



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

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September 27, 2016

Mr. Jack Cobill
The Proprietors of the Rural Cemetery
in Worcester
180 Grove Street
Worcester, MA 01605

RE: Worcester
Transmittal No.: X270648-A1
Application No.: CE-16-013
Class: *SM-25*
FMF No.: 51418
AIR QUALITY PLAN APPROVAL

Dear Mr. Cobill:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application (“Application”) listed above. This Application concerns the proposed construction, substantial reconstruction, alteration and/or operation of two new human crematory units (retorts) at your cremation facility located at 180 Grove Street in Worcester, Massachusetts (“Facility”). The Application bears the seal and signature of Paul G. Richard, Massachusetts Registered Professional Engineer number 45899.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control,” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-O, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

A. HISTORY AND DESCRIPTION OF OPERATIONS

On February 27, 1991, MassDEP issued Plan Approval Transmittal No. 7250 to the Permittee for the construction of a building extension to house two new cremators, and the installation of the two new cremators. The cremators were Industrial Equipment and Engineering Super Power Pak Model No. IE 43 II units and are designated as emission units (EU) 1 and 2. On January 28, 2004, MassDEP issued Plan Approval Transmittal No. 21004698 for the installation of two new Industrial Equipment and Engineering Model No: IE43-SPP cremators, EU3 and EU4. Plan Approval No. 21004698 superseded Plan Approval No. 7250.

B. PROJECT DESCRIPTION

On July 7, 2016, MassDEP received the present application for two new cremators, both by Facultatieve Technologies. One is Model No. FT II and will be designated EU5, and the other is Model No. FT III and will be designated EU6.

Each unit's primary chamber is equipped with a Facultatieve Model HH-VFB 350 burner which uses natural gas as its only fuel of use at a maximum firing rate of 850,000 British thermal units (Btu) per hour. Each unit's secondary chamber is equipped with a Facultatieve Model HH-VFB 350 burner which uses natural gas as its only fuel of use at a maximum firing rate of 1,250,000 Btu per hour. The units are designed to provide a minimum exhaust gas residence time of 2.0 seconds at a minimum of 1,600 degrees Fahrenheit.

Existing units 1, 2, 3 & 4 shall remain under the operating requirements of the existing MassDEP approval (Transmittal #: 21004698) issued on January 28, 2004.

On July 27, 2016, MassDEP issued Plan Approval Transmittal No. X270648 for the two new cremators.

On September 21, 2016, the Permittee requested an Administrative Amendment of Plan Approval Transmittal No. X270648. The amendment consisted of minor changes in the language of Table 6. The changes were to clarify Special Condition No. 1.a. regarding the duration of a typical cremation cycle, and to remove unnecessary and duplicative language in Special Conditions 1.b. and 1.c. regarding the materials allowed to be cremated.

This Plan Approval Transmittal No. X270648-A1 supersedes Plan Approval Transmittal No. X270648 issued July 27, 2016 in its entirety.

C. APPLICABLE REGULATORY REQUIREMENTS

1. State Requirements

In accordance with 310 CMR 7.02(5)(c)6, the Permittee had AERMOD air dispersion modeling done to demonstrate that operation of the two proposed units would not cause exceedances of the NAAQS for PM₁₀ and PM_{2.5}. The modeling was run with the assumptions that all six units (four existing, two proposed) were running simultaneously; and that hours of operation were restricted to between 7 AM and 7 PM daily. The Permittee calculated an emission rate of 0.2 pounds PM₁₀ per hour per unit for the proposed units, and also applied that same emission rate to the four existing units. (Although the previous MassDEP approvals for the existing units listed higher PM₁₀ emission rate limits than the PM₁₀ limits for the proposed units, there was stack test data from the original units' applications which indicated that the existing units are capable of meeting the same 0.2 pounds PM₁₀ per hour emission limit.) For this analysis, it was conservatively assumed that PM_{2.5} is equivalent to PM₁₀. The modeling results indicated that operation of the six units would not cause exceedance of the applicable NAAQS for PM₁₀ and PM_{2.5}.

310 CMR 7.02(2)(8) requires Best Available Control Technology (BACT) for CPAs. MassDEP has determined that BACT for this application is represented by the Cremator Template emission limits devised by MassDEP after research of emission standards for cremation units.

2. Federal Requirements

The Project is not subject to 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, or 40 CFR Part 64.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1		
EU	Description	Design Capacity
EU 5 ¹	<u>Crematory Retort:</u> Facultatieve Technologies Model FTII Natural gas fired <u>Primary Combustion Chamber Burner:</u> Facultatieve Model HH-VFB 350 <u>Secondary Combustion Chamber Burner:</u> Facultatieve Model HH-VFB 350	<u>Primary Combustion Chamber Burner:</u> 0.85 MMBtu/hr <u>Secondary Combustion Chamber Burner:</u> 1.25 MMBtu/hr MAXIMUM CHARGE SIZE: 600 lbs at 35" Maximum Width ²
EU 6 ¹	<u>Crematory Retort:</u> Facultatieve Technologies Model FTIII Natural gas fired <u>Primary Combustion Chamber Burner:</u> Facultatieve Model HH-VFB 350 <u>Secondary Combustion Chamber Burner:</u> Facultatieve Model HH-VFB 350	<u>Primary Combustion Chamber Burner:</u> 0.85 MMBtu/hr <u>Secondary Combustion Chamber Burner:</u> 1.25 MMBtu/hr MAXIMUM CHARGE SIZE: 1200 lbs at 43" Maximum Width ²

Table 1 Key:

EU# = Emission Unit Number

MMBtu/hr = million British thermal units per hour

Table 1 Notes

1. Proposed units, approved herein
2. Maximum charge size is the equipment's stated design capacity from the vendor

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2				
EU	Operational / Production Limit	Air Contaminant	Emission Limit ¹	
5 and 6	Minimum Secondary Chamber Temperature \geq 1,600 Degrees Fahrenheit 72 hrs/week per EU, 312 hrs/month per EU, and 3,744 hrs/year per EU. 48 cremations/week per EU, 208 cremations/month per EU, and 2,496 cremations per EU for any consecutive 12-Month time period. 0.655 MMft ³ of natural gas per month per EU ⁴ and 7.86 MMft ³ of natural gas per EU per any consecutive 12-month time period ⁴ Operate EUs only between 7 AM and 7 PM, 6 days/week	PM/PM ₁₀ /PM _{2.5} ²	0.06 gr/dscf	
			0.06 tpm	
			0.75 tpy	
		NO _x ³	200 ppmv	
			0.18 tpm	
2.18 tpy				
CO ³	50 ppmv			
	0.027 tpm			
0.33 tpy				
Opacity ⁵	5%,			
	except for \leq 2 consecutive minutes during any one hour, opacity shall be between 5% and 20%			
Facility Wide ⁶	2.49 MMft ³ of natural gas per month and 29.84 MMft ³ of natural gas per any consecutive 12-month time period.	NO _x	0.58tpm	6.50 tpy
		CO	0.47 tpm	1.29 tpy
		PM/PM ₁₀ /PM _{2.5} ¹	0.10 tpm	3.95 tpy

Table 2 Notes:

1. Emission limits in tpm and tpy are for two units combined and are based on the approved gr/dscf and ppmv BACT emission limits and restricted operation of 624 hours per month and 7,488 hours per year for both units combined at maximum capacity (7 AM to 7 PM, 6 days/week)
2. All PM and PM₁₀ values are assumed to be PM_{2.5}.
3. The NO_x emission rate of 200 ppmv @7% O₂ and the CO emission rate of 50 ppmv @7% O₂ are based on firing of a normal body weight of less than 200 lbs
4. Natural gas usage is based on a proposed maximum natural gas heat input of 4.1 MMBtu/hr and 7,488 hours of operation per 12 month period (both units).
5. Opacity is exclusive of uncombined water vapor
6. Includes emission limits from existing units, EU 1 – 4.

Table 2 Key:

EU = Emission Unit Number	PM _{2.5} = Particulate Matter less than or equal to 2.5 microns in diameter includes filterable and condensable fractions
NO _x = Nitrogen Oxides	gr/dscf – grains per dry standard cubic foot, corrected to 7 percent oxygen
CO = Carbon Monoxide	ppmv – parts per million by volume, corrected to 7 percent oxygen
tpm = tons per calendar month	≤ = less than or equal to
tpy = tons per consecutive 12-month period	≥ = greater than or equal to
MMft ³ = million cubic feet	> = greater than
% = percent	

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

Table 3	
EU	Monitoring and Testing Requirements
5 and 6	1. The Permittee shall monitor temperatures in the primary and secondary chambers with Continuous Temperature Monitoring Systems (CTMS) during each complete cremation cycle. A complete cremation cycle shall include burn-down and cool-down time as recommended by the manufacturer, or the time required to consume all combustible material, whichever is greater.
	2. The Permittee shall equip each temperature monitor, or thermocouple, with both an audible and a visual alarm set to alert the operator(s) whenever a temperature deviation occurs.
	3. The Permittee shall ensure the primary chamber burner is electronically interlocked with the secondary chamber thermocouple to prevent ignition of the primary chamber burner or to automatically shut off the primary chamber burner during the burn cycle should the secondary chamber thermocouple detect a temperature less than the minimum required temperature as stated in Table 2 of this Plan Approval.
	4. The Permittee shall monitor the opacity of the stack gas from each retort, during each complete cremation cycle, using its own dedicated full scale (0-100%) Continuous Opacity Monitoring Systems (COMS) with associated Data Acquisition System (DAS) which shall include the corresponding date and time. A complete cremation cycle shall include burn-down and cool-down time as recommended by the manufacturer, or the time required to consume all combustible material, whichever is greater.

Table 3

EU	Monitoring and Testing Requirements
5 and 6	5. The Permittee shall install each COMS in an appropriate sampling location in the ductwork or stack to give a representative and accurate opacity measurement when the crematory retort is operating.
	6. Each COMS shall have the following design specifications: <ol style="list-style-type: none"> a. The light source shall have a peak and mean spectral response between 500 and 600 nanometers (nm). The response at any wavelength below 400 nm or above 700 nm shall be less than 10 percent of the peak spectral response, b. The light source shall be modulated to filter out the effects of ambient light such as sunlight, c. The output signal from the COMS shall be in terms of electrical current such as in a 4 to 20 milliamp format, and d. Opacity data shall be collected using digital output technology.
	7. The Permittee shall equip each COMS and DAS with both an audible and a visual alarm set to alert the operator(s) whenever opacity exceeds either of the following two alarm points: <ol style="list-style-type: none"> a. The first alarm point shall be triggered when the opacity has exceeded five (5) percent opacity for more than any two consecutive one minute periods during any one clock hour time period, without exceeding twenty (20) percent; b. The second alarm point shall be triggered when the opacity exceeds twenty (20) percent for any period of time.
	8. The Permittee shall ensure the primary chamber is electrically interlocked with the opacity monitor to prevent ignition of the primary chamber burner or to automatically shut off the primary chamber burner during the burn cycle should the opacity exceed the limit in Table 2.
	9. The Permittee shall operate the crematory retorts in accordance with the manufacturer's Standard Operating and Maintenance Procedures (SOMP). The Permittee shall check all air pollution control and continuous opacity monitoring equipment daily for proper operation and function before proceeding with the cremation process.
	10. The Permittee shall maintain the crematory retorts as necessary and kept in good working condition. The temperature monitoring equipment shall be calibrated at a frequency and maintained in accordance with manufacturer's recommendations to ensure continuous compliance with the temperature limits in Table 2 of this Approval. The COMS shall be calibrated in the field on a quarterly basis by performing clear path calibration that is conducted manually for the zero and for a span point that is between twenty (20) and thirty (30) percent transmission using a certified neutral density filter. Said quarterly calibrations shall be conducted between January 1 st through March 31 st , April 1 st through June 30 th , July 1 st through September 30 th , and October 1 st through December 31 st of every year.
	11. The Permittee shall monitor the number of cremations performed in each crematory retort on a daily, monthly, and consecutive twelve month period basis.
	12. The Permittee shall monitor the natural gas consumption for each crematory retort on a monthly and consecutive twelve month period basis.

Table 3	
EU	Monitoring and Testing Requirements
5 and 6	13. The Permittee shall conduct emissions compliance testing on one (1) of the new cremation retorts to demonstrate compliance with the PM _{2.5} , NO _x , CO, and opacity emission limitations as contained in Table 2 of this Plan Approval. All compliance testing for particulate matter shall include the condensable fraction. Testing only one of new multiple cremation retorts is allowable only if the retorts are identical.
	14. The Permittee shall conduct emissions compliance testing within 180 days after commencement of commercial operation of the new crematory retorts. Testing shall be conducted in accordance with the requirements and procedures set forth by appropriate EPA Reference Test Methods, 40 CFR Part 60 Subpart A, 40 CFR Part 51, Appendix M, Air Pollution Control Regulations 310 CMR 7.00, Section 7.13 and this Plan Approval. The opacity testing shall be conducted in accordance with the requirements and procedures as contained in 40 CFR 60 Subpart A, Method 9. The dates and times for conducting the emission tests shall be coordinated with MassDEP personnel of this Office for a mutually agreed upon schedule for testing.
	15. As an alternative to emissions compliance testing, the Permittee may provide documentation of satisfactory emissions compliance testing that was conducted on an identical cremation retort either by the manufacturer or by another facility within five years prior to the date of submittal of a complete Application. The documentation shall show the compliance testing met the requirements and procedures set forth by appropriate EPA Reference Test Methods and has been reviewed and approved a state environmental permitting authority or by EPA.
Facility-wide	16. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	17. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13.

Table 3 Key:

EU = Emission Unit Number

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

COMS = Continuous Opacity Monitoring System

DAS = Data Acquisition System

% = percent

PM = Total Particulate Matter

PM₁₀ = Particulate Matter less than or equal to 10 microns in diameter

PM_{2.5} = Particulate Matter less than or equal to 2.5 microns in diameter

SOMP = Standard Operating and Maintenance Procedures

CTM = Continuous Temperature Monitoring Systems

Table 4

EU	Record Keeping Requirements
5 and 6	1. The Permittee shall digitally record temperatures continuously in the primary and secondary chambers of each cremation retort during each complete cremation cycle using a computerized data acquisition system and data logger. The data acquisition system shall log at least one data point (for each temperature) every 15 seconds.
	2. The Permittee shall digitally record continuously the opacity of the stack gas from each retort during each complete cremation cycle using a DAS and digital recorder that records opacity on a full scale of 0% - 100%. The digital recorder shall record the opacity readings with corresponding dates and times on a continuous basis. All data shall be stored in electronic format using a hard drive or comparable storage device.
	3. The Permittee shall identify in all records the cremation retort and show the date, start and end time of each cremation, and shall contain the name of the operator who performed the cremation.
	4. The Permittee shall maintain on site and accessible at or near the subject equipment, at all times, a copy of this Approval letter and the SOMP for all air-emissions-related equipment at the Facility. The SOMP for each crematory retort shall include start-up or pre-heat, cremation loading, and burn-down cycle procedures as well as descriptions of the temperature monitors, opacity monitors and all interlocks.
5 and 6	5. The Permittee shall keep on-site records of all preventative or corrective maintenance, calibration checks, adjustments, and evaluations performed on each retort and each retort's temperature and opacity monitors, including dates and detailed descriptions of what was performed.
	6. The Permittee shall record the date and number of cremations performed each day in each crematory retort. The Permittee shall maintain detailed records of the number of cases burned including weight, time and date of cremation. Use this data to calculate the number of cremations performed on a monthly and consecutive twelve month period basis in each crematory retort.
	7. The Permittee shall record on a monthly and consecutive twelve month period basis the natural gas consumption for each crematory retort.
	8. The Permittee shall maintain on-site documentation, including dated operator's certificates, showing that each operator at the Facility has received training in the proper operation and in the manufacturer's SOMP for said retorts. Said documentation shall be kept on site throughout each operator's employment as well as for at least five (5) years after termination of employment.
Facility-wide	9. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	10. The Permittee shall maintain records of monitoring and testing as required by Table 3.

Table 4	
EU	Record Keeping Requirements
Facility-wide	11. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	12. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	13. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	14. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU = Emission Unit Number

SOMP = Standard Operating and Maintenance Procedure

DAS = Data Acquisition System

PCD = Pollution Control Device

USEPA = United States Environmental Protection Agency

% = percent

Table 5	
EU	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP any changes to the SOMP within seven (7) days of commencement of the modification(s).
	2. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	3. The Permittee shall notify the Central Regional Office of MassDEP, BAW Permit Chief by telephone 508-767-2845 email, CERO.Air@massmail.state.ma.us or fax 508-792-7621 as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).

Table 5	
EU	Reporting Requirements
Facility-wide	4. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	5. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP’s request.
	6. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	7. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU	Special Terms and Conditions
5 and 6	1. The Permittee shall ensure the duration of each cremation is performed as required by the manufacturer’s recommendations and standard operating procedures.

Table 6

EU	Special Terms and Conditions
5 and 6	<p>2. The Permittee shall implement an Operator Training Program to train personnel who will be operating any of the crematory retorts in the proper operation and in the manufacturer’s SOMP for said retorts. Said training shall be given by a representative from the manufacturer of the crematory retort or another qualified organization. The training shall include the following elements:</p> <ul style="list-style-type: none"> a. principles of combustion; b. operating monitors and controls; c. operating sequence under normal conditions; d. safety and operating procedures under foreseeable upset conditions (e.g. power or fuel interruption, burner malfunction, visible emissions, high and low temperature incidents, etc.); e. regulatory requirements; f. calibration, adjustment and replacement of thermocouples; g. preventative maintenance practices and procedures and recommended frequency; and h. record keeping requirements and procedures; and i) calibration, adjustment and replacement of opacity monitors. <p>Minimum training criteria shall include hands-on control of the retort for at least two (2) operating cycles in order to complete the program and receive an operator’s certificate. All training shall be equipment specific. If an existing crematory retort is modified, the operator(s) must be re-trained to operate the modified retort.</p> <p>3. The Permittee shall have an operator who has completed the Operator Training Program present at all times during cremations. The cremation operator shall take any necessary action, including shutdown of the equipment, to ensure that the Facility operates in compliance with the temperature and opacity limits contained within this Approval</p>
5 and 6	<p>4. The Permittee shall utilize the crematory retort(s) only for human-remains-related-material and their container. No other material shall be incinerated in the crematory retort(s).</p> <p>5. The Permittee shall locate the thermocouple in each retort’s secondary chamber at a position that defines a chamber volume, as measured between the secondary chamber burner and the downstream thermocouple, sufficient to provide a minimum exhaust gas residence or retention time of 1.0 second at 1,600 degrees Fahrenheit.</p> <p>6. The Permittee shall locate the thermocouple in each retort’s primary and secondary chamber at the exit end of each combustion zone in order to measure each chamber’s representative temperature and not be otherwise impacted by the flame’s radiant heat effect.</p> <p>7. In the event of a malfunction or breakdown of a retort or the associated monitoring equipment, the Permittee shall not initiate any new cremations in said retort until repairs are completed and normal operation can be restored.</p> <p>8. The Permittee shall incinerate only containers, including cremation pouches that contain no chlorinated plastics.</p>

Table 6	
EU	Special Terms and Conditions
5 and 6	9. The Permittee shall ensure that, prior to operation of EU5 and EU6, said retorts are equipped with temperature and opacity monitoring and recording devices that comply with the requirements contained in Table Nos. 3 and 4 above.
	10. The Permittee shall burn Natural Gas in the retort(s) as the only fuel, where available.
	11. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:

EU = Emission Unit Number

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.” The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (Feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
5	40	1.5	31.9-42	750-1100
6	40	1.5	31.9-42	750-1100

Table 7 Key:

EU = Emission Unit Number

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. 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 Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with 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) and a completed Adjudicatory Hearing Fee Transmittal Form, a copy of which is attached hereto, must be mailed to:

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

This 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.

MassDEP 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.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggins by telephone at 508-767-2760, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley
Permit Chief
Bureau of Air and Waste

Enclosure

ecc: Worcester Dept of Inspectional Services
Worcester Fire Department
MassDEP/Boston - Yi Tian
Philip Kuszpa – Amec Foster Wheeler
Phillips Davis – Fletcher Tilton