** subject to the emissions limits in §60.33e(a)(1), the test methods listed in §60.56c(b)(7) and (8), the **fugitive emissions** testing requirements under **§60.56c(b)(14)** and **(c)(3)**,...

“(2) For a designated facility as defined in **§60.32e(a)(1)** and (a)(2) subject to the emissions limits in **§60.33e(a)(2)** and (a)(3), the **annual fugitive emissions** testing requirements under **§60.56c(c)(3)**, ...

Where “ ...a designated facility as defined in **§60.32e(a)(1)**... “ is :

“ **§60.32e Designated facilities.**

“(a) Except as provided in paragraphs (b) through (h) of this section, the designated facility to which the guidelines apply is each individual HMIWI:

“(1) For which construction was commenced on or before June 20, 1996, or for which modification was commenced on or before March 16, 1998.

And , “...the emissions limits in **§60.33e(a)(2)**...” is:

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“§60.33e Emission guidelines.:

“(a) For approval, a State plan shall include the requirements for emissions limits at least as protective as the following requirements, as applicable:

...

“(2) “For a designated facility as defined in 60.32e(a)((1) subject to the emission guidelines as amended on October 6, 2009, the requirements listed in Table 1B of this subpart, except as provided n paragraph (b) of this section.”

The facility is subject to the emission guidelines as amended on October 6, 2009, which means that the facility is at least subject to an initial fugitive emissions test requirement. However, COMAR 26.11.08.08-2B(4)(a) requires annual fugitive emissions testing as well, because it negates the exclusion under §60.37e(a)(2) of the recurring annual test requirement:

COMAR 26.11.08.08-2B(4)(a) “ A person who owns or operates an HMIWI subject to §B of this regulation shall complete the initial and subsequent tests which shall meet the conditions and requirements using the test methods and procedures listed under 40 CFR §60.56c(b)(1) to (b)(6) and (b)(9) to **(b)(14)**, except for annual fugitive and CO emissions testing requirements, which shall comply with 40 CFR **§60.56c(c)(3)** and (4).”

Compliance Demonstration

Testing Requirements

Permit condition **§1.2 A(2)** requires the Permittee to determine compliance with the visible emissions limits for fugitive emissions from fly ash/bottom ash storage and handling by conducting a performance test using EPA Reference Method 22 of appendix A-7 on an annual basis (no more than 12 months following the previous test) [Authority: COMAR 26.11.08.08-2B(4)(a), which references 40 CFR 60.56c(c)(3)].

Monitoring Requirements Same as above.

Recordkeeping and Reporting Requirements.

Permit condition **§1.4 A(1)** requires the Permittee to keep records of the results of the fugitive emission tests by EPA Reference Method 22 for at least 5 years [Authority: COMAR 26.11.08.08-2B(6); §60.58c(b)(2)(ii)]

Permit condition **§1.5 A(2)** requires the Permittee to include the results of the annual fugitive emission test in the (semi-)annual report required by 40 CFR §60.58c(d) [Authority: COMAR 26.11.08.08-2B(6); §60.58c(d)(6)]

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A3 Carbon Monoxide

COMAR 26.11.08.08-2B(1) - Emission Standard for HMIWIs constructed prior to 1996. The standard applicable on or after June 15, 2012 limits carbon monoxide emissions to 11 ppm by volume, adjusted to 7% oxygen, dry basis. CEM determinations of compliance shall be based on a 24-hr block average [Ref: 40 CFR §60.56c(c)(4)]. This standard is currently in effect.

Compliance Demonstration

Testing Requirements

Permit condition **§1.2 A(3)** provides that the Permittee may determine compliance with the emission limits for **CO** by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test. However, if the Permittee operates a certified CO CEMS, the performance of an annual Relative Accuracy Test Audit (RATA) satisfies the performance test requirement for CO [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2 A(6)** requires the Permittee determine the maximum charge rate in accordance with 40 CFR §60.51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].

Permit condition **§1.2 A(7)** require the Permittee to determine the minimum secondary chamber temperature in accordance with 40 CFR §60.51c, which is 90 percent of the highest 3-hour average secondary chamber temperature (taken, as a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, **CO**, dioxin/furan, and NO_x emissions limits. For CO, some other representative period approved by the Department for which a certified CO CEMS is operational and demonstrates compliance may be used [Authority:... 40 CFR §60.56c(d)]

Monitoring Requirements

Permit condition **1.3 A(4)** requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)]

Permit condition **§1.3 A(5)(b)** specifies that compliance with the October 6, 2009 emission limit using CO CEMS will be based on a 24-hour block average [Authority: 40 CFR Part 60, Subpart Ce, §60.37e(a), which cites Subpart Ec; §60.56c(c)(4)]

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40 CFR §60.37e(a) states, “ ... for approval, a state plan shall include the requirements for compliance and performance testing listed in §60.56c of subpart Ec of this part , with the following exclusions:

The exclusion under §60.37e(a)(2) provides that an HMIWI, for which construction commenced before June 20, 1996, that is subject to the emission limits in the emission guidelines as amended on October 6, 2009, is not required to install CO CEMS as would otherwise be required to under 60.56c(c)(4), but “... may, however, elect to use CO CEMS as specified under §60.56c(c)(4)....”

40 CFR §60.56c(c)(4) states, “(4) For an affected facility as defined in §60.50c(a)(3) and (4), determine compliance with the CO emissions limit using CO CEMS according to paragraphs (c)(4)(i) through C(4)(iii) of this section:

“(i) Determine compliance with the CO emissions limit using a 24-hour block average , calculated as specified in section 12.4.1 of EPA Reference Method 19 of appendix A-7 of this part,

“(ii) Operate the CEMS in accordance with the applicable procedures under appendices B and F of this part.

“(iii) Use of a CO CEMS may be substituted for the CO annual performance test and minimum secondary chamber temperature to demonstrate compliance with the CO emissions limit.”

Permit condition **§1.3 A(7)** requires the Permittee to develop and maintain a preventive maintenance plan for implementing the recommendations in the Carbon Monoxide Control Evaluation Report. The plan must describe the maintenance activity and time schedule for completing each activity. The Permittee must perform maintenance activities within the time frames established in the plan and must maintain a log with records of the dates maintenance was performed [Authority: COMAR 26.11.03.06C] .

Rationale for permit condition **§1.3 A(7)**: This requirement was incorporated into the previous Title V permit issued on April 1, 2008 and is retained in the present permit as a part of continuing maintenance activity. The requirement originates out of the Consent Order dated August 9, 2005 (expired on August 9, 2008) which required the Permittee to retain the services of an independent contractor to review the operations of the facility and prepare a written report containing recommendations and a proposed schedule for the implementation of measures to ensure that the facility operates in compliance with carbon monoxide requirements. The independent contractor review was required to specifically address the causes of past carbon monoxide emission violations and make recommendations to eliminate such violations.

Permit condition **§1.3 A(8)** requires the Permittee to continuously monitor and record CO and O₂ using Continuous Emissions Monitors that are certified in accordance with 40 CFR Part 60, Appendix B and meets the quality assurance criteria of the Department’s Air Management Administration Technical Memorandum 90-01 “Continuous Emission Monitoring (CEM) Policies and Procedures” (October 1990), which is incorporated by reference [Authority: condition E(16), Permit to Construct 510-02975-2-0279 M, issued on April 1, 2008]

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On July 13, 2006, EPA Region III partially approved Curtis Bay Energy's request for alternative monitoring requirements for carbon monoxide. The Permittee was exempted from the requirement to monitor the minimum secondary chamber temperature and the annual performance test requirement for CO. These provisions have since been incorporated into Subpart Ec with the October 6, 2009 amendments (See Appendix).

Permit condition **§1.3 A(9)** requires the Permittee, during periods of temporary malfunction of the CO CEMS, to comply with the monitoring requirements with respect to the minimum secondary chamber temperature and maximum charge rate (each measured on a 3-hour rolling average) of §60.56c(d)(2), §60.56c(e)(1), and §60.57c(a), which references Table 3 of Subpart Ec of Part 60 [Authority: COMAR 26.11.03.06C(3)].

Recordkeeping and Reporting Requirements

Permit condition **§1.4 A(1)** derives from Subpart Ec § 60.58c(b) "The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c, and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]. The following requirements pertain to CO emissions:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

....

"(iii) HMIWI charge dates, times and weights and hourly charge rates;

....

"(xv) Records indicating use of the bypass stack, including dates times and durations;

....

"(xix) Concentrations of CO as determined by the continuous emission monitoring system.

§60.58c(b)(3) Identification of calendar days for which data on emission rates ... specified under paragraph (b)(2) of §60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval, **have not been obtained**, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken.

§60.58c(b)(5) Identification of calendar days for which data on **emission rates** ... specified under paragraph (b)(2) of §60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval, exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c), as amended by EPA's November 22, 2006 Alternative Monitoring Approval.

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Permit condition **§1.5** A(1) requires that a test protocol be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: Permit to Construct #510-2975-2-0279 M issued on April 1, 2008].

Permit condition **§1.5** A(2) requires the Permittee to submit the following reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR 60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), (h), or (j), as applicable.

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(d), (h), or (j), as applicable.

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to § 60.56c(d), (h), or (j) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

Note: The applicable operating parameters pertaining to CO emissions "...established pursuant to §60.56c(d)..." are the maximum charge rate and minimum secondary chamber temperature

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

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§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(d)(11) Concentrations of CO as determined by the continuous emissions monitoring system.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

The Permit to Construct 510-2975-2-0279M issued on April 1, 2008 [conditions E(13) and F(3)] specifies quarterly and other reporting provisions extracted from COMAR 26.11.01.10 – 11 for the COMS and the CO and HCI CEMS. These provisions would not otherwise apply to HMIWI.

Permit condition **§1.4** A(5) specifies that the Permittee must maintain all records as necessary to comply with the data reporting requirements of COMAR 26.11.01.10 and .11 [Authority: COMAR 26.11.03.06C].

Permit condition **§1.5** A(3) requires the Permittee to report all COMS or CEMS downtime that lasts or is expected to last more than 24 hours to the Department by telephone before 10 a.m. of the first regular business day following the breakdown. The system breakdown reports required by COMAR 26.11.01.10D(1)(a) or COMAR 26.11.01.11E(1)(b) shall include the reason, if known, for the breakdown and the estimated period of time that the COMS or CEMS will be down. The owner or operator of the CEMS shall notify the Department by telephone when an out-of-service CEMS is back in operation and producing valid data [Authority: condition F(3), Permit to Construct 510-2975-2-0279M issued on April 1, 2008].

Permit condition **§1.5** A(4) requires the Permittee to submit a **quarterly summary report** to the Department not later than 30 days following each calendar quarters. The report shall be in a format approved by the Department, and shall include the following [Authority: condition F(4), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008].:

(a) The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;

(b)The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;

(c) The time periods and cause of all COM or CEM downtime including records of any repairs, adjustments, or maintenance that may affect the validity of emission data;

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(d) Quarterly totals of excess emissions, installation downtime, and CEM downtime during the calendar quarter;

(e) Quarterly quality assurance activities; and

(f) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; and

(g) Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.”

A4. Dioxins/Furans

COMAR 26.11.08.08-2B(1) Emission Standard for HMIWIs constructed prior to 1996 establishes a dioxins/furans limit of 9.3 nanogram/dscm or 0.054 nanograms per dry standard cubic meter TEQ, adjusted to 7% O₂, dry basis.

Compliance Demonstration

Testing Requirements

Permit condition **§1.2 A(3)** requires the Permittee to determine compliance with the emission limits for **Dioxins/Furans**, by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2 A(4)** allows the Permittee to use the results of previous emissions test to demonstrate initial compliance with the October 6, 2009 emission limits in accordance with 40 CFR §60.37e(f) [Authority: 40 CFR Part 60, Subpart Ce, §60.37e(f)].

Permit condition **§1.2 A(5)** requires the Permittee to complete the compliance testing for the October 6, 2009 emission limits no later than 180 days after the final compliance date, October 6, 2014 [Authority: COMAR 26.11.08.08-2E(1)(a)].

Permit condition **§1.2 A(6)** requires the Permittee to determine the maximum charge rate in accordance with 40 CFR §60.51c by the following : For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].

Permit condition **§1.2 A(7)** requires the Permittee to determine the minimum secondary chamber temperature in accordance with 40 CFR §60.51c, which is 90 percent of the highest 3-

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hour average secondary chamber temperature (taken, as a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, CO, dioxin/furan, and NOx emissions limits [Authority:... 40 CFR §60.56c(d)]

Permit condition **§1.2 A(8)** requires the Permittee to determine the minimum Hg sorbent flow rate (i.e., powdered activated carbon) in accordance with 40 CFR §60.51c by the following: 90 percent of the highest 3-hour average Hg sorbent flow rate (taken at a minimum once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Monitoring Requirements

Permit condition **§1.3 A(3)** requires that the Permittee shall install, calibrate, (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration [Authority: 40 CFR§60.57c(c)] .

Permit condition **1.3 A(4)** requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)]

Permit condition **§1.3 A(12)** requires the Permittee to install, calibrate (to manufacturer's specifications), maintain the fabric filter inlet temperature device and operate the incinerators with the fabric filter inlet temperature at no less than 330°F and no greater than 479°F based on a rolling 3-hour average [Authority: EPA Alternative Monitoring Request Approval - amended December 10, 2018].

Rationale for conditions **§1.3 A(9) – (13)**:

As previously mentioned, the Permittee petitioned the Administrator on April 28, 2006, "Request for Regulatory Deviation/ Alternative Control of Dioxins/Furans." The request for alternative parameters was conditionally approved by EPA. To summarize, the basis for the petition was that the facility uses a fabric filter impregnated with catalyst for the control of dioxins/furans, which is the primary mechanism for control of dioxins/furans. Powdered activated carbon injection was secondary and primarily used for mercury emissions control. Hence an upper fabric filter inlet temperature based on the dioxins/furans compliance test, as would otherwise be required, was inappropriate since catalyst activity increases with temperature, while activated carbon adsorption decreases with increasing temperature. The appropriate upper and lower limits were determined by manufacturer guarantees for catalyst activity and emissions testing. The parameters that are to be continuously monitored found in Table 4 of the fact sheet (Table 3 of the Permit). See Appendix – Alternative Determination Approvals from EPA dated July 13, 2006, August 7, 2006, November 22, 2006 – amended August 7, 2007.

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Permit condition **§1.3** A(13) allows the Permittee, on approval from the Department and the EPA, to establish alternative upper and lower temperature limits by submitting confirmatory test data, manufacturer equipment specifications, manufacturer guarantees, and, on approval by the Department and the EPA, by conducting subsequent performance tests [Authority: 40 CFR §§60.56c(j) -(k)].

Permit condition **§1.3** A(14) requires the Permittee to maintain the incinerator carbon monoxide (CO) emissions at no greater than 11 parts per million by volume, adjusted to 7 percent (%) oxygen measured on a dry basis at standard conditions (ppmdv), based on a 24-hour block average. This requirement replaces the original requirement of 40 ppmdv at 7% O₂, 12-hour rolling average with the current October 6, 2009 CO standard now in effect [Authority: COMAR 26.11.03.06C(3)].

Permit condition **§1.3** A(15) requires the Permittee to operate the Hg sorbent injection system at a feed rate no lower than 90% of the highest Hg sorbent feed rate based on a 3-hour rolling average (readings taken at least once every hour) measured during the most recent performance test demonstrating compliance with the mercury emission limit. The Permittee will utilize only PAC engineered for mercury control (i.e. containing a mercury oxidizing chemical additive such as bromine or mechanically engineered to increase mercury capture). [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007].

The Permittee shall evaluate potential mercury process monitors, select and install a mercury process inlet monitor, and operate the monitor continuously to be able to detect sudden increases in mercury concentration and automatically increase the PAC feed rate accordingly to prevent exceedances of the mercury emission limit. The mercury process monitor will operate continuously except during periodic calibration and maintenance and/or repair in accordance with manufacturer's specifications. Mercury process monitor implementation schedule:

- Select and purchase monitor within 120 days of issuance of this permit;
- Install, start-up and test monitor within 180 days of issuance of this permit;
- Commence operation of monitoring and automatic PAC feed control within 240 days of issuance of this permit.

[Authority: COMAR 26.11.03.06C]

Permit condition **§1.3** A(16) requires the Permittee to comply with a 10% opacity operational limit based on a 3-hour rolling average, as determined by a continuous monitoring system (COMS). The COMS shall be operated and maintained in accordance with applicable COMAR requirements and Technical Memorandum 90-01. The operational limit is not applicable during periods of start-up, shutdown or malfunction.[Authority: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007]

Permit condition **§1.3** A(17) provides that an exceedance of the 3-hour rolling average 10% opacity operational limit shall require the Permittee to immediately initiate an evaluation of bags for possible mechanical or other failure, and expeditious replacement of failed bag(s) [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

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Recordkeeping and Reporting

Permit condition **§1.4 A(1)** requires the Permittee to , “... maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c, and EPA’s November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

“(i) ...Measurements of. **opacity** as determined by a continuous emission monitoring system;

....

“(iii) HMIWI charge dates, times, and weights and hourly charge rates;

“(vi) Amount and type of **Hg sorbent** [i.e. powdered activated carbon sorbent] used in each hour of operation;

“(xv) Records indicating use of the **bypass stack**, including, dates, times, and durations;

“(xvi) For affected facilities complying with §60.56c(j) and §60.56c(d), the owner or operator shall maintain all **operating parameter data** collected;

...

“(xix) Concentrations of CO as determined by the continuous emission monitoring system;

§60.58c(b)(3) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c, as amended by EPA’s November 22, 2006 Alternative Monitoring Approval, have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken.

§60.58c(b)(5) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c, as amended by EPA’s November 22, 2006 Alternative Monitoring Approval, exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b)(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c), as amended by EPA’s November 22, 2006 Alternative Monitoring Approval.

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Permit condition **§1.4 A(2)** requires the Permittee to maintain records of 6-minute and 3-hour rolling average opacity record [Authority: EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].

Permit condition **§1.4 A(3)** requires the Permittee to maintain for a period of at least 5 years records of the date and time of identified bag failures including the date and time that failed bags were replaced [Authority:40 CFR §60.58c(b)(4) and EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].

Permit condition **§1.4 A(4)** requires the Permittee to maintain for a period of at least 5 years records of the results of the initial, annual and any subsequent performance (stack) tests conducted to determine compliance with the emission limits and/or to establish or re-establish operating parameters, as applicable, and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable [Authority: COMAR 26.11.03.06C and 40 CFR §60.58c(b)(6)].

Permit condition **§1.5 A(1)** requires that a test protocol must be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: condition F(7), Permit to Construct #510-2-0279 M issued on April 1, 2008].

Permit condition **§1.5 A(2)** requires the Permittee to submit the following reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR 60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(c) submit the information specified below no later than 60 days following the initial performance test. All reports shall be signed by the facilities manager:

§60.58c(c)(1) The initial performance test data as recorded under § 60.56c(b)(1) through (14), as applicable.

§60.58c(c)(2) The values of the site specific operating [parameters established pursuant to §60.56c(d), (h) or (j) as applicable.

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), (h), or (j), as applicable. Only two parameter limits are established during compliance testing:

Lowest waste feed charge rate (3-hour rolling average) established during the most recent compliance test for any pollutant under §60.52c, including dioxins/furans.

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Lowest Hg sorbent flow rate (3-hour rolling average) established during the most recent Hg compliance test.

– See discussion below)¹

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(d), (h), or (j), as applicable. Applicable to the following alternative monitoring parameters for dioxins/furans :

Highest waste feed charge rate (3-hour rolling average).

Highest and lowest fabric filter inlet temperatures (3-hour rolling average).

Highest carbon monoxide concentration, corrected to 7% O₂ dry gas (12-hour rolling average or 24-hour block average).

Highest percent opacity (3-hour rolling average).

Lowest powdered activated carbon (PAC) sorbent flow rate (3-hour rolling average).

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to § 60.56c(d), (h), or (j) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period. [See (d)(2) above]

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR

¹ Regarding §60.58c(d)(1) – (3), the applicable operating parameter pertaining to dioxins/furans emissions “...established pursuant to §60.56c(d), (h) or (j)...” fall under §60.56c(j), which states:

“ (j) The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, ... to comply with the emission limits under § 60.52c shall petition the Administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the Administrator. ”

As previously mentioned, the Permittee did petition the Administrator on April 28, 2006, “Request for Regulatory Deviation/ Alternative Control of Dioxins/Furans.” To summarize, the basis for the petition was that the facility uses a fabric filter impregnated with catalyst for the control of dioxins/furans, and is the primary mechanism for control of dioxins/furans. Powdered activated carbon injection was secondary and primarily used for mercury emissions control. The request for alternative parameters was conditionally approved. The parameters that are to be continuously monitored found in Table 4 of the fact sheet (Table 3 of the Permit).

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60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(d)(11) Concentrations of CO as determined by the continuous emissions monitoring system.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

The Permit to Construct 510-2975-2-0279M issued on April 1, 2008 [conditions E(13) and F(3)] specifies quarterly and other reporting provisions extracted from COMAR 26.11.01.10 – 11 for the COMS and the CO and HCl CEMS. These provisions would not otherwise apply to HMIWI. For further information see Compliance Demonstration for CO.

Permit condition **§1.4** A(5) specifies that the Permittee must maintain all records as necessary to comply with the data reporting requirements of COMAR 26.11.01.10D and .11E [Authority: COMAR 26.11.03.06C].

Permit condition **§1.5** A(3) requires the Permittee submit reports in accordance with COMAR 26.11.01.10D(1)(a) for the opacity monitor and COMAR 26.11.01.11E(1)(b) and the CO CEMS. [Authority: condition F(3), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008].

A5. Hydrogen Chloride

COMAR 26.11.08.08-2B(1) establishes an HCl limit of 6.6 ppm by volume corrected to 7% O₂, dry basis. CEM compliance shall be based on a 24-hour block average in accordance with 40 CFR §60.56c(c)(5)(ii)

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Compliance Demonstration

Testing Requirements

Permit condition **§1.2** A(3) provides that the Permittee may determine compliance with the emission limits for **HCl** by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test. However, if the Permittee operates a certified HCl CEMS, the performance of an annual Relative Accuracy Test Audit (RATA) satisfies the performance test requirement [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2** A(6) requires the Permittee determine the maximum charge rate in accordance with 40 CFR §60.51c by the following : For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].

Permit condition **§1.2** A(6) requires the Permittee to determine the minimum HCl sorbent flow rate, which, in accordance with 40 CFR §60.51c, shall be 90 percent of the highest 3-hour average HCl sorbent flow rate (taken at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit, or some other representative period approved by the Department for which a certified HCl CEMS is operational and demonstrates compliance [Authority: ... 40 CFR §60.56c(d); 40 CFR §60.57c(a)].

Use of HCl CEMS may be substituted for the HCl initial and annual performance tests and minimum HCl sorbent flow rate to demonstrate compliance with the HCl emission limit [Authority: 40 CFR Part 60, Subpart Ce, §60.37e(a), which cites Subpart Ec; §60.56c(b)(12); §60.56c(c)(5)(iv)]. However, during periods of downtime or malfunction of the HCl CEMS , these parameters must be continuously monitored and it is necessary to establish limits for these parameters.

Monitoring Requirements

Permit condition **1.3** A(3) requires the Permittee to install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration [Authority: 40 CFR §60.57c(c)].

Permit condition **1.3** A(4) requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)].

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Permit condition **1.3** A(5) requires that facilities using a CEMS to demonstrate compliance with any of the emission limits under §60.33e(a), must:

- (a) In keeping with §60.37e(a)(1), for any of the emission limits under §60.33e(a)(1) (i.e., the emission guidelines as promulgated on September 15, 1997) determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours [Authority:40 CFR 60.56c(c)(3) and (c)(4)(i)];
- (b) In keeping with §60.37e(a)(2), for any of the emission limits under §60.33e(a)(2) (i.e., the emission guidelines as amended on October 6, 2009) determine compliance with the appropriate emission limit(s) using a 24-hour block average, calculated as specified in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR part 60 [Authority:40 CFR 60.56c(c)(4)(i) - (5)(ii)]

Permit condition **1.3** A(7) requires the Permittee to develop and maintain a preventive maintenance plan for implementing the recommendations in the Hydrogen Chloride Control Evaluation Report. The plan shall describe the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates that maintenance was performed. [Authority: COMAR 26.11.03.06C]

Permit condition **1.3** A(10) requires the Permittee to use a CEMS to monitor HCl emissions. The Permittee must install, operate, maintain, and calibrate the CEM in accordance with the Performance Specifications under 40 CFR Part 60, Appendix B and the Quality Assurance Procedures under 40 CFR Part 60, Appendix F with the revised RATA calculation procedures given in Enclosure 1 of EPA's August 7, 2006 alternative determination letter and the December 10, 2018 EPA approval letter.

Permit condition **1.3** A(11) requires that under the following circumstances, the Permittee must maintain the 3-hour rolling average HCl sorbent flow rate (taken at a minimum, once every hour) above the minimum HCl sorbent flow rate, as determined during the most recent performance test for HCl:

- (a) During periods of known or suspected malfunction of the HCl CEMS [Authority: COMAR 26.11.01.11B(4) and COMAR 26.11.03.06C(3)]; and
- (b) Prior to approval by the Department of an HCl CEMS for demonstrating compliance with the HCl standard as promulgated on October 6, 2009 [Authority: COMAR 26.11.03.06C(3)].

Curtis Bay Energy received approval of alternative monitoring of HCl by CEM and relief from the requirement to continuously monitor the HCl sorbent flow rate and maintain a minimum HCl sorbent flow rate as determined during an HCl performance test. (EPA Alternative Determination letter dated August 7, 2006 -See Appendix for detailed discussion). Relief from these provisions for HMIWI using HCl CEMS has now been incorporated into Subpart Ec as amended on October 6, 2009. Curtis Bay Energy received approval for the use of Performance

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Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources in Appendix B of 40 CFR part 60.

40 CFR §60.56c(c)(5) states, “ Facilities using CEMS to demonstrate compliance with any of the of the emission limits under §60.52c shall:

“(ii) For an affected facility as defined in §60.50c(3) and (4), determine compliance with the appropriate emissions limit(s) using a 24-hour block average, calculated as specified in section 12.4.1 of EPA Reference Method 19, appendix A-7 of this part;

“(iii) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part. For those CEMS for which performance specifications have not yet been promulgated (HCl, multi-metals), this option for an affected facility as defined in §60.50c(a)(3) and (4) effect on the date a final performance specification is published in the Federal Register or the date of approval of a site-specific monitoring plan.

“(iv) For an affected facility as defined in §60.50c(3) and (4), be allowed to substitute use of an HCl CEMS for the HCl annual performance test, minimum HCl sorbent flow rate, and minimum scrubber liquor flow rate to demonstrate compliance with the HCl emissions limit.

Recordkeeping and Reporting Requirements.

Permit condition **§1.4 A(1)** derives from Subpart Ec § 60.58c(b) “The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c, and EPA’s November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]. The following pertain to HCl emissions:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

“(i) Concentration of any pollutant listed in § 60.52c ... as determined by a continuous emission monitoring system [CEMS]; *applicable to HCl.*

....

“(iii) HMIWI charge dates, times and weights and hourly charge rates;

....

“(xv) Records indicating use of the bypass stack, including dates times and durations;

§60.58c(b)(3) Identification of calendar days for which data on emission rates ... specified under paragraph (b)(2) of §60.58c, as amended by EPA’s November 22, 2006 Alternative Monitoring Approval, **have not been obtained**, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken.

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§60.58c(b)(5) Identification of calendar days for which data on **emission rates** ... specified under paragraph (b)(2) of §60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval, exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c), as amended by EPA's November 22, 2006 Alternative Monitoring Approval.

Permit condition **§1.5 A(1)** requires that a test protocol be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: Permit to Construct #510-2975-2-0279 M issued on April 1, 2008] .

Permit condition **§1.5 A(2)** requires the Permittee to submit several reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR 60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), (h), or (j), as applicable.

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(d), (h), or (j), as applicable.

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to § 60.56c(d), (h), or (j) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

Note: The applicable operating parameters pertaining to HCl emissions "...established pursuant to §60.56c(d), (h) or (j)..." falls under §60.56c(d) and are the maximum charge rate and minimum HCl sorbent flow rate during periods HCl CEMS malfunction, testing or maintenance.

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR

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§60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

The Permit to Construct 510-2975-2-0279 M issued on April 1, 2008 [conditions E(13) and F(3)] specifies quarterly and other reporting provisions extracted from COMAR 26.11.01.10 – 11 for the COMS and the CO and HCl CEMS. These provisions would not otherwise apply to HMIWI.

Permit condition **§1.4 A(5)** specifies that the Permittee must maintain all records as necessary to comply with the data reporting requirements of COMAR 26.11.01.10D and .11E [Authority: COMAR 26.11.03.06C].

Permit condition **§1.5 A(3)** requires the Permittee to report all COMS or CEMS downtime that lasts or is expected to last more than 24 hours to the Department by telephone. *See discussion under CO for further information*

Permit condition **§1.5 A(4)** requires the Permittee to submit a **quarterly summary report** to the Department not later than 30 days following each calendar quarters. *See quarterly summary report requirements discussion under CO for summary report requirements.*

A6. 35

COMAR 26.11.08.08-2B(1) Emission Standards for HMIWIs constructed prior to 1996 that is applicable on or after June 15, 2012 which establishes a SO₂ limitation of 9.0 ppm by volume corrected to 7% O₂. This standard is currently in effect and CBE maintains that the facility is currently in compliance with this standard.

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Compliance Demonstration

Testing Requirements

Permit condition **§1.2 A(3)** requires the Permittee to determine compliance with the emission limits for **SO₂** by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2 A(6)** requires the Permittee to determine the maximum charge rate in accordance with 40 CFR 51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with the SO₂ limit [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M , issued on April 1, 2008].

Monitoring Requirements

Permit condition **1.3 A(2)** requires the Permittee to install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 2 of this Permit. [Authority: 40 CFR §60.57c(a) and (c)(d)].

The parameters applicable to SO₂ emissions in Table 2 are:

Waste feed charge rate (3-hour rolling average).

HCl concentration (12-hour rolling average or 24-hour block average, as applicable). ^{Note (*)}

Use of bypass stack.

Note (*): Historically EPA has assumed for the HMIWI category, that because HCl concentrations in the flue gas are generally much higher than SO₂ concentrations (opposite of the MWC category), if HCl is adequately controlled, so too will SO₂ be adequately controlled. They are both controlled at Curtis Bay Energy by DSI with Trona. Two decades of operation and stack testing have borne this out. The data in the following table compare CEMS values for HCl concentrations measured during the annual RATA and annual stack test data for SO₂ concentrations in the last 5 years.

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CBE Historical HCl vs. SO2 ppmvd@7% O2

		HCl	Std.	SO ₂	Std.	Notes
2018	Unit 1	3.2	6.6	2.0	9.0	SO2 Below detection limit in one or more runs; detection limit used in those cases.
	Unit 2	1.7	6.6	5.2	9.0	SO2 Below detection limit in one or more runs; detection limit used in those cases.
2017	Unit 1	2.8	6.6	4.8	9.0	SO2 Below detection limit in one or more runs; detection limit used in those cases.
	Unit 2	1.1	6.6	5.0	9.0	SO2 Below detection limit in one or more runs; detection limit used in those cases.
2016	Unit 1	0.3	6.6	1.3	9.0	HCl Below detection limit in one or more runs; detection limit used in those cases.
	Unit 2	2.1	6.6	6.0	9.0	SO2 Below detection limit in one or more runs; detection limit used in those cases.
2015	Unit 1	3.9	6.6	0.2	9.0	
	Unit 2	2.6	6.6	0.5	9.0	
2014	Unit 1	8.9	100.0	0.7	55.0	HCl limit was 100ppm during this test.
	Unit 2	91.4	100.0	1.3	55.0	HCl limit was 100ppm during this test.

Permit condition **1.3 A(3)**. The Permittee must install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration [Authority: 40 CFR §60.57c(c)].

Permit condition **1.3 A(4)** requires the Permittee shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)].

Recordkeeping and Reporting Requirements

Permit condition **§1.4 A(1)** The Permittee shall maintain records of results of the stack tests for a period of 5 years.

Permit condition **§1.5 A(1)** requires that a test protocol shall be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed.

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Permit condition **§1.5 A(2)** requires the Permittee to submit the following reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR 60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

A7. Nitrogen Oxides (NOx)

COMAR 26.11.08.08-2B(1) Emission Standards for HMIWIs constructed prior to 1996 establishes a NOx limitation of 140 ppm by volume corrected to 7% O₂.

COMAR 26.11.09.08H(4) - NOx emissions from hospital, medical, and infectious waste incinerators as defined in COMAR 26.11.08.01B(18) may not exceed the NOx emission standards in COMAR 26.11.08.08-1A(2) (250 ppm 24-hour average) as applicable.

Because Curtis Bay Energy was not able to achieve compliance with the COMAR 26.11.08.08-2B(1) standard by June 15, 2012, Curtis Bay Energy was required to submit a Plan for Compliance for this pollutant to achieve compliance with standard by no later than October 6, 2014 [Reference: COMAR 26.11.08.08-2E(1)(b)].

Compliance Demonstration

Testing Requirements

Permit condition **§1.2 A(3)** provides that the Permittee may determine compliance with the emission limits for **NOx** by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test. However, if the Permittee operates a certified NOx CEMS, the performance of an annual Relative Accuracy Test Audit (RATA) satisfies the performance test requirement [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2 A(10)** requires that, upon installation and operation of selective non-catalytic reduction (SNCR) technology to control NOx emissions, the Permittee establish the maximum charge rate, the minimum secondary chamber temperature, and the minimum reagent flow rate as site specific operating parameters during the initial performance test to determine compliance with the NOx emissions limits or during some other representative period approved by the Department for which NOx CEMS are operational and demonstrate compliance [Authority: 40 CFR §60.56c(h)(1)]

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Monitoring Requirements

Permit condition **1.3** A(3). The Permittee must install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration [Authority: 40 CFR §60.57c(c)].

Permit condition **1.3** A(4) requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)].

Permit condition **1.3** A(5) provides that facilities using a CEMS to demonstrate compliance with any of the emission limits under §60.33e(a), must:

- (a) In keeping with §60.37e(a)(1), for any of the emission limits under §60.33e(a)(1) (i.e., the emission guidelines as promulgated on September 15, 1997) determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours [Authority: ...40 CFR 60.56c(c)(3) and (c)(4)(i)];
- (b) In keeping with §60.37e(a)(2), for any of the emission limits under §60.33e(a)(2) (i.e., the emission guidelines as amended on October 6, 2009) determine compliance with the appropriate emission limit(s) using a 24-hour block average, calculated as specified in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of 40 CFR part 60 [Authority: ...40 CFR 60.56c(c)(4)(i) - (5)(ii)];
- (c) Operate all CEMS in accordance with the applicable procedures under appendices B and F of 40 CFR 60. [Authority: ...40 CFR 60.56c(c)(4)(ii) and (c)(5)(iii)]

Permit condition **1.3** A(18) provides that, in lieu of continuous NO_x reactant injection rate monitoring required by 40 CFR §60.56c(h), the Permittee, may on approval its use as an Alternative Monitoring Requirements in accordance with 40 CFR §60.56c(j), continuously monitor and record NO_x using a Continuous Emissions Monitor that is installed, operated and maintained in conformance with §60.13 Monitoring requirements, including Performance Specification 2- Specifications and Test Procedures for SO₂ and NO_x Continuous Emission Monitoring Systems in Stationary Sources in Appendix B and the quality assurance procedures specified in Appendix F to Part 60 [Authority: ... 40 CFR §60.56c(c)(5)(ii) and §60.56c(j)].

Permit condition **1.3** A(19) provides that, upon approval of its use as an Alternative Monitoring Requirement in accordance with 40 CFR §60.56c(j), the Permittee shall install and maintain a NO_x CEMS with feedback control of the SNCR reagent flows to each incinerator. Upon certification and operation of the NO_x CEMS, compliance with §60.57c(b)(2) –(3) and §60.56c(h)(2)-(3) cited by condition (21) below is not required, except as noted in condition (20) below [Authority: ... 40 CFR §60.56c(c)(5)(ii)-(iii) and §60.56c(j)].

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Permit condition **1.3** A(20) provides that, during periods of temporary malfunction of the NO_x CEMS, the Permittee shall comply with the requirements of §60.57c(b)(2) –(3) and §60.56c(h)(2)-(3) cited by condition (21) below [Authority: COMAR 26.11.01.11B(4)].

Permit condition **1.3** A(21) requires the Permittee to install, calibrate (to manufacturers' specifications) maintain and, except as provided above, operate devices (or establish methods) for monitoring the operating parameters listed in §60.56c(h) such that such devices (or methods) measure and record values of the operating parameters at all times. Operating parameter values shall be measured and recorded at the following minimum frequencies [Authority: 40 CFR §60.57c(b)]:

§60.57c(b)(1) Maximum charge rate shall be measured continuously and recorded once each hour;

§60.57c(b)(2) Minimum secondary chamber temperature shall be measured continuously and recorded once each minute; and

§60.57c(b)(3) Minimum reagent flow rate shall be measured hourly and recorded once each hour.

§60.56c(h)(2) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature or the minimum reagent flow rate measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times. Operating parameter limits do not apply during performance tests.

§60.56c(h)(3) Except as provided in paragraph (i) of this section, operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum reagent flow rate simultaneously shall constitute a violation of the NO_x emissions limit.

Recordkeeping and Reporting Requirements

Permit condition **§1.4** A(1) requires the Permittee shall maintain the following information (as applicable) for a period of at least 5 years [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c ...]:

§60.58c(b)(1): Calendar date of each record;

§60.58c(b)(2): Records of the following data:

...

(iii) HMIWI charge dates, times, and weights and hourly charge rates;

...

(vii) Amount and type of NO_x reagent used during each hour of operation during periods of NO_x CEMS maintenance or malfunction.

...

(ix) In keeping with § 60.56c(h), the secondary chamber temperature during each minute of

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operation during periods of NOx or HCl CEMS maintenance or malfunction.

...

(xv) Records indicating use of the bypass stack, including dates, times and durations;

...

§60.58c(b)(3) Identification of calendar days for which data on ... operating parameters specified under paragraph (b)(2) of §60.58c, ... have not been obtained, with an identification of the ... operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of malfunctions, a description of the malfunction and the corrective action taken.

§60.58c(b)(5) Identification of calendar days for which data on ... parameters specified under paragraph (b)(2) of §60.58c ... exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b)(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c),

Permit condition **§1.4** A(4) requires the Permittee to keep for a period of at least 5 years, records of the results of the initial, annual and any subsequent performance (stack) tests conducted to determine compliance with the emission limits and/or to establish or re-establish operating parameters, as applicable, and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable [Authority: COMAR 26.11.03.06C; 40 CFR §60.58c(b)(6)].

Permit condition **§1.5** A(1) requires the Permittee to submit a compliance test protocol to the Department for approval at least 30 days prior to the scheduled test date, and to submit a copy of the results of compliance stack tests to the Department within 45 days after the date that the test was completed [Authority: COMAR 26.11.03.06C and condition F(7), Permit to Construct 510-2975-2-0279 M issued on April 1, 2008].

Permit condition **§1.5** A(2) requires the Permittee to submit the following reports. ... [Authority: 40 CFR §60.58c...]:

§60.58c(c) submit the information specified below no later than 60 days following the initial performance test. All reports shall be signed by the facilities manager:

§60.58c(c)(1) The initial performance test data as recorded under § 60.56c(b)(1) through (14), as applicable.

§60.58c(c)(2) The values of the site specific operating [parameters established pursuant to §60.56c(d), (h) or (j) as applicable.

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§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR §60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(h), or (j), as applicable for NO_x.

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(h), or (j), as applicable for NO_x.

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to § 60.56c(h), or (j) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

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§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

A10. Mercury

COMAR 26.11.08.08-2B(1) Emission Standard for HMIWIs constructed prior to 1996, which establishes a mercury limit of 0.018 mg/dscm adjusted to 7% O₂, dry basis. This standard is currently in effect and CBE maintains that the facility is currently in compliance with this standard.

Compliance Demonstration

Testing requirements

Permit condition **§1.2 A(3)** requires the Permittee to determine compliance with the emission limits for **mercury (Hg)** by conducting annual performance (stack) tests on each incinerator train using the applicable procedures and test methods listed in §60.56c(b)(1) - (14). The annual performance test must be conducted no more than 12 months following the previous performance test. The use of the bypass stack during a performance test invalidates the performance test [Authority: COMAR 26.11.03.06C, COMAR 26.11.08.08-1A(5) and .08-2B(4), which reference 40 CFR §60.56c; §60.56c(c)(2)].

Permit condition **§1.2 A(6)** requires that the Permittee determine the maximum charge rate in accordance with 40 CFR §60.51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits [Authority: condition D(6), Permit to Construct 510-2975-2-0279 M, issued on April 1, 2008].

Permit condition **§1.2 A(8)** requires the Permittee to determine the minimum Hg sorbent flow rate in accordance with 40 CFR §60.51c by the following: 90 percent of the highest 3-hour average Hg sorbent flow rate (taken at a minimum once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit [Authority: 40 CFR §60.56c(e)(4); EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Monitoring Requirements

Permit condition **§1.3 A(3)** requires that the Permittee shall install, calibrate, (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration [Authority: 40 CFR§60.57c(c)].

Permit condition **§1.3 A(4)** requires the Permittee to obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected

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facility is combusting hospital waste and/or medical/infectious waste. [Authority: 40 CFR 60.57c(e)].

Permit condition **§1.3 A(15)** requires the Permittee to operate the powdered activated carbon injection (PAC) system at a feed rate no lower than 90% of the highest PAC feed rate based on a 3-hour rolling average (readings taken at least once every hour) measured during the most recent performance test demonstrating compliance with the mercury emission limit [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Permit condition **§1.3 A(16)** requires the Permittee to comply with a 10% opacity operational limit based on a 3-hour rolling average, as determined by a continuous monitoring system (COMS). The COMS shall be operated and maintained in accordance with applicable COMAR requirements and Technical Memorandum 90-01. The operational limit is not applicable during periods of start-up, shutdown or malfunction [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007].

Permit condition **§1.3 A(17)** provides that an exceedance of the 3-hour rolling average 10% opacity operational limit shall require the Permittee to immediately initiate an evaluation of bags for possible mechanical or other failure, and expeditious replacement of failed bag(s) [Authority: EPA November 22, 2006 Alternative Monitoring Request Approval – amended August 9, 2007].

Recordkeeping and Reporting

Permit condition **§1.4 A(1)** requires the Permittee to , “... maintain the following information (as applicable) for a period of at least 5 years ” [Authority: COMAR 26.11.08.08-1A(7) and .08-2B(6), which cite 40 CFR §60.58c, and EPA’s November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(b)(1) Calendar date of each record;

§60.58c(b)(2) Records of the following data:

“(i) ...Measurements of. **opacity** as determined by a continuous emission monitoring system;
(including 6-minute and 3-hour rolling averages)

....

“(iii) HMIWI charge dates, times, and weights and hourly charge rates;

“(vi) Amount and type of **Hg sorbent** used in each hour of operation;

“(xv) Records indicating use of the **bypass stack**, including, dates, times, and durations;

“(xvi) For affected facilities complying with ... §60.56c(d), the owner or operator shall maintain all **operating parameter data** collected;

§60.58c(b)(3) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c have not been obtained, with an identification of

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the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

§60.58c(b)(4) Identification of calendar days, times and duration of **malfunctions**, a description of the malfunction and the corrective action taken;

§60.58c(b)(5) Identification of calendar days for which data on ... **operating parameters** specified under paragraph (b)(2) of §60.58c exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

§60.58c(b)(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

§60.58c(b) (11) Records of calibration of any monitoring devices as required under §60.57c (a), (b), and (c),.

Permit condition **§1.4 A(2)** requires the Permittee to maintain records of 6-minute and 3-hour rolling average opacity record [Authority: EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]. .

Permit condition **§1.4 A(3)** requires the Permittee to maintain for a period of at least 5 years records of the date and time of identified bag failures including the date and time that failed bags were replaced. [Authority: 40 CFR §60.58c(b)(4) and EPA November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007].

Permit condition **§1.4 A(4)** requires the Permittee to maintain for a period of at least 5 years records of the results of the initial, annual and any subsequent performance (stack) tests conducted to determine compliance with the emission limits and/or to establish or re-establish operating parameters, as applicable, and a description, including sample calculations, of how the operating parameters were established or re-established, if applicable [Authority: COMAR 26.11.03.06C and 40 CFR §60.58c(b)(6)].

Permit condition **§1.5 A(1)** requires that a test protocol must be submitted to the Department for approval at least 30 days prior to the scheduled test date. The Permittee shall submit a copy of the results of compliance stack tests to the Department within 45 days after the date the test was completed [Authority: condition F(7), Permit to Construct #510-2-0279 M issued on April 1, 2008].

Permit condition **§1.5 A(2)** requires the Permittee to submit the following reports. These reports shall include all the operating parameters identified in Table 2 of EPA's November 22, 2006 Alternative Monitoring Request and the following information [Authority: 40 CFR §60.58c and EPA's November 22, 2006 Alternative Monitoring Approval - amended August 09, 2007]:

§60.58c(c) submit the information specified below no later than 60 days following the initial performance test. All reports shall be signed by the facilities manager:

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§60.58c(c)(1) The initial performance test data as recorded under § 60.56c(b)(1) through (14), as applicable.

§60.58c(c)(2) The values of the site specific operating parameters established pursuant to §60.56c(d), (h) or (j) as applicable.

§60.58c(d) An annual report ... (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The [semi] annual report shall include the information specified in paragraphs (d)(1) through (d)(9) and (d)(11) of 40 CFR 60.58c, as amended by EPA's November 22, 2006 Alternative Monitoring Approval. All reports shall be signed by the facilities manager.

§60.58c(d)(1) The values for the site-specific operating parameters established pursuant to §60.56c(d), ..., as applicable. Only two parameter limits are established during compliance testing:

Lowest waste feed charge rate (3-hour rolling average) established during the most recent compliance test for any pollutant under §60.52c, including dioxins/furans.

Lowest Hg sorbent flow rate (3-hour rolling average) established during the most recent Hg compliance test.

§60.58c(d)(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to § 60.56c(d), ..., as applicable. Applicable to mercury are:

Highest waste feed charge rate (3-hour rolling average).

Highest percent opacity (3-hour rolling average).

Lowest Hg sorbent flow rate (3-hour rolling average).

§60.58c(d)(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded pursuant to § 60.56c(d),... for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period [See (d)(2) above].

§60.58c(d)(4) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year being reported.

§60.58c(d)(5) Any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR 60.58c, for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

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§60.58c(d)(6) If a performance test was conducted during the reporting period, the results of that test.

§60.58c(d)(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c, for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

§60.58c(d)(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

§60.58c(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of 40 CFR §60.58c no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of 40 CFR 60.58c. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

§60.58c(f) All records specified under paragraph (b) of 40 CFR 60.58c, shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

The Permit to Construct 510-2975-2-0279M issued on April 1, 2008 [conditions E(13) and F(3)] specifies quarterly and other reporting provisions extracted from COMAR 26.11.01.10 – 11 for the continuous opacity monitoring system (COMS). These provisions would not otherwise apply to HMIWI. See discussion under Compliance Demonstration for CO CEMS.

Permit condition **§1.5 A(3)** requires the Permittee to report all COMS or CEMS downtime that lasts or is expected to last more than 24 hours.

B. Waste Management Plan

COMAR 26.11.08.08-2B(3) require preparation of a Waste Management Plan that identifies the feasibility and the approach to solid waste segregation or material substitution to reduce the amount of toxic emissions. The Waste Management Plan shall meet the requirements of 40 CFR §60.55c, subpart Ec:

“The owner or operator of an affected facility shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as segregation and recycling of paper, cardboard, plastics, glass, batteries, food waste, and metals (e.g., aluminum cans, metals-containing devices); segregation of non-recyclable wastes (e.g., polychlorinated biphenyl-containing waste, pharmaceutical waste, and mercury-containing waste, such as dental waste); and purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste

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management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have. The American Hospital Association publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" (incorporated by reference, see §60.17) shall be considered in the development of the waste management plan. The owner or operator of each commercial HMIWI company shall conduct training and education programs in waste segregation for each of the company's waste generator clients and ensure that each client prepares its own waste management plan that includes, but is not limited to, the provisions listed previously in this section.
[74 FR 51409, Oct. 6, 2009].

Compliance Demonstration

Testing Requirements - Not applicable.

Monitoring Requirements - Not applicable.

Recordkeeping and Reporting

Permit condition **§ 1.4 B(1)** The Permittee shall keep a current copy of the Waste Management Plan on site and shall make it available to authorized MDE or EPA inspectors upon request [Authority: COMAR 26.11.03.06C].

Permit condition **§ 1.5 B(1)** The Permittee shall submit a revised Waste Management Plan within 60 days of completion of the required initial compliance tests under regulation COMAR 26.11.08.08-2 [Authority: COMAR 26.11.08.08-2B(3)(a)].

C. Operator Training

Permit condition **§ 1.1 C(1)**: " For approval, a State [111(d)/129] plan shall include the requirements for operator training and qualification at least as protective as those requirements listed in §60.53c of subpart Ec of this part. The State plan shall require compliance with these requirements according to the schedule specified in §60.39e(e)." [Authority: 40 CFR §60.34e].

Permit condition **§ 1.1 C(2)** "No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within 1 hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators." [Authority: 40 CFR §60.53c(a)].

Permit condition **§ 1.1 C(3)**: Operator training and qualification shall be obtained through a State-approved program or by completing the requirements included in paragraphs (c) through (g) of this section...." [Authority: 40 CFR §60.53c(b)].

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COMAR 26.11.08.09B and C requires that the owner certify to the Department that the incinerator operator has completed the proper training and review courses and is present at all times whenever the incinerator is in operation, and also specifies the specific training course and course requirements for the incinerator operator.

Compliance Demonstration

The Permittee must maintain documentation of training (operator training manual) on site and update the documentation annually at the time of the annual review course. The documentation shall be as specified in 40 CFR §60.53c(h).

- (1) Summary of the applicable standards under this subpart;
- (2) Description of basic combustion theory applicable to an HMIWI;
- (3) Procedures for receiving, handling, and charging waste;
- (4) HMIWI startup, shutdown, and malfunction procedures;
- (5) Procedures for maintaining proper combustion air supply levels;
- (6) Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;
- (7) Procedures for responding to periodic malfunction or conditions that may lead to malfunction;
- (8) Procedures for monitoring HMIWI emissions;
- (9) Reporting and recordkeeping procedures; and
- (10) Procedures for handling ash.

The Permittee must maintain the following records:

- (1) Records showing the names of HMIWI operators who have completed review of the information in §60.53c(h) as required by §60.53c(i), including the date of the initial review and all subsequent annual reviews;
- (2) Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training; and
- (3) Records showing the names of the HMIWI operators who have met the criteria for qualification under §60.53c and the dates of their qualification.

D. Equipment Inspection Requirements [Authority: COMAR 26.11.08.08-2D and 40 CFR §60.36e]

- (1) Each HMIWI shall undergo annual inspections that at a minimum include the following
 - (a) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot flame sensor, as necessary;
 - (b) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;
 - (c) Inspect hinges and door latches, and lubricate as necessary;

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- (d) Inspect dampers, fans, and blowers for proper operation;
- (e) Inspect HMIWI door and door gaskets for proper sealing;
- (f) Inspect motors for proper operation;
- (g) Inspect primary chamber refractory lining; clean and repair or replace lining as necessary;
- (h) Inspect incinerator shell for corrosion or hot spots, or both;
- (i) Inspect secondary/tertiary chamber and stack and clean as necessary;
- (j) Inspect mechanical loader, including limit switches, for proper operation, if applicable;
- (k) Visually inspect waste bed (grates), and repair or seal, as appropriate;
- (l) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;
- (m) Inspect air pollution control device or devices for proper operation, if applicable;
- (n) Inspect waste heat boiler systems to ensure proper operation, if applicable;
- (o) Inspect bypass stack components;
- (p) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
- (q) Generally observe that the equipment is maintained in good operating condition.

(2) Within 10 operating days following an equipment inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department for a different date to complete all necessary repairs [Authority: COMAR 26.11.08.08-2D(2)].

(3) Each HMIWI shall undergo an equipment inspection annually (within 12 months following the previous annual equipment inspection), in accordance with the requirements of §D(1) of this regulation Authority: COMAR 26.11.08.08-2D(2)].

(4): The control device of HMIWI shall undergo an inspection annually (within 12 months following the previous annual inspection), in accordance with the requirements of §D(4) of this regulation, as follows:

- (a) Inspect air pollution control device(s) for proper operation, if applicable;

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(b) Ensure proper calibration of thermocouples, sorbent feed systems, and any other monitoring equipment;

(c) Generally observe that the equipment is maintained in good operating condition; and

(d) Within 10 operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department establishing a date whereby all necessary repairs of the designated facility shall be completed.

Compliance Demonstration

Permit condition § 1.4 D requires the Permittee to keep records of the annual air pollution control device inspection, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the Department or EPA [Authority: 40 CFR § 60.58c(b)(2)(xvii)].

Permit condition § 1.5 D requires the Permittee to include in the annual report required under §60.58c(d) records of the annual air pollution control device inspection, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by Department or the EPA Administrator [Authority: 40 CFR §60.58c(d)(9)].

E. Operational Standards

Permit condition § 1.1 E(1): The following Permit to Construct requirement: The total waste burned in both incinerators shall not exceed 150 tons per day [Authority: condition (5), Part D, Permit to Construct #510-2975-2-0279 M, issued on April 1, 2008].

Compliance Demonstration

Testing Requirements: No testing requirements under this paragraph.

Monitoring/Recordkeeping Requirements:

Permit condition §1.4 E(1) The following apply:

(a) The Permittee must maintain records of the charge dates, times, and weights and hourly charge rates [Authority: 40 CFR §60.58c(b)(2)(iii)].

(b) The net weight of each individual charge to each incinerator shall be accurately determined [Authority: condition D(4), Permit to Construct 510-2975-2-0295 M, issued on April 1, 2008].

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Reporting Requirements

Permit condition **§1.5 E(1)**: HMIWI waste monitoring requirements. The Permittee shall include in the (semi-) annual report required by § 60.58c(d) of this permit any exceedance of the 150 ton per day limit [Authority: COMAR 26.11.03.06C].

EPA approved alternative monitoring requests from Curtis Bay Energy. Table 3 details the Alternative Surrogate Compliance Indicators for dioxin/furans and other emissions. Table 4 summarizes the approved Alternative Operating Parameter Monitoring and Records Requirements to which Curtis Bay Energy is subject.

Table 3 - Alternative Surrogate Compliance Indicators for CDD/CDF and Other Emissions

<i>If the Curtis Bay Energy incinerator unit...</i>	<i>Then Curtis Bay Energy is in violation of...</i>
1. Operates fabric filter inlet temperature below 330°F or above 479°F (3-hour rolling average) or operates fabric filter inlet temperature outside limits approved by EPA.	CDD/CDF limit
2.. For compliance with the <u>October 6, 2009 limits</u> operates above the maximum charge rate (3-hour rolling average), above the CO emission limitation of 11 ppmdv (7% O ₂ , 24-hour block average) and above the 10% opacity operational limit (3-hour rolling average) simultaneously during any 3-hour period ¹	CDD/CDF, PM, and CO limits
3. Operates above the maximum charge rate (3-hour rolling average) and below the minimum Hg sorbent flow rate (3-hour rolling average), simultaneously.	Hg limit
4. Operates the bypass stack	PM, CDD/CDF, HCL, Pb, Cd, and Hg limits

Notes:

1. The above operating parameter limits/restrictions do not apply during startup, shutdown, malfunction, or performance tests for demonstrating compliance.
2. Curtis Bay Energy may conduct a performance test within 30 days of a violation of the above operating limits/restrictions in order to demonstrate that its HMIWI unit is not in violation of an emission limit(s).
3. CO and HCL compliance is determined directly from certified CEMS and stack test data.
4. The primary compliance methods are the performance tests, as stipulated in the 111(d)/129 Plan.

Table 4. Summary of Curtis Bay Energy Operating Parameter Monitoring and Records Requirements Deviation Request Approval

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	Data Measurement	Data Recording
Waste feed charge rate* (3-hour rolling average)	Continuously	1 x hour
Fabric filter inlet temperatures*** (3-hour rolling average)	Continuously	1 x minute
Oxygen concentration (3-hour rolling average)	Continuously	1 x minute
Carbon monoxide concentration* (12-hour rolling average or 24-hour block average, as applicable)	Continuously	1 x minute
Mercury sorbent (PAC) flow rate** (3-hour rolling average)	Continuously	1 x hour
HCl concentration* (12-hour rolling average or 24-hour block average, as applicable)	Continuously	1 x minute
Percent opacity * (6-minute and 3-hour rolling average)	Continuously	1 x minute
Use of bypass stack (except during each startup, shutdown, or malfunction)	Continuously	1 x minute

Notes:

* Maximum operating limit applies.

** Minimum operating limit applies.

***Both maximum and minimum operating limit applies.

O₂, CO, and HCl concentrations are determined at 7% O₂ and dry standard conditions.

[Reference: EPA November 22, 2006 Alternative Monitoring Request Approval - amended August 09, 2007].

EU-03 and EU-04: Two Storage Silos feeding alkaline sorbent material to either Unit 1 or Unit 2 dry scrubber.

APPLICABLE STANDARDS and LIMITATIONS

A. Visible Emissions

COMAR 26.11.06.02C(2)- Visible Emissions. In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

B. Particulate Matter Emissions

COMAR 26.11.06.03B(2) - A person may not cause or permit to be discharged in to the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).

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Compliance Demonstration

- A. The Permittee shall perform a visual observation of the exhaust from the bag house, when silo is being filled, at least one minute once per month to determine if there are any visible emissions. If visible emissions are observed, the Permittee shall perform the following:
- (a) Inspect all process and/or control equipment that may affect visible emissions;
 - (b) Perform all necessary repairs and/or adjustments to all processes and/or control equipment, within 48 hours, so that visible emissions in the exhaust gases are eliminated;
 - (c) Document, in writing, the results of the inspections and the repairs and/or adjustments made to the processes and/or control equipment; and
 - (d) If visible emissions have not been eliminated within 48 hours, the Permittee shall perform a Method 9 observation once daily for an 18-minute period until corrective actions have eliminated the visible emissions.

The Permittee shall maintain records of the results of the monthly inspections for at least five (5) years and make them available to the Department upon request [Authority: COMAR 26.11.03.06C].

- B. The Permittee shall develop and maintain a preventative maintenance plan for the bag house that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. The log of inspection and maintenance records shall be kept on site for at least five (5) years and shall be made available to the Department upon request [Authority: COMAR 26.11.03.06C].

COMPLIANCE SCHEDULE

Not applicable

TITLE IV - ACID RAIN

The Acid Rain Program does not apply to Curtis Bay Energy.

TITLE VI - OZONE DEPLETING SUBSTANCES

There are no ozone depleting substances released to the atmosphere at this location.

SECTION 112 (r) - ACCIDENTAL RELEASE

Curtis Bay Energy is not subject to the requirements of Section 112 (r) of the Clean Air Act.

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PERMIT SHIELD

Curtis Bay Energy did not request a permit shield.

SECTION V- INSIGNIFICANT ACTIVITIES

This section contains a list of the insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (2) Containers, reservoirs, or tanks used exclusively for:
 - No. 12 Storage of lubricating oils.
- (3) Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (4) Laboratory fume hoods and vents;
- (5) Any other emissions unit, not listed in this section, with a potential to emit less than the "de minimis" levels listed in COMAR 26.11.02.10X (list and describe units):
 - No. 1 300 gallon diesel oil above ground tank
 - No. varies Propane bottles used to power lift trucks.

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SECTION VI - STATE-ONLY ENFORCEABLE REQUIREMENTS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:
 - (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
 - (b))COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
 - (c) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Operating Conditions:
 - (a) Except as otherwise provided in this part, the HMIWIs shall be operated in accordance with specifications included in the application and any operating procedures recommended by equipment vendors unless the Department provides written approval for alternative operating procedures.
 - (b) The Permittee shall keep the incinerator and associated process equipment, air pollution control equipment, instrumentation and controls, gauges, monitors, and recorders properly maintained, calibrated, and operated in accordance with the manufacturer’s recommendations and specifications so as to accurately indicate and assure proper operating conditions and maintain continuous compliance with all applicable requirements.
 - (c) The Permittee is prohibited from burning hazardous waste as defined in COMAR 26.13.03.
 - (d) The net weight of each individual charge to each incinerator shall be accurately determined.
 - (e) The total waste burned in both incinerators shall not exceed 150 tons per day.
 - (f) The maximum charge rate shall be determined in accordance with 40 CFR §60.51c by the following: For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.
 - (g) Ash shall be visually inspected periodically during each operating day to assure the complete combustion of the waste.

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- (h) Only natural gas or No. 2 fuel oil shall be used as auxiliary fuel.
- (i) All incinerator operators must be trained in accordance with the requirements of COMAR 26.11.08.09.
- (j) The Permittee shall operate in compliance with the Department's Waste Management Administration's Refuse Disposal Permit #2005-WMI-0036 and any subsequent permits issued.

3. Monitoring

The Permittee shall maintain a daily logbook containing the following records:

- (a) Hours per day of operation of each furnace;
- (b) Maintenance of the air pollution control system;
- (c) Malfunction and repair of equipment items;
- (d) Quantity of refuse received and charged to incinerator.

4. Record Keeping and Reporting:

- (a) The Permittee shall maintain the daily logbook at the facility. The most recent 3 years of data shall be readily available for the Department inspection.
- (b) The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:
 - (i) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (ii) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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APPENDIX – Summary of the Alternative Determination Letters from EPA

On April 28, 2006, Curtis Bay Energy submitted three (3) separate alternative monitoring requests to the U.S. Environmental Protection Agency (EPA):

1. "Request for Regulatory Deviation/Alternative Determination- Control of Carbon Monoxide";
2. "Request for Regulatory Deviation/Alternative Determination- Control of Hydrogen Chloride"; and
3. "Request for Regulatory Deviation/Alternative Determination- Control of Dioxin/Furans".

On July 13, 2006, EPA Region III partially approved Curtis Bay Energy's request for alternative monitoring requirements for carbon monoxide. On August 7, 2006, EPA Region III partially approved Curtis Bay Energy's request for alternative monitoring requirements for hydrogen chloride. On November 22, 2006, EPA partially approved Curtis Bay Energy's "Request for Regulatory Deviation/Alternative Determination- Control of Dioxins/Furans."

As a final condition of these approvals, EPA required Curtis Bay Energy to submit a revised Title V operating permit application that incorporates the alternative monitoring and record keeping requirements to the Department. The Department received Curtis Bay Energy's revised Title V application on January 17, 2007.

EPA Alternative Determination letter dated July 13, 2006 which partially approved Curtis Bay Energy's request for alternative monitoring as follows:

1. 40 CFR Part 60, Subpart Ec § 60.56c(e)(1) which states that "Operation of the affected facility above the maximum charge rate and below the minimum secondary combustion chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit."
2. 40 CFR Part 60, Subpart Ec § 60.57c(a) which states that "The owner or operator of an affected facility shall install, calibrate (to manufacturer's specifications), maintain and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 3 of this subpart such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times except during periods of start-up and shutdown. Table 3 Operating Parameters: Maximum charge rate, and Minimum secondary chamber temperature."
3. 40 CFR Part 60, Subpart Ec § 60.58c(b) which states that "The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years: (2) Records of the following data: (iii) HMIWI charge dates, times, and weights and hourly charge rates: (viii) Secondary chamber temperatures recording during each minute of operation."

EPA approved Curtis Bay Energy's request to deviate from the assumption that a violation of CO emission limit occurs if the facility simultaneously operates above the maximum charge rate and below the minimum secondary combustion chamber temperature (each measured on a 3-hour rolling average) if the CO emissions in the flue gas being measured with an EPA compliant continuous CO emissions monitor on a real-time basis shows CO

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emissions are within the allowable limits, 11 parts per million by volume adjusted to 7% oxygen measured on a dry basis at standard conditions. EPA's approval is conditional on Curtis Bay installing, operating and maintaining the CO CEMS in conformance with EPA requirements. In addition, Curtis Bay must install, calibrate, maintain and operate an oxygen CEM. The oxygen concentration must be monitored at each location where CO is monitored. In addition, Curtis Bay must meet certain minimum data availability requirements. These requirements were incorporated into the Title V permit.

EPA Alternative Determination Letter dated November 22, 2006 - amended August 09, 2007, which partially approved Curtis Bay Energy's request for alternative monitoring as follows:

1. Deviation Request Determination- Item 1

40 CFR Part 60, Subpart Ec §60.56c(e)(2)- "Operation of the affected facility (a) above the maximum fabric filter inlet temperature, (b) above the maximum charge rate, and (c) below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit."

EPA conditionally approved Curtis Bay Energy's request to deviate from the assumption that a violation of the CDD/CDF emission limit occurs, if the facility simultaneously operates (a) above the maximum filter inlet temperature, (b) above the maximum charge rate and (c) below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) provided the following five conditions are met:

- i) Maintain the fabric filter inlet temperature no less than 330 degree Fahrenheit (°F) and no greater than 479 °F based on a 3-hour rolling average.
- ii) Maintain incinerator carbon monoxide (CO) emissions at no greater than 11 parts per million by volume, adjusted to 7 percent (%) oxygen measured on a dry basis at standard conditions (ppmdv), based on a 12-hour rolling average, as required in the Maryland 111(d)/129 Plan. Accordingly, calibrate and maintain EPA compliance CO CEMS, as approved by EPA in its previous July 13, 2006 letter.
- iii) Comply with a 10% opacity operational limit based on a 3-hour rolling average, as determined by a continuous monitoring system (COMS). This is in addition to the no visible emission requirement of the Maryland 111(d)/129 Plan. Exceedance of the 10% opacity operational limit shall require Curtis Bay Energy to immediately initiate an evaluation of bags for possible mechanical or other failure, and expeditious replacement of failed bag(s). The COMS shall be operated and maintained in accordance with applicable COMAR requirements and Technical Memorandum 90-01. The operational limit is not applicable during periods of start-up, shutdown or malfunction. Curtis Bay shall revise the Standard Operating Procedure (SOP) for Bag house Operations to include an expeditious timeframe(s) for initiating and completing specific tasks relating to facility operational changes (e.g., use of a second or redundant bag house) and the evaluation and correction of bag

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failure. The revision shall be consistent with the requirements of the "W.L. Gore & Associates, Inc. Technical Conditions for Remedia® Catalytic Filter" submitted to EPA on July 20, 2006. Revision of the SOP shall be completed within 120 days of approval of this request and submitted to EPA and MDE for review and approval.

- iv) Operate the PAC system at a feed rate no lower than 90% of the highest sorbent feed rate based on a 3-hour rolling average (readings taken at least once every hour) measured during the most recent performance test demonstrating compliance with the mercury emission limit.
- v) Operate the incinerator in a manner consistent with the surrogate compliance indicators for CDD/CDF and other pollutants as listed in the Summary below and the Enclosure to this letter- CBE Alternative Surrogate Compliance Indicators for CDD/CDF and other Emissions, Technical Support Paper.

On January 15, 2007, Curtis Bay Energy submitted a letter to EPA Region III stating the following:

"Curtis Bay Energy has reviewed your comments and will comply with the additional monitoring/reporting requirements. We understand that the current defined temperature domains are a function of historical temperatures recorded during compliance demonstrations. These domains may be expanded upon, pending approval from the EPA, by conducting additional compliance demonstrations at temperatures outside the currently defined domain."

On February 20, 2007, the Department received a copy of a letter from Curtis Bay to EPA Region III submitting a revised Bag house Standard Operating Procedure (SOP). Per Curtis Bay's letter:

"The purpose of this SOP is to provide a structured procedure for systematically bringing a bag house on-line and operating in a manner that:

- ◆ ensures the safety of personnel working in the facility,
- ◆ conforms to the requirements of the facility's operating permits, State and Federal law, and
- ◆ minimizes facility operating costs."

2. Deviation Request Determination- Item 2

40 CFR Part 60, Subpart Ec §60.57c(a)- "The owner or operator of an affected facility shall install, calibrate (to manufacturer's specifications), maintain and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 3 of this subpart such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times except during periods of start-up and shutdown. Table 3 Operating Parameters: (a) Maximum charge rate, (b) Maximum fabric filter inlet temperature, and (c) Minimum dioxin/furan sorbent flow

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rate.”

EPA did not approve Curtis Bay’s request to eliminate the requirement to install, calibrate (to manufacturer’s specifications), maintain and operate a device for monitoring the maximum charge rate as specified in §60.57c(a) and Table 3 of 40 CFR Part 60, Subpart Ec.

EPA conditionally approved Curtis Bay’s request to eliminate the operating parameter monitoring requirements for maximum fabric filter (FF) inlet temperature, as specified in §60.57c(a) and Table 3 of 40 CFR Part 60, Subpart Ec, providing the following requirements are met:

- i) Install, calibrate (to manufacturer’s specifications), maintain the FF inlet temperature device and operate the incinerators with the FF inlet temperature at no less than 330 °F and no greater than 479°F based on a 3-hour rolling average.
- ii) Calibrate and maintain an EPA compliant CO CEMS (meets §60.13 Monitoring requirements including Appendices B and F to Part 60) as approved by EPA in its July 13, 2006 letter and operate the incinerators within the 40 ppm_{dv} (adjusted to 7% oxygen) emission limit based on a 12-hour rolling average.
- iii) Calibrate, maintain, and operate a COMS in accordance with applicable Maryland COMAR requirements and Technical Memorandum 90-01 and operate the incinerators within the 10% opacity operational limit based on a 3-hour rolling average. Curtis Bay shall immediately initiate an evaluation of bags for possible mechanical or other failure and replacement of failed bag(s) if the 10% opacity operational limit (3-hour rolling average) is exceeded.

EPA conditionally approved Curtis Bay’s request to eliminate the operating parameter monitoring requirements for minimum CDD/CDF sorbent flow rate as specified in §60.57c(a) and Table 3 of 40 CFR Part 60, Subpart Ec subject to the following requirement- Install, calibrate (to manufacturer’s specifications) and maintain the PAC flow rate at a rate of at least 90% of the highest sorbent feed rate based on a 3-hour rolling average (readings taken at least once every hour) measure during the most recent performance test demonstrating compliance with the mercury emission limit.

EPA noted that the PAC system is the primary control for mercury emissions but that the system provides incidental or secondary control for CDD/CDF emissions.

“Curtis Bay Energy has reviewed your comments and will comply with the additional monitoring/reporting requirements. We understand that the current defined temperature domains are a function of historical temperatures recorded during compliance demonstrations. These domains may be expanded upon, pending EPA approval, by conducting additional compliance demonstrations at temperatures outside the currently defined domain.”

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3. Deviation Request Determination- Item 3

40 CFR Part 60, Subpart Ec §60.58c(b)- “The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years: (2)(a) Records of the following data: (iii) HMIWI charge dates, times and weights and hourly charge rates; (v)(b) Amount and type of dioxin/furan, sorbent used during each hour of operation, as applicable...”

EPA did not approve Curtis Bay’s request to eliminate the record keeping requirements for HMIWI charge dates, times, and weights and hourly charge rates.

EPA conditionally approved Curtis Bay’s request to eliminate the sorbent flow rate record keeping requirements for the primary control system (i.e., Remedia® catalyst system) for CDD/CDF emissions, as required under 40 CFR 60.58c(b)(2)(v). In lieu of sorbent flow rate, Curtis Bay shall maintain records of the date and time of identified bag failures including the date and time that failed bags were replaced. In addition, Curtis Bay shall maintain hourly records of PAC flow rate as required by Maryland’s 111(d)/129 Plan (COMAR 26.11.08.08-1) provision relating to the main operating parameter for controlling mercury emissions.

EPA Alternative Determination letter dated August 7, 2006 which partially approved Curtis Bay Energy’s request for alternative monitoring as follows:

1. 40 CFR Part 60, Subpart Ec §60.56c(e)(3)- Operation of the affected facility above the maximum charge rate and below the minimum HCL sorbent flow rate (each measure on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.
2. 40 CFR Part 60, Subpart Ec §60.57c(a)- “The owner or operator of an affected facility shall install, calibrate (to manufacturer’s specifications), maintain and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 3 of this subpart such that these devices (or methods) measure and record values except during periods of start up and shutdown. Table 3 Operating Parameters: Maximum charge rate, and Minimum HCl sorbent flow rate.”
3. 40 CFR Subpart Ec §60.58c(b)- “The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years: (2) Records of the following data: (vii) Amount and type of HCl sorbent used during each hour of operation, as applicable.”

EPA approved Curtis Bay Energy’s request to deviate from the assumption that a violation of HCl emission limit occurs if the facility simultaneously operates above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a 3-hour rolling average) if the HCL emissions in the flue gas being measured with an EPA compliant continuous HCl emissions monitor on a real-time basis shows HCl emissions are within the allowable limits, 100 parts per million by volume adjusted to 7% oxygen measured on a dry basis at standard conditions or 93 percent reduction. The HCl CEMS serves as a primary element in a feedback

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loop that modulates the feed rate of alkaline sorbent as HCl concentration in the flue gas changes.

The Permittee shall continuously monitor and record HCl using a Continuous Emissions Monitor that is installed, operated and maintained in conformance with §60.13 Monitoring requirements including Performance Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources in Appendix B^(f)Part 60.

NOTE^(f): EPA promulgated Performance Specification 18—Performance Specifications and Test Procedures for Gaseous Hydrogen Chloride (HCl) Continuous Emission Monitoring Systems at Stationary Sources in 40 CFR 60 Appendix B Therefore, use of Performance Specification 2 used previously for HCL performance testing/monitoring is no longer applicable.

EPA approved Curtis Bay Energy's request to eliminate the operating parameter monitoring requirements for minimum HCl sorbent flow rate as specified in §60.57c(a) and Table 3 of 40 CFR Part 60 Subpart Ec since EPA agrees that an HCl CEM is superior to using the surrogate parameter of HCl sorbent flow rate.

EPA approved Curtis Bay Energy's request to eliminate the record keeping requirements for amount and type of HCl sorbent used during each hour of operation in §60.58c(b)(2)(vii).

EPA Alternative Determination letter dated December 10, 2018:

Curtis Bay Energy requested two "regulatory deviations" in approved requirements/standards for Hospital Medical and Infectious Waste incinerators. The request was made in a letter to EPA dated November 12, 2018.

Regarding the request to change the minimum allowable baghouse temperature from 343°F to 330°F, CBE submitted information from the manufacturer that supported that this change would not affect the efficiency of the catalyst. The manufacturer also agreed that their emission guarantees would remain in effect. EPA approved CBE's request to lower the minimum inlet temperature for the baghouse.

Regarding for a regulatory deviation from Maryland's SIP approved HMIWI regulations, including the proposal to use an alternative methodology to demonstrate compliance with the CO performance standard during periods of start-up and shut down, EPA did approve this request. EPA indicated that they would not consider approval of this request unless Maryland submits a revised HMIWI state plan h that approved the alternative limits and that would meet the requirements of 40CFR 60 Subpart Ce.