Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
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March 19, 2012

Mark Davis
Plant Manager
SEMASS Partnership
141 Cranberry Highway
West Wareham, Massachusetts 02576-1504

RE: **FINAL APPROVAL**
Application for: BWP AQ 22
MUNICIPAL WASTE COMBUSTOR – EMISSION CONTROL PLAN
Application No.: SE-11-042
Transmittal No.: X241551

AT: SEMASS Resource Recovery Facility
141 Cranberry Highway
Rochester, Massachusetts

Dear Mr. Davis:

The Department of Environmental Protection (the "Department"), Bureau of Waste Prevention, has reviewed your Municipal Waste Combustor (MWC) Emission Control Plan (ECP) application dated January 5, 2012 and "Consolidated Plan Approval Application, SEMASS Auxiliary Burner Replacement Project, Revision 1" dated February 15, 2012. This ECP application proposes modification of the ECP approved by the Department on December 1, 2000. The modifications proposed is the replacement of the existing No.2 fuel oil auxiliary burners on each of the three municipal waste combustors with dual fuel low NOx burners which fire both No. 2 fuel oil and natural gas

The ECP as proposed details how emission limitations and compliance schedules for the control of certain designated pollutants according to 310 CMR 7.08(2) – Municipal Waste Combustors (MWCs), adopted by the Department on August 21, 1998, will be implemented for equipment at the SEMASS Partnership (SEMASS) facility located at 141 Cranberry Highway, Rochester, Massachusetts. This application bears the signature of Mr. Mark Davis as the designated legally responsible official for SEMASS, and was submitted over the seal and signature of Mr. Eric Pearson, P.E. No. 39741.

LEGAL AUTHORITY

On December 19, 1995, EPA adopted New Source Performance Standards (NSPS) for new MWCs (40 CFR 60 Subpart Eb), and Emission Guidelines (EG) for existing MWCs (40 CFR 60 Subpart Cb). The United States Environmental Protection Agency adopted final revisions to the NSPS and EG on October 24, 1997. The NSPS apply to facilities that commenced construction after September 20, 1994, and the EG apply to facilities that commenced construction on or prior to September 20, 1994. Both the NSPS and the EG apply to large MWC units, that is, those

combusting greater than 250 tons per day of municipal solid waste (MSW). Because SEMASS was constructed prior to September 20, 1994, and your combustion unit(s) burn greater than 250 tons per day of MSW, your facility is subject to 40 CFR 60 Subpart Cb "Emission Guidelines" and 310 CMR 7.08(2). In addition, the Department has imposed further requirements and lowered the emission limitation for mercury from the Federal limit of 0.080 milligrams per dry standard cubic meter (mg/dscm) to 0.028 mg/dscm. With the exception of the emission limitation for mercury, the Commonwealth has adopted Emission Limits identical to the Federal EG into regulation under 310 CMR 7.08(2), "Municipal Waste Combustors" as contained in 310 CMR 7.00 "Air Pollution Control Regulations" adopted by the Department pursuant to the Massachusetts General Laws, Chapter 111, Sections 142 A-M.

The MWC Regulation requires any person who owns, leases, operates or controls a large municipal waste combustor unit to comply with 310 CMR 7.08(2) in its entirety. The MWC ECP was submitted in accordance with 310 CMR 7.08(2)(j).

The purpose of 310 CMR 7.08(2) is to provide emission limitations and compliance schedules for the control of certain designated pollutants emitted from Municipal Waste Combustors, in accordance with the requirements contained in Sections 111(d) and 129 of the Clean Air Act. 310 CMR 7.08(2) establishes requirements for the following:

Operating Practices (Carbon Monoxide, Flue Gas Temperature, Load Level)
Metals (Mercury, Lead, Cadmium)
Particulate Matter
Opacity
Organics (Dioxin/Furan)
Acid Gases (Sulfur Dioxide, Hydrogen Chloride)
Nitrogen Oxides
Fugitive Ash Emissions

Applicable requirements and limitations contained in 310 CMR 7.08(2) shall not supersede, relax or eliminate any more stringent conditions or requirements (e.g. emission limitation(s), testing, record keeping, reporting, or monitoring requirements) established by regulation or contained in a facility's previously issued source specific plan approval(s) or emission control plan(s). Furthermore, the facility must amend its operating permit application to include the approved emission control plan.

Based on the above, the Department has determined that the referenced ECP Application is administratively and technically complete, and the proposed modifications are in conformance with current air pollution control engineering practices. The Department hereby grants Final Approval of the ECP subject to the conditions listed below.

Abbreviations used in this Final Approval mean the following:

EU# = Emission Unit Number
MMBtu/hr = million British thermal units per hour
lbs/hr = pounds per hour
mg/dscm = milligram per dry standard cubic meter
ng/dscm = nanogram per dry standard cubic meter
ppm = parts per million
% = percent
psig = pounds per square inch gauge
ACFM = Actual Cubic Feet per Minute
°C = Degrees Centigrade
°F = Degrees Fahrenheit

Cd = Cadmium
Pb = Lead
Hg = Mercury
NH_3 = Ammonia
NO_x = Nitrogen Oxides
CO = Carbon Monoxide
PM = Particulate Matter
HCl = Hydrogen Chloride
SO_2 = Sulfur Dioxide
O_2 = Oxygen
$\leq$ = less than or equal to

EQUIPMENT DESCRIPTION

The following emission units (Table 1) are subject to and regulated by this ECP approval:

Table 1

EMISSION UNIT (EU#)	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY	POLLUTION CONTROL DEVICE
EU 1	Refuse Derived Fuel Incinerator/Water Wall Boiler	375 MMBtu/hr Heat Input 280,000 lb/hr of steam	Two (2) No. 2 Fuel Oil/Natural Gas Fired Auxiliary Burners [AB]; 162.5 MMBtu/hr per AB firing No. 2 Fuel Oil; 170 MMBtu/hr per AB firing Natural Gas
			Wet Bottom Boiler Seal [WBBS]
			Powdered Activated Carbon Injection System [PACI]
			Spray Dryer Absorber with Calcium Hydroxide Slurry Atomization [SDA]
			Five Field, Electrostatic Precipitator [ESP]
			Low Pressure High Volume Pulse Jet, Fabric Filter Bag, Compact Hybrid Particulate Collector [COHPAC]
EU 2	Refuse Derived Fuel Incinerator/Water Wall Boiler	375 MMBtu/hr Heat Input 280,000 lb/hr of steam	Two (2) No. 2 Fuel Oil/Natural Gas Fired Auxiliary Burners [AB]; 162.5 MMBtu/hr per AB firing No. 2 Fuel Oil; 170 MMBtu/hr per AB firing Natural Gas
			WBBS
			PACI
			SDA
			ESP
			COHPAC
EU 3	Refuse Derived Fuel Incinerator/Water Wall Boiler	375 MMBtu/hr Heat Input 270,796 lb/hr	Two (2) No. 2 Fuel Oil/Natural Gas Fired Auxiliary Burners [AB]; 162.5 MMBtu/hr per AB firing No. 2 Fuel Oil; 170 MMBtu/hr per AB firing Natural Gas
			WBBS
			Selective Non-Catalytic Reduction with Urea Injection [SNCR]
			SDA
			Pulse Jet, 12 Module, Fabric Filter/Baghouse [FF/BH]
EU 4	Bottom Ash Handling and Fugitive Emissions	60 ton/hr	Enclosed Building and Conveyors
			Wet Bottom Ash
EU 5	Fly Ash Handling and Fugitive Emissions for EU 1 and EU 2	2000 ACFM [Silo Vent] 2000 ACFM [Loud-out Chutes]	Enclosed Conveyor, Storage Silo and Load-out Chutes
			Cartridge Filters [CF] for Load-out Chutes
			FF/BH for Silo Vent
			Pugmill with Conditioning
EU 6	Fly Ash Handling and Fugitive Emissions for EU 3	2000 ACFM [Silo Vent] 2000 ACFM [Load-out Chutes]	Enclosed Conveyor, Storage Silo and Load-out Chutes
			CF for Load-out Chutes
			FF/BH for Silo Vent
			Pugmill with Conditioning

APPLICABLE REQUIREMENTS

A. EMISSION LIMITS AND RESTRICTIONS

The SEMASS facility is subject to the emission limits/restrictions as contained in Table 2 below:

Table 2

EU#	RESTRICTION/OPERATING PRACTICES	POLLUTANT	EMISSION LIMIT/STANDARD [4]	APPLICABLE REGULATION AND/OR APPROVAL NUMBER
EU 1, EU 2	Unit Load ≤ 110% of maximum demonstrated load, calculated in 4-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved [3] PM control device inlet temperature ≤ 17°C (30°F) above maximum demonstrated PM control device inlet temperature, calculated in 4-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved [3]	PM	≤ 27 mg/dscm at 7% O_2 dry basis [1]	310 CMR 7.08(2)(f)2
		Opacity	≤ 10% (6 minute average)	310 CMR 7.08(2)(f)2
		Cd	≤ 0.040 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		Pb	≤ 0.440 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		Hg	≤ 0.028 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		SO_2	≤ 29 ppm by volume at 7% O_2 dry basis or 75% reduction by weight or volume, whichever is less stringent (24-hour geometric mean)	310 CMR 7.08(2)(f)2
		HCl	≤ 29 ppm by volume at 7% O_2 dry basis or 95% reduction by weight or volume, whichever is less stringent.	310 CMR 7.08(2)(f)2
		Dioxin/Furan	≤ 60 ng/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		CO	≤ 200 ppm by volume at 7% O_2 dry basis at combustor outlet (24-hour daily arithmetic average)	310 CMR 7.08(2)(f)1.a.i.
		NO_x	≤ 250 ppm by volume at 7% O_2 dry basis (24-hour daily arithmetic average)	310 CMR 7.08(2)(f)3
EU 3	Unit Load ≤ 110% of maximum demonstrated load, calculated in 4-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved [3] PM control device inlet temperature ≤ 17°C (30°F) above maximum demonstrated PM control device inlet temperature, calculated in 4-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved [3]	PM	≤ 27 mg/dscm at 7% O_2 dry basis [1]	310 CMR 7.08(2)(f)2
		Opacity	≤ 10% (6 minute average)	310 CMR 7.08(2)(f)2
		Cd	≤ 0.040 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		Pb	≤ 0.440 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		Hg	≤ 0.028 mg/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		SO_2	≤ 29 ppm by volume at 7% O_2 dry basis or 80% reduction by weight or volume, whichever is less stringent (24-hour geometric mean)	310 CMR 7.02 Approval No. 4I98028
		HCl	≤ 25 ppm by volume at 7% O_2 dry basis or 95% reduction by weight or volume, whichever is less stringent.	310 CMR 7.02 Approval No. 4I98028
		Dioxin/Furan	≤ 30 ng/dscm at 7% O_2 dry basis	310 CMR 7.08(2)(f)2
		CO	≤ 150 ppm by volume at 7% O_2 dry basis at combustor outlet (24-hour daily arithmetic average)	310 CMR 7.02 Approval No. 4I98028
		NO_x	≤ 180 ppm by volume at 7% O_2 dry basis (24-hour daily arithmetic average)	310 CMR 7.02 Approval No. 4I98028
EU 4		Fugitive Ash	Visible emissions ≤ 5% of the observation period [2]	310 CMR 7.08(2)(f)5
EU 5		Fugitive Ash	Visible emissions ≤ 5% of the observation period [2]	310 CMR 7.08(2)(f)5
EU 6		Fugitive Ash	Visible emissions ≤ 5% of the observation period [2]	310 CMR 7.08(2)(f)5

Table 2 Notes:

1 No person shall cause, suffer, allow, or permit emissions from any incinerator of any particles that have a dimension greater than 100 microns. (Be referred to 310 CMR 7.06(2))

2 No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere of any visible emissions of combustion ash from an ash conveying system (including transfer points) in excess of 5 percent of the observation period (nine minutes per three hour period). This emission limit does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however the emission limit does apply to visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems. This subsection does not apply during maintenance and repair of ash conveying systems. Maintenance and repair of the ash conveying systems must be done in accordance with best management practices.

3 No person subject to 310 CMR 7.08(2) shall:

a. cause, suffer, allow or permit a municipal waste combustor unit to operate at a load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load calculated in 4-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved; and

b. cause, suffer, allow or permit a municipal waste combustor unit to operate at a temperature, measured at the PM control device inlet, exceeding 17 °C (30 °F) above the maximum demonstrated PM control device temperature, calculated in 4-hr block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved.

During any nine month dioxin/furan compliance test and the 2 weeks preceding each nine month dioxin/furan compliance test, municipal waste combustor unit load limit and PM control device temperature limitations are not applicable.

Municipal waste combustor unit load limit and PM control device temperature limitations may be waived, if prior approval is granted by the Department, for the purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance provided that there is an improvement in controlling air pollution, or advancing the state-of-the-art for controlling facility emissions.

4 Emission limits apply at all times except during periods of start-up, shutdown or malfunction as defined in 40 CFR Part 60.58b.

B. COMPLIANCE DEMONSTRATION

Any person subject to 310 CMR 7.08(2) that is subject to 310 CMR 7.00 and 310 CMR 19.00 shall be in compliance with, or on a Department approved compliance schedule to meet, all provisions of 310 CMR 7.00 and 310 CMR 19.00 and any plan approval, order, notice of noncompliance or permit issued thereunder. The facility is subject to the applicable requirements contained in Table 2 above and 310 CMR 7.08, and monitoring/testing, record keeping, and reporting requirements as contained in Tables 3, 4 and 5 below and 310 CMR 7.08:

Table 3	
EU#	MONITORING/TESTING REQUIREMENTS
EU 3	In accordance with 310 CMR 7.08(2)(k)3, complete initial performance test for dioxin/furan and Hg within 180 days after the final compliance date which is one year following the approval by EPA of the state plan or one year following the promulgation of 40 CFR, Subpart FFF of Part 62, whichever is earlier.
EU 1, EU 2, EU 3	In accordance with 310 CMR 7.08(2)(g), complete initial performance tests within 180 days after the final compliance date of December 19, 2000.
	Following the date of the initial performance test for dioxin/furan, the facility shall conduct compliance tests for dioxin/furan emissions according to one of the schedules specified below, as required by 310 CMR 7.08(2)(g)1.a. and b.: a. conduct compliance test for dioxin/furan emissions on all municipal waste combustor unit(s) on a nine month basis, or b. for municipal waste combustor unit(s) where all compliance tests for all unit(s) over a 27 month period indicate that dioxin/furan emissions are less than or equal to 7 nanograms per dry standard cubic meter total mass (ng/dscm), corrected to 7 percent oxygen, the facility may elect to conduct compliance tests for one unit every nine months. At a minimum, a compliance test for dioxin/furan emissions shall be conducted every nine months following the previous compliance test for one unit at the municipal waste combustor plant. Every nine months a different unit at the municipal waste combustor plant shall be tested, and the units at the plant shall be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable). The facility may continue to conduct compliance testing on only one unit per nine month basis so long as the dioxin/furan emissions remain less than or equal to 7 ng/dscm @ 7% O_2. If any nine month compliance test indicates dioxin/furan emissions greater than the specified limit, compliance tests shall thereafter be conducted on all units at the plant every nine months until and unless all nine month compliance test for all units at the plant over a 27 month period indicate dioxin/furan emissions less than or equal to the 7 ng/dscm @ 7% O_2.
	In accordance with 310 CMR 7.08(2)(g)1.d., for municipal waste combustor units where carbon injection (or equivalent) is used to comply with the dioxin/furan emission limits specified in section 310 CMR 7.08(2)(f)2. or the dioxin/furan emission limit specified in 310 CMR 7.08(2)(g)1.b, measure and calculate the carbon (or equivalent) usage rate following the procedures specified in 40 CFR 60.58b(m) effective December 19, 1995 and as amended October 4, 1997.
	In accordance with 310 CMR 7.08(2)(g)2., following the date of the initial performance test for Hg, compliance testing for Hg shall be conducted on all municipal waste combustor unit(s)on a quarterly basis. Compliance with the emissions limit specified in 310 CMR 7.08(2)(f) 2. Shall be based on the average of four quarterly compliance tests per rolling twelve months but shall not exceed 0.080 mg/dscm in any quarterly test. If compliance with the Hg emission limit has been achieved in each quarter for eight consecutive quarters, the facility may elect to perform compliance testing on a nine month basis. Any municipal waste combustor unit(s) which cannot achieve compliance with the emission limitation in 310 CMR 7.08(2)(f) 2. during the nine month compliance test shall resume quarterly compliance testing as specified above.

Table 3	
EU#	MONITORING/TESTING REQUIREMENTS
	In accordance with 310 CMR 7.08(2)(g)3., for municipal waste combustor unit(s) which employ a carbon injection (or equivalent) Hg emission control system, conduct optimization tests. These tests will determine the optimum feed rate for the Hg emissions control apparatus by determining the carbon (or equivalent) feed rate at which the emissions of Hg are equal to or less than the applicable limit at 310 CMR 7.08(2)(f) 2. The optimization test shall be conducted as follows: a. The optimization tests shall be performed during the initial performance test, after a change in carbon (or equivalent), upon request by the Department, upon request by the facility or annually if required under 310 CMR 7.08(2)(g)4. b. If there are identical municipal waste combustor units at the municipal waste combustor plant, then optimization tests may be performed on one unit, and the resulting parameters applied to the other unit(s) which are identical to that unit at that plant. c. Within 30 calendar days of the conclusion of any optimization test, the facility shall submit to the Department for approval a proposed optimized carbon (or equivalent) feed rate which minimizes Hg emissions. An approvable feed rate is the feed rate such that a higher feed rate achieves insignificant additional reductions in Hg emissions compared to the amount of carbon (or equivalent) added. The carbon (or equivalent) feed rate approved by the Department shall be used to operate the carbon injection (or equivalent) Hg control system until the next optimization test is performed and the feed rate approved.
	In accordance with 310 CMR 7.08(2)(g)6., the facility shall conduct compliance testing for all designated pollutants every nine months for each municipal waste combustor unit(s). Compliance testing for dioxin/furan and Hg shall be as specified in 310 CMR 7.08(2)(g)1. and 2.
	In accordance with 310 CMR 7.08(2)(g)5.a. and b., Continuous Emissions Monitoring Systems (CEMS) which monitor NO_x, SO_2, and operating practices parameters (e.g., CO, unit load and PM control device inlet temperature) shall obtain at a minimum valid continuous emissions monitoring system data for 75% of the hours per day (18 hours per day) for 75% of the days per month (23 days per month for a 30 day month) that a municipal waste combustor unit is combusting municipal solid waste continuously (24 hours per day) and valid CEMS data must be obtained for 90% of the hours per quarter that the municipal waste combustor unit is combusting municipal solid waste. CO CEMS installed and operated in accordance with Performance Specification 4 of 40 CFR Part 60, Appendix B, will satisfy the requirements in 310 CMR 7.08(2)(g).
EU4, EU 5, EU 6	Monitor visible emissions associated with ash handling and fugitive operations to insure compliance with visible emission standards as specified in Table 2.

Table 4	
EU#	RECORD KEEPING REQUIREMENTS
EU 1, EU 2, EU 3	In accordance with 310 CMR 7.08(2)(h)9., the results of the initial performance tests and all nine month compliance tests conducted to determine compliance with the PM, opacity, Cd, Pb, Hg, dioxin/furan, HCl, and fugitive ash emission limits shall be recorded along with supporting calculations and submitted to the Department within 90 days after the test. In addition, the results of the quarterly Hg compliance tests shall also be recorded and submitted to the Department within 90 days after the test.

Table 4	
EU#	RECORD KEEPING REQUIREMENTS
	For the initial dioxin/furan performance test and all subsequent dioxin/furan compliance tests recorded under 7.08(2)(h), the maximum demonstrated municipal waste combustor load and maximum PM control device temperature (for each PM control device) shall be recorded along with supporting calculations, as required by 310 CMR 7.08(2)(h)10.
	As required by 310 CMR 7.08(2)(h)4., for municipal waste combustor unit(s) that apply carbon (or equivalent) for Hg or dioxin/furan control and maintain, the following records: a. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated as required under 40 CFR 60.58b(m)(1)(i) effective December 19, 1995 and as amended October 24, 1997, during the initial Hg performance test and all subsequent compliance tests, with supporting calculations. b. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(1)(ii) effective December 19, 1995 and as amended October 24, 1997, during the initial dioxin/furan performance test and all subsequent nine month compliance tests, with supporting calculations. c. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(3)(ii) effective December 19, 1995 and as amended October 24, 1997, with supporting calculations. d. The total carbon (or equivalent) usage for each calendar quarter estimated as specified under 40 CFR 60.58b(m)(3) effective December 19, 1995 and as amended October 24, 1997, with supporting calculations. e. The carbon (or equivalent) injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon (or equivalent) feed rate.
	As required by 310 CMR 7.08(2)(h)13., for municipal waste combustor units that apply carbon (or equivalent) for Hg or dioxin/furan control: a. Identification of the calendar dates when the average carbon (or equivalent) mass feed rates recorded under 310 CMR 7.08(2)(h)4.c. were less than either of the hourly carbon feed rates estimated during compliance tests for Hg or dioxin/furan emissions and recorded under paragraphs 310 CMR 7.08(2)(h) 4. a. or b. of this section, respectively, with reasons for such feed rates and a description of corrective actions taken. b. Identification of the calendar dates when the carbon injection (or equivalent) system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (or equivalent) recorded under 310 CMR 7.08(2)(h) 4. e., are below the level(s) estimated during the compliance tests as specified in 40 CFR 60.58b(m)(1)(i) and 60.58b(m)(1)(ii)effective December 19, 1995 and as amended October 24, 1997, with reasons for such occurrences and a description of corrective actions taken.

Table 4	
EU#	RECORD KEEPING REQUIREMENTS
	In accordance with 310 CMR 7.08(2)(h)2., record the emission concentrations and operating parameters measured using continuous emissions monitoring systems. The measurements specified below shall be recorded and shall be available for submittal to the Department or for onsite review by an inspector: a. All 6-minute average opacity levels as specified under 40 CFR 60.58b(c) effective December 19, 1995 and as amended October 24, 1997, including the highest level measured. b. All 1-hour average SO_2 emission concentrations as specified under 40 CFR 60.58b(e) effective December 19, 1995 and as amended October 24, 1997. c. All 1-hour average NO_x emission concentrations as specified under 40 CFR 60.58b(h) effective December 19, 1995 and as amended October 24, 1997. d. All 1-hour average CO emission concentrations, municipal waste combustor unit load measurements, and PM control device inlet temperatures as specified under 40 CFR 60.58b(i) effective December 19, 1995 and as amended October 24, 1997. e. All 24-hour daily geometric average SO_2 emission concentrations and all 24-hour daily geometric average percent reductions in SO_2 emissions as applicable, as specified under 40 CFR 60.58b(e) effective December 19, 1995 and as amended October 24, 1997 including the highest level recorded. f. All 24-hour daily arithmetic average NO_x emission concentrations as specified under 40 CFR 60.58b(h) effective December 19, 1995 and as amended October 24, 1997, including the highest level recorded. g. All 24-hour daily arithmetic average CO emission concentrations as specified under 40 CFR 60.58b(i) effective December 19, 1995 and as amended October 24, 1997, including the highest level recorded. h. All 4-hour block arithmetic average municipal waste combustor unit load levels (steam flow) and PM control device inlet temperature as specified under 40 CFR 60.58b(i) effective December 19, 1995 and as amended October 24, 1997, including the highest level recorded.
	As required by 310 CMR 7.08(2)(h)3., record the calendar dates when any of the average emissions concentrations or percent reductions, or operating parameters recorded under section 7.08(2)(h) 2., exceed the applicable limits, with detailed specific reasons for such exceedances and a description of corrective actions taken.
	As required by 310 CMR 7.08(2)(h)5., record the calendar dates and time periods for which the minimum number of hours of any of the data specified below have not been obtained including reasons for not obtaining sufficient data and a description of corrective actions taken: a. SO_2 emissions data. b. NO_x emissions data. c. CO emissions data. d. Municipal waste combustor unit load data, including PM control device inlet temperature data.

Table 4	
EU#	RECORD KEEPING REQUIREMENTS
	As required by 310 CMR 7.08(2)(h)6., record each occurrence that SO_2 emissions data, NO_x emissions data, or operational data (e.g. CO emissions, unit load, and PM control device temperature) have been excluded from the calculation of average emission concentrations or parameters, along with detailed and specific reasons for excluding the data.
	As required by 310 CMR 7.08(2)(h)7., record the results of daily drift tests and quarterly accuracy determinations for SO_2, NO_x, and CO continuous emission monitoring systems, as required under 40 CFR, Part 60, Appendix F, Procedure 1.
	As required by 310 CMR 7.08(2)(h)8., record each occurrence of a start-up, shut-down or malfunction, including the specific reasons for each occurrence, date, time, and unit involved. Average emissions concentrations or percent reductions, or operating parameters recorded under section 7.08(2)(h) 2., shall be recorded during start-up, shut-down or malfunction.
	In accordance with 310 CMR 7.08(2)(h)11., maintain records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who are certified by ASME (Operator Certification and Provisional Certification), including the dates of initial and renewal certifications and documentation of current certification. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course if required.
	In accordance with 310 CMR 7.08(2)(h)12., maintain the records showing the names of the persons who have completed a review of the operating manual as required by section 7.08(2)(f) 6. d. including the date of the initial review and subsequent annual reviews.
	As required by 310 CMR 7.08(2)(h)1., maintain the calendar date of each record.
	The facility shall maintain records of the information specified in this section, as applicable, for each municipal waste combustor unit. All records shall be retained at the facility for at least 5 years, in accordance with 310 CMR 7.08(2)(h) and shall be made available to Department personnel upon request.
EU 4, EU 5, EU 6	Maintain records of the compliance status of visible emissions associated with ash handling and fugitive operations.

Table 5	
EU#	REPORTING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4, EU 5, EU 6	As required by 310 CMR 7.08(2)(i), the facility shall submit an initial performance report as well as an annual report of the information specified in 310 CMR 7.08(2)(i) 1., as applicable. The facility which elects to follow the compliance testing schedule specified in 310 CMR 7.08(2)(g) 1.b., shall follow the procedures specified in section 310 CMR 7.08(2)(i) 1. for reporting the selection of this schedule. Annual Reporting Requirements[1] – The information specified in (a.) through (g.) below shall be reported: a. 310 CMR 7.08(2)(h) 2.a., e. through h. for the highest emission levels recorded. b. 310 CMR 7.08(2)(h) 4.a. and b. c. 310 CMR 7.08(2)(h) 5. – 6. d. 310 CMR 7.08(2)(h) 8. – 10. e. Summary of a. through d. for the previous year. f. The performance evaluation of the continuous emission monitoring system using the applicable performance specifications in Appendix B of 40 CFR, Part 60. g. A notification of intent to begin the reduced dioxin/furan compliance testing schedule specified in section 310 CMR 7.08(2)(g) 1. b. during the following calendar year. As required by 310 CMR 7.08(2)(i), the facility shall submit semiannual reports that included the information specified in 310 CMR 7.08(2)(I)2. for any recorded pollutant or parameter that does not comply with the emission limits as set forth in 310 CMR 7.08(2). Semi-Annual Reporting Requirements[2] – The information specified in a. through e. below shall be reported: a. 310 CMR 7.08(2)(h)2.a., e. through h. for each date recorded in 310 CMR 7.08(2)(h)3. b. 310 CMR 7.08(2)(h)3. c. 310 CMR 7.08(2)(h)4.c. d. 310 CMR 7.08(2)(h)9.[3] e. 310 CMR 7.08(2)(h)13.
	As required by 310 CMR 7.08(2)(i), in meeting the reporting requirements of 310 CMR 7.08(2)(i)1. And 310 CMR 7.08(2)(i)2., the facility shall report the information in a format determined by the Department that is designed to be understandable and informative to the public.

Table 5 Notes:

1 Annual reports shall be submitted to this Office no later than February 15 of each year following the calendar year in which the data was collected.

2 Semiannual reports shall be submitted according to the schedule specified: If data reported in accordance with section 310 CMR 7.08(2)(i)2. were collected during the first calendar half, then the report shall be submitted on or before August 1 following the first calendar half; (2) If data reported in section 310 CMR 7.08(2)(i)2. were collected during the second calendar half, then the report shall be submitted on or before February 15 following the second calendar half.

3 Include only reports which document emission levels that were above the applicable requirements and the corrective actions taken.

COMPLIANCE SCHEDULE

As required by 310 CMR 7.08(2)(k), the subject municipal waste combustor unit(s) shall be in full compliance with the applicable requirements of 310 CMR 7.08(2):

TABLE 6		
EU#	ACTIVITY	DATE
EU 1, EU 2, EU 3, EU 4, EU 5, EU 6	All contracts involving required air pollution control systems and required process modifications, and the issuance of any additional orders for the purchase of air pollution control equipment will be awarded by:	August 21, 1999
	On-site construction required for the installation of air pollution control equipment and required process modifications will be initiated by:	August 21, 2000
	Completion of on-site construction or installation of air pollution control equipment or process modifications will be achieved by:	November 19, 2000
	Compliance will be achieved by:	December 19, 2000
EU 3	Compliance with the mercury and dioxin/furan emission limits contained in 40 CFR, Subpart Ca of Part 60:	One year following approval by EPA of the state plan or one year following the promulgation of 40 CFR, Subpart FFF of Part 62, whichever is earlier.

SPECIAL CONDITIONS FOR ECP

SEMASS shall comply with the following special conditions:

a. SEMASS shall comply with the requirements contained in Tables 2, 3, 4, 5 and 6 on and after December 19, 2000.

b. SEMASS shall submit to the Department documentation that each activity has been completed within 30 days of the compliance date for each activity identified in Table 6 above.

c. SEMASS shall not combust sewage sludge in any of the municipal waste combustor units.

d. SEMASS shall conduct an optimization/minimization testing program regarding the use of urea on the SNCR systems to insure that the emission of ammonia (ammonia slip) is minimized. A test protocol for the optimization/minimization test program shall be submitted 30 days prior to commencement of the test program. SEMASS shall notify the Department of the dates that testing will occur. A test report shall be submitted to the Department within 60 days of the completion of such testing.

e. Upon demonstrating compliance with the applicable pollutant emission limits specified in 310 CMR 7.08(2), through stack emission testing, SEMASS shall be permitted to operate at a steam load level as defined in 310 CMR 7.08(2)(f)1. upon submission to the Department of the initial performance test report referenced in Table 5 above. The steam load limit would apply to EU 1, EU 2 and EU 3, and can be effective prior to the compliance date of December 19, 2000. Furthermore, upon compliance demonstration, all previously approved steam load limits would be superseded by the steam limit methodology specified in 310 CMR 7.08(2)(f)1.

GENERAL CONDITIONS FOR ECP

A. SITE ASSIGNMENT

In accordance with 310 CMR 7.08(2)(a), no person shall, suffer, allow, or permit the construction, substantial reconstruction, alteration or operation of a municipal waste combustor unit on a site which has not received a site assignment in accordance with M.G.L. c.111, s.150A.

B. COMPLIANCE AND PERFORMANCE TESTING

As required by 310 CMR 7.08(2)(g), the facility shall comply with the provisions of 40 CFR 60.58b, "Compliance and performance testing", effective December 19, 1995 and as amended October 24, 1997, the provisions of which are hereby incorporated by reference. Compliance with the applicable requirements as set forth in 310 CMR 7.08(2)(f) and Section 4 of this ECP, shall be determined in accordance with 40 CFR 60.58b, except as provided under 310 CMR 7.08(2)(g)1., 2., 3., 4., 5., and 6, and as specified within this ECP. The initial performance test must be completed within 180 days after the final compliance date.

C. OPERATOR TRAINING AND CERTIFICATION

In accordance with 310 CMR 7.08(2)(f)6., the facility shall implement the following municipal waste combustor operator training and certification requirements:

a. shall obtain and maintain an Operator Certificate issued by the American Society of Mechanical Engineers (ASME).

b. shall not allow the municipal waste combustor unit to be operated at any time unless one of the following persons is on duty: A chief facility operator or a shift supervisor who has obtained an Operator Certificate. (A Provisional Certificate is acceptable provided the supervisor is scheduled to obtain an Operator Certificate in accordance with section (f) below). If one of the persons listed above must leave the municipal waste combustor plant during his or her operating shift, a provisionally certified control room operator who is onsite at the municipal waste combustor plant may fulfill these requirements.

c. shall have all chief facility operators, shift supervisors, and control room operators who have not obtained an Operator Certificate from ASME complete the National Technical Information Service - "EPA Municipal Waste Combustor Operating Course."

d. shall establish a training program to review the operating manual with each person who has responsibilities affecting the operation of an affected municipal waste combustor unit, including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. The operating manual shall address at a minimum the following:

i. A summary of all applicable requirements in this regulation;
ii. Basic combustion theory applicable to a municipal waste combustor unit;
iii. Procedures for receiving, handling, and feeding municipal solid waste;
iv. Municipal waste combustor unit startup, shutdown, and malfunction procedures;
v. Procedures for maintaining proper combustion air supply levels;
vi. Procedures for operating the municipal waste combustor unit within the requirements established under this regulation;
vii. Procedures for responding to periodic upset or off-specification conditions;
viii. Procedures for minimizing PM carryover;
ix. Procedures for handling ash;
x. Procedures for monitoring municipal waste combustor unit emissions; and

xi. Reporting and recordkeeping procedures.

e. shall make available to the Department for inspection upon request all the operating manuals and records of training.

f. shall be in compliance with all training and certification requirements specified in 310 CMR 7.08(2)(f)6. by six months after the date of start up or August 21, 1999, whichever is later.

ADDITIONAL REQUIREMENTS

In accordance with 310 CMR 7.08(2)(j)5., additional requirements may be included in the emission control plan approval if the Department determines that the emissions from a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include but are not limited to emissions limits on air contaminants, and additional stack testing or emission monitoring requirements.

The Department may modify the emission control plan at any time if the Department determines that a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation.

MODIFICATION TO THE ECP

In accordance with 310 CMR 7.08(2)(j)7., if the Department proposes to modify a municipal waste combustor plant's emission control plan, the Department shall publish a notice of public comment in accordance with M.G.L. c. 30A detailing the proposed modification. The Department shall allow for a 30 day public comment period following the published notice. The Department will modify the emission control plan after the close of the public comment period.

GENERAL LEGAL RESPONSIBILITY

SEMASS shall maintain continuous compliance at all times with the terms of this emission control plan. This approval may be suspended, modified, or revoked by the Department if at any time the facility is violating any applicable Regulation(s) or conditions of this approval letter.

The application material submitted and this approval letter together constitute the approved emission control plan. Where there is a conflict between the submitted information and this approval letter, this letter shall rule.

Should a condition of air pollution occur as a result of the operation of this facility, then SEMASS shall immediately take appropriate steps to abate said condition.

MASSACHUSETTS ENVIRONMENTAL POLICY ACT

The Department has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs, for air quality control purposes, was not required prior to this action by the Department. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and Regulation 301 CMR 11.00 Section 11.03, provide certain "Fail Safe Provisions" which allow the Secretary to require the filing of an ENF and/or Environmental Impact Report at a later time.

APPEAL PROCESS

This Emission Control Plan Approval is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one

(21) days of the date of issuance of this Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, the relief sought and shall be limited to the matters concerning the proposed modifications to the previously issued Final Approval dated July 14, 1999. Additionally, the request must state why the approval is not consistent with the applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, Massachusetts 02211

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

If a request for an adjudicatory hearing is filed concerning the Department's approval of this Emission Control Plan, the facility may continue to implement the Emission Control Plan Final Approval pending the outcome of the administrative proceedings. The Emission Control Plan Final Approval is subject to affirmation, modification or revocation by any Final Decision issued by the Department after adjudicatory hearing, if one is requested.

Please be advised that this Final Approval does not negate the responsibility of SEMASS to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Final Approval imply compliance with any applicable federal, state or local regulations now or in the future. This Final Approval supersedes the July 14, 1999 Final Approval (4B98051) and the December 1, 2000 Final Approval (4B00058) issued to SEMASS.

Should SEMASS have questions concerning this matter or regarding the terms or conditions of this Final Approval, please do not hesitate to contact the undersigned at (508) 946-2779.

Very truly yours,

John K. Winkler, Permit Chief
Bureau of Waste Prevention

ecc: Will Campbell, SEMASS Partnership, Rochester, MA
Michael Feinblatt, ESS Group, Inc., Waltham, MA
Board of Health, Rochester, MA
Fire Department, Rochester, MA
Marilyn Levenson, MassDEP/BWP, Boston, MA
Yi Tian, MassDEP/BWP, Boston, MA

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