Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Materials Innovation and Recycling Authority
Address	200 Corporate Place, Suite 202, Rocky Hill, CT 06067
Equipment Location	CSWS Resource Recovery Facility located at Reserve Road, Gate 20, Hartford, CT
Equipment Description	CE Power Systems Model VU-40 Waterwall Municipal Waste Combustor No. 11 with Spreader Stoker and Traveling Grate
Town-Permit Numbers	075-0044
Premises Number	075-158
Stack Number	101
Prior Permit Issue Dates	April 18, 1985 (Permit to Construct) July 12, 1988 (Temporary Permit to Operate) August 27, 1993 (Permit to Operate) April 25, 2007 (Minor Modification) April 30, 2012 (Minor Modification)
Modification Issue Date	March 28, 2018
Expiration Date	None

/s/ Robert E. Kaliszewski
Robert E. Kaliszewski
Deputy Commissioner

3/28/18
Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

The CE Power Systems VU-40 Waterwall Municipal Waste Combustor (MWC), with a spreader stoker and traveling grates, burns Refuse Derived Fuel (RDF) and coal to produce steam, which is in turn used to produce electricity. The auxillary burner system is natural gas-fired. The MWC is equipped with a spray dryer absorber for acid gas control, a fabric filter for particulate matter control, and a selective non-catalytic reduction system for nitrogen oxide control. The MWC is also equipped with a continuous emission monitoring system to monitor opacity, SO_2, NOx, and CO.

B. Equipment Design Specifications

1. Municipal Waste Combustor
   a. Design RDF Firing Rate: 28.15 tons/hr, based on a design higher heating value of 5,785 Btu/lb
   b. Design RDF Heat Input: 326 MMBtu/hr
   c. Design Coal Firing Rate: 9.85 tons/hr, based on a design heating value of 12,690 Btu/lb
   d. Design Coal Heat Input: 249.9 MMBtu/hr
   e. Design Unit Load (Steam Production): 231,000 lb/hr
   f. Steam Temperature at Superheater Outlet: 825°F
   g. Steam Pressure at Superheater Outlet: 880 psig

2. Auxiliary Burner System
   a. Burner Manufacturer/Model No: CE Series 80 IFM
   b. Fuel Type: Natural Gas
   c. Number of Burners: 4
   d. Maximum Heat Input, each burner: 10 MMBtu/hr

C. Control Equipment Design Specifications

1. Fabric Filter (FF)
   a. Make and Model: Ray-Jet
   b. Number of Compartments: 12
   c. Bags per Compartment: 168
   d. Air/Cloth Ratio: 2:1
   e. Bag Material: Teflon Coated Woven Fiberglass or equivalent
   f. Cleaning Method: Reverse Air
   g. Pressure Drop Across Each Compartment: 2 to 4 inches of H_2O
   h. Pressure Drop Across Fabric Filter: 2 to 7 inches of H_2O
   i. Design Removal Efficiency: 99% +
   j. Minimum Number of Compartments in Service at Any Time: 8

2. Spray Dryer Absorber (SDA)
    a. Make and Model: CE with rotary atomizer
    b. Control Reagent: Lime and water solution (5-10% lime by weight)
    c. Reagent Flow Rate Range: 2 – 15 gallons per minute
    d. Reagent Line Pressure: 20 psig

3. Selective Non-Catalytic Reduction (SNCR) System:
    a. Make and Model: NALCO NOxOUT with up to 8 atomizing injectors operating at up to 80 psig
    b. Control Reagent: NOxOUT A or similar solution containing 50% urea
    c. Reagent Injection Rate: 0-42 gallons per hour
    d. Design Removal Efficiency: 35%

D. Stack Parameters

1. Minimum Stack Height: 218 ft

2. Minimum Exhaust Gas Flow Rate: 70,000 acfm

3. Normal Stack Exit Temperature Range: 150-210 °F

4. Minimum Distance from Stack to Nearest Property Line: 500 ft

PART II. OPERATIONAL CONDITIONS

A. Operating Limits

1. Municipal Waste Combustor (MWC)

    a. Allowable Fuels/Materials:
        i. Refuse Derived Fuel (RDF). RDF shall consist only of Municipal Solid Waste (MSW) as defined and restricted under CGS §22a-207 et seq. and any applicable Bureau of Materials Management and Compliance Assurance permit. RDF shall not consist, in part, or in whole, of any of the following: commercial hazardous waste, industrial hazardous waste, biomedical waste, or "beryllium containing waste" as defined by 40 CFR Part 61 Subpart C.
        ii. Bituminous Coal
        iii. Natural Gas
        iv. Special Waste upon prior authorization by the commissioner
    b. Maximum Facility RDF Combustion Rate: 739,855 tons per calendar year
    c. When RDF, bituminous coal and natural gas are combusted simultaneously in this MWC, at no time shall the coal or natural gas contribution to the total BTU input exceed 249.9 MMBtu/hr.
    d. Maximum Unit Load (Steam Production): In no event shall the MWC unit load exceed 254,100 pounds per hour, based on a 4-hour block average.
    e. The Permittee shall comply with the operating practices for MWC unit load and particulate matter control device temperature as set forth in RCSA §22a-174-38(g).
    f. This MWC shall be capable of maintaining a minimum combustion gas temperature of 1500°F after secondary air injections for at least one second.

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Pollutants

Table 1: Summary of Mass Emission Limits

Pollutant	lb/MMBtu	ppmvd @ 12% CO_2	ppmvd @ 7% O_2	tpy
PM				51.3
SO_2	[1]			457.0
NOx				420.0
VOC/HC		70[2]		130.0
CO				389.0
Pb				0.48
Sulfuric Acid	0.02			
Ammonia			20	

[1] The SO_2 emission limit when combusting only coal is 0.55 lb/MMBTU based on a 24-hour block average. The SO_2 emission limit when combusting only RDF is 0.32 lb/MMBtu based on a 24-hour block average. When a mixture of coal and RDF is combusted, the SO_2 emission limit shall be determined using the following equation: [(0.55 * C) + (0.32 * R)] lb/MMBtu based on a 24-hour block average. Where C is the fraction of BTU input from coal and R is the fraction of Btu input from RDF over the 24-hour period.

[2] Expressed as methane

Table 2: Summary of RCSA §22a-174-38 Limits

Pollutant	mg/dscm @ 7% O_2	ppmvd @ 7% O_2
PM	25	
SO_2		29[1]
NOx		146[2]
CO		200[3]
HCl		29[4]
Cadmium (Cd)	0.035	
Lead (Pb)	0.400	
Mercury (Hg)	0.028[5]	
Dioxin/Furans	0.000030	
Ammonia		20[6]

[1] Based on a 24-hour geometric average or 75% reduction by weight or volume, whichever is less stringent.

[2] Based on a 24-hour daily average. Compliance may be achieved through the use of the NOx emissions trading program as described in RCSA §22a-174-38(d) or utilization of NOx controls.

[3] Based on a 24-hour daily average.

[4] Or achieve 95% reduction by weight or volume, whichever is less stringent.

[5] Or achieve 85% reduction by weight, whichever is less stringent.

[6] Based on the average of three one-hour stack testing runs from annual stack testing.

The emission limits set forth in RCSA §22a-174-38(c), as specified in Table 2 above, shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

1. Particulate Matter (PM)

    a. The Permittee shall not cause or allow emissions of particulate matter in excess of 25 milligrams per dry standard cubic meter of exhaust gas corrected to seven percent oxygen. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual performance test, performed as set forth in RCSA §22a-174-38(i). [RSCA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).
    b. This MWC shall not emit greater than 51.3 tons of particulate matter per calendar year.

2. Sulfur Dioxide (SO_2)

    a. The Permittee shall not cause or allow emission of sulfur dioxide in excess of 29 ppmvd corrected to seven percent oxygen, or achieve 75% reduction by weight or volume measured as required by RCSA §22a-174-38(c)(7), whichever is less stringent. [RCSA §22a-174-38(c)(1)] Continuous compliance with the sulfur dioxide limit shall be based on a 24-hour geometric average of the hourly arithmetic average emission concentrations using CEM system outlet data if compliance is based on an emission concentration, or CEM system inlet and outlet data if compliance is based on a percent reduction. [RCSA §22a-174-38(c)(4)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).
    b. The SO_2 emission limit when combusting only coal is 0.55 lb/MMBtu based on 24-hour block average. The SO_2 emission limit when combusting only RDF is 0.32 lb/MMBtu based on a 24-hour block average. When a mixture of coal and RDF is combusted, the SO_2 emission limit shall be determined using the following equation: [0.55*C) + (0.32*R)] lb/MMBtu based on a 24-hour block average. Where C is the fraction of Btu input from the coal and R is the fraction of Btu input from RDF over the 24-hour period.
    c. This MWC shall not emit greater than 457.0 tons of sulfur dioxide over any 12 consecutive months.

3. Nitrogen Oxides (NOx)

    a. The Permittee shall not cause or allow emission of nitrogen oxides in excess of 146 ppmvd corrected to seven percent oxygen. [RCSA §22a-174-38(c)(8)] Continuous compliance with the nitrogen oxides emission limit shall be based on a 24-hour daily average. [RCSA §22a-174-38(c)(9)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown or malfunction as set forth in RCSA §22a-174-38(c)(11). Emissions trading in accordance with RCSA §22a-174-38(d) may be used to comply with this limit.

b. This MWC shall not emit greater than 420.0 tons of nitrogen oxides over any 12 consecutive months. [RCSA §22a-174-22(e)(2)(4)]

4. Carbon Monoxide (CO)

a. The Permittee shall not cause or allow emission of carbon monoxide in excess of 200 ppmvd corrected to seven percent oxygen. Continuous compliance with the carbon monoxide emission limit shall be based on a 24-hour daily average. [RCSA §22a-174-38(c)(10)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).
b. This MWC shall not emit greater than 389.0 tons of carbon monoxide over any 12 consecutive months.

5. Volatile Organic Compounds (VOC) and Hydrocarbons (HC)

a. The Permittee shall not cause or allow emission of greater than 70 ppmvd of volatile organic compounds (express as methane) corrected to 12% carbon dioxide.
b. This MWC shall not emit greater than 130.0 tons of hydrocarbons per calendar year.

6. Hydrogen Chloride (HCl)

The Permittee shall not cause or allow emission of hydrogen chloride in excess of 29 ppmvd corrected to seven percent oxygen, or achieve 95% reduction by weight or volume measured as required by RCSA §22a-174-38(c)(7), whichever is less stringent. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual stack test, performed as set forth in RCSA §22a-174-38(i). [RCSA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

7. Cadmium (Cd)

The Permittee shall not cause or allow emission of cadmium in excess of 0.035 milligrams per dry standard cubic meter of exhaust gas corrected to seven percent oxygen. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual stack test performed as set forth in RCSA §22a-174-38(i). [RCSA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

8. Lead (Pb)

a. The Permittee shall not cause or allow emission of lead in excess of 0.400 milligrams per dry standard cubic meter of exhaust gas corrected to seven percent oxygen. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual performance stack test performed as set forth in RCSA §22a-174-38(i). [RCSA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods

of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

b. This MWC shall not emit greater than 0.48 tons of lead per calendar year.

9. Mercury (Hg)

The Permittee shall not cause or allow emission of mercury in excess of 0.028 milligrams per dry standard cubic meter of exhaust gas corrected to seven percent oxygen, or achieve 85% reduction by weight measured as required by RCSA §22a-174-38(c)(7), whichever is less stringent. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual performance test, performed as set forth in RCSA §22a-174-38(i). [RCSA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

10. Dioxins and Furans

a. The Permittee shall not cause or allow emission of dioxins and furans in excess of 30 nanograms per dry standard cubic meter of exhaust gas total mass corrected to seven percent oxygen. [RCSA §22a-174-38(c)(1)] Compliance with this emission limit shall be determined based on an annual performance test, performed as set forth in RCSA §22a-174-38(i). [RCSA §22a-174-38(c)(3)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

b. The Permittee shall not cause or allow emission of greater than 5.04×10^{-7} pounds of Dioxin and furan toxic equivalents per hour. [RCSA §22a-174-1(33)]

11. Sulfuric Acid

The Permittee shall not cause or allow emission of greater than 0.02 pounds of sulfuric acid per MMBtu of heat input.

12. Ammonia

The Permittee shall not cause or allow emissions of ammonia in excess of 20 ppmvd corrected to seven percent oxygen. The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11). Compliance with the ammonia emission limits shall be based on an annual stack test, performed as set forth in RCSA §22a-174-38(i).
[RCSA §22a-174-38(c)(17)]

B. Hazardous Air Pollutants

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCSA §22a-174-29. [STATE ONLY REQUIREMENT]

C. Opacity

The Permittee shall not cause or allow visible emissions in excess of 10% opacity.

[RCSA §22a-174-38(c)(1)] Continuous compliance with the opacity emission limit shall be based on a six-minute arithmetic average. [RCSA §22a-174-38(c)(5)] The emission limits set forth in RCSA §22a-174-38(c) shall apply at all times except during periods of startup, shutdown, or malfunction as set forth in RCSA §22a-174-38(c)(11).

This equipment shall not exceed 10% opacity during any six minute block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9.

D. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using emission factors from the following sources:

- *PM, hydrogen chloride, cadmium, lead, mercury, dioxin/furan, ammonia: Annual Stack Testing. Reference Part V*
- *SO_2, NOx, CO: Continuous Emission Monitoring. Reference Part IV*
- *VOC, H_2SO_4, All other HAPs: Initial Stack Test*

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

1. The Permittee shall comply with the CEM requirements as set forth in RCSA §22a-174-4. CEM shall be required by RCSA §22a-174-38 (unless otherwise specified) for the following pollutant/operational parameters and enforced on the following basis:

Pollutant/Operational Parameter	Averaging Times	Emission Limit	Units
Opacity	6-minute arithmetic average	10%	
SO_2	24-hour geometric average	29[1]	ppmvd @ 7% O_2
NOx	24-hour daily average	146	ppmvd @ 7% O_2
CO	24-hour daily average	200	ppmvd @ 7% O_2
O_2	1-hour		
Unit Load	4-hour block average		lb/hour
Fabric Filter Inlet Temperature	4-hour block average		°C or °F
Furnace Temperature	4-hour block average		°F

[1] Or achieve 75% reduction by weight or volume, whichever is less stringent

2. The Permittee shall operate CEM systems to continuously monitor and record opacity, Sulfur dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO), and Oxygen (O_2).

3. The Permittee shall operate a steam flow meter to continuously monitor and record the MWC unit load (steam production). Averaging time is a 4-hour block average.

4. The Permittee shall continuously monitor and record the fabric filter inlet temperature. Averaging time is a 4-hour block average.

5. The Permittee shall continuously monitor and record the furnace temperature as measured in the boiler bank area. Averaging time is a 4-hour block average.

6. The Permittee shall continuously monitor and record total combine overfire and underfire air, fabric filter (FF)/spray dryer absorber (SDA) system differential pressure, SDA lime slurry flow rate and selective non-catalytic reduction (SNCR) reagent injection rate.

7. The Permittee shall review all recorded CEM data daily and shall notify the commissioner in writing , on forms prescribed by the commissioner, of any deviation from an emissions limitation, and shall identify the cause or likely cause of such deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows: (a) for any hazardous air pollutant, no later than 24 hours after such deviation commenced; and (b) For any other regulated air pollutant or parameter, no later than ten days after such deviation commenced. [RCSA §22a-174-33(p)(1)]

8. The Permittee shall ensure that the CEM systems meet all applicable performance specifications and quality assurance requirements of RCSA §22a-174-38(j) and RCSA §22a-174-4.

9. The Permittee shall use redundant thermocouples for each temperature measurement required by this permit. Defective thermocouples shall be replaced as soon as practicable. The fabric filter thermocouple signal transmitter shall be calibrated annually.

10. The Permittee shall report all CEM data to the commissioner on a quarterly basis using a one-hour average. Opacity shall be reported using a six-minute arithmetric average.

11. The Permittee shall determine the calendar year quantity of RDF by summing the scale house weight data for the calendar year minus the estimated tipping floor inventory on the last day of the year, less the scale house weight data for separated pre-combustion and post-combustion scrap metal, oversized MSW, bulky waste and rejected wastes.

12. The Permittee shall use a non-resettable totalizing fuel meter to continuously monitor the weight of coal combusted in the MWC. Coal usage shall be recorded on an hourly basis.

13. The Permittee shall use a common non-resettable totalizing fuel meter to continuously monitor total natural gas combusted in the three MWCs. Total natural gas shall be recorded on an hourly basis.

14. The Permittee shall determine the calendar year quantity of Special Waste for the facility by summing the truck scale house weight data.

B. Record Keeping

1. The Permittee shall make and keep records summarizing the calendar year quantity of RDF and Special Waste combusted for the facility.

2. The Permittee shall make and keep records of hourly amounts of coal, and natural gas combusted for this MWC. The Permittee shall total these amounts to create records of fuel combusted for the calendar year. Calendar year natural gas usage for each MWC shall be allocated based on records of the calendar year operating hours for each MWC.

3. The Permittee shall make and keep records of daily operating hours of this MWC. The Permittee shall total these records to create records of operating hours for the calendar year. Records of operating hours shall be made to distinguish periods of startup and shutdown of this MWC.

4. The Permittee shall calculate and record monthly and consecutive 12 month emissions for SO_2, CO and NOx in units of tons/month and tons/year for the preceding month. The consecutive 12 month emissions shall be determined by adding the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of each month.

5. The Permittee shall calculate and record calendar year emissions for PM, VOC/HC. Pb and ammonia in units of tons/year. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of each calendar year.

6. The Permittee shall make and keep records of all required performance tests.

7. The Permittee shall make and keep records of the date, the time of the shift, the name of the operator of that shift and the operator's certification. [RCSA §22a-174-38(h)(1)]

8. The Permittee shall make and keep records of the name of each person that has reviewed the operating manual, the date of initial review and the date of the annual review. [RCSA §22a-174-38(h)(5)]

9. The Permittee shall maintain records of information specified in RCSA §22a-174-38(k).

10. The Permittee shall make and keeps records of the dates on which the condition of the boiler tubes is evaluated based on boiler draft and pressure drops, the name of the inspector and the evaluation of the condition of the boiler tubes.

11. The Permittee shall make and keep records of the dates on which cleaning of the boiler tube heat transfer surfaces is performed.

12. The Permittee shall make and keep records of the dates and time periods of startup, shutdown and malfunction.

13. All records shall indicate the date and time of occurrence of the recorded event.

14. The Permittee shall keep all records required by this permit on premises for a period of no less than five years and shall submit such records to the commissioner upon request.

C. Reporting

1. The Permittee shall submit reports to the commissioner of all required performance tests.

2. The Permittee shall submit a quarterly report to the commissioner within 30 days following the end of each calendar quarter. Each quarterly report shall include the information as set forth in RCSA §22a-174-38(l)(2).

3. The Permittee shall submit an annual report to the commissioner no later than January 30 of each year following the calendar year in which the data were collected. Each annual report shall include the information as set forth in RCSA §22a-174-38(l)(3).

4. The Permittee shall include in the annual report required by RCSA §22a-174-38(l)(3) the following information:
   a. The calendar year quantity of RDF and Special Waste combusted for the facility.
   b. The hourly amounts of coal, and natural gas combusted for each MWC.
   c. The calendar year amounts of coal, and natural gas combusted for each MWC.
   d. The calendar year operating hours for each MWC.
   e. The monthly and consecutive 12 month emissions for SO_2, CO and NOx in units of tons/month and tons/year for each MWC.
   f. The calendar year emissions for PM, VOC/HC, Pb and ammonia in units of tons/year for each MWC.
   g. The dates on which cleaning of the boiler tube heat transfer surfaces is performed for each MWC.
   h. The dates and time periods of startup, shutdown and malfunction for each MWC.

5. The Permittee shall provide written notification to the commissioner within 72 hours of the time at which the Permittee receives information regarding stack tests results indicating that any particulate matter, opacity, cadmium, lead, mercury, dioxin/furan, hydrogen chloride, ammonia, or fugitive ash emission levels exceed the applicable pollutant emission limits or standards defined in RCSA §22a-174-38. [RCSA §22a-174-38(l)(6)]

PART V. STACK EMISSION TEST REQUIREMENTS

A. Stack emission testing shall be performed in accordance with the Emission Test Guidelines available on the DEEP website.

B. Annual stack testing shall be required for the following pollutants:

☒ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ SO_2 ☐ NOx ☐ CO
☐ VOC ☐ Opacity ☒ Dioxins/Furans ☒ Fugitive Ash
☒ Other (HAPs): Lead, Hydrogen Chloride, Cadmium, Mercury, Ammonia

C. The Permittee shall conduct the annual stack test for particulate matter, dioxin/furan, fugitive ash, lead, hydrogen chloride, cadmium, mercury, and ammonia as set forth in RCSA §22a-174-38(j).

D. The annual stack test for dioxin/furan shall be conducted as set forth in RCSA §22a-174-38(i)(3).

E. All performance stack tests shall be conducted under representative full load operating conditions.

F. The Permittee shall submit the Intent-to-Test (ITT) package to the Stack Test Group of the Bureau of Air Management at least 90 days before the proposed source test date. The Permittee shall provide written notification to the commissioner three business days prior to conducting any stack test. The Permittee shall submit an acceptable test report to the commissioner within 60 days of the completion of the performance test.

G. The Permittee shall comply with all applicable notification, testing, and record keeping provisions of RCSA §22a-174-38.

H. Pursuant to RCSA §22a-174-5(e) and §22a-174-29(e), the commissioner may require the Permittee to conduct additional performance testing of any pollutant, possibly on an annual basis, based on CEM data, emission test results, and any other information that the commissioner deems appropriate.

PART VI. OPERATION AND MAINTENANCE REQUIREMENTS

A. The Permittee shall not cause or allow the plant to be operated at any time unless a certified chief operator or shift operator is physically present at the plant. [RCSA §22a-174-38(h)(1)] Operators shall be certified by the commissioner under RCSA §22a-231-1. [RCSA §22a-174-38(h)(2)] All chief operators and shift operators must satisfactorily complete an operator training course conducted by the commissioner as set forth in RCSA §22a-174-38(h)(3). The equipment operators shall be trained in the operation and maintenance of both the fuel burning and pollution control equipment.

B. The Permittee shall maintain an Operating and Maintenance (O&M) Manual that shall be updated on a yearly basis. [RCSA §22a-174-38(h)(4)] The Permittee shall submit any revision to this manual which conflicts or may conflict with any condition of this permit to the commissioner for review and shall receive the commissioner's written approval prior to incorporating such revision in the O&M Manual.

C. The Permittee shall establish a training program to review the O&M Manual with each person who has responsibilities affecting the operation of the plant. The training program shall be repeated on an annual basis for each person. [RCSA §22a-174-38(h)(5)]

D. The Permittee shall clean the boiler tubes at least twice per year. Additionally, the facility shall clean the boiler tubes when it is determined that the air flow through the boiler has become restricted due to ash build up on the boiler tubes. This determination will be based on a regular evaluation of the boiler draft and pressure drops. Cleaning of the boiler tubes may be done via online water washing.

E. The Permittee shall properly maintain and operate the fabric filter, the spray dryer

absorber, and the SNCR system at all times in accordance with the requirements of RCSA §22a-174-7.

F. In the event of a malfunction of the pollution control systems, which results in an exceedance of an applicable emission limit, the Permittee shall not charge any RDF or coal into this MWC until after the air pollution control equipment has been put back on-line.

PART VII. SPECIAL REQUIREMENTS

A. The Permittee shall comply with all applicable sections of the following New Source Performance Standards at all times.

Title 40 CFR Part 60 Subparts A and Eb

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

B. The Permittee shall comply with all applicable sections of the following National Emission Standards for Hazardous Air Pollutants at all times.

Title 40 CFR Part 61 Subparts C and/or E

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

C. The Permittee shall institute and comply with the following conditions at all times:

1. Sufficient wind-sheltered storage capacity for refuse, residual particulates and bottom ash on site and provision for landfill disposal of same must be provided for, in the event of strike, malfunction of air pollution control equipment, or other interruption.

2. Vehicular traffic areas shall be paved at the plant site.

3. Transfer, storage and transportation at and from the plant site, of materials collected from the furnace grates and the air pollution control equipment shall be transferred in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

4. The Permittee shall implement a cleanup program on the plant site whereby at least once per day any refuse, RDF or other materials, which may become airborne will be collected.

5. The Permittee shall not allow the public to have uncontrolled access to any portion of this premises.

D. Except during periods of maintenance and repair of ash conveying systems, the visible emissions to the atmosphere from the conveyance or transfer of combustion ash shall be limited to five percent of the observation period (i.e., nine minutes per three hour period), as set forth in RCSA §22a-174-38(i)(4)(I). During periods of maintenance and repair of the ash conveyance systems all reasonable measures to control emissions from this MWC shall be implemented. [RCSA §22a-174-38(f)]

E. The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA §22a-174-23. [STATE ONLY REQUIREMENT]

F. The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA §§22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VIII. ADDITIONAL TERMS AND CONDITIONS

A. This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

B. Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.

C. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.

D. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not parties to this permit.

E. Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."

F. Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.

G. Within 15 days of the date the Permittee becomes aware of a change in any information

submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.

H. The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

I. Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.