



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Central Regional Office, 627 Main Street, Worcester, MA 01608

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Lieutenant Governor

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Secretary

ROBERT W. GOLLEDGE, Jr.  
Commissioner

## FINAL AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("The Department") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

**ISSUED TO ["the Permittee"]:**

University of Mass Medical School  
55 Lake Avenue North  
Worcester, MA 01655

**FACILITY LOCATION:**

University of Mass Medical School  
55 Lake Avenue North  
Worcester, MA 01655

**NATURE OF BUSINESS:**

Medical and Surgical Teaching Hospital

**RESPONSIBLE OFFICIAL:**

Name: Robert Jenal  
Title: Chief Operating Officer  
Phone: (508) 856- 3892

**INFORMATION RELIED UPON:**

Application No. W044653  
Transmittal No. W044653  
TR# W003896/TR# W014499  
ECP # TR# 101225

**FACILITY IDENTIFYING NUMBERS:**

SSEIS ID NO. 118/334  
FMF FAC NO. 51203  
FMF RO NO. 161418

**STANDARD INDUSTRIAL CODE (SIC):**

8221

**FACILITY CONTACT PERSON:**

Name: Joseph Collins  
Title: Director, Power Plant  
Phone: (508) 856-2220

This operating permit shall expire on July 19, 2010.

For the Department of Environmental Protection, Bureau of Waste Prevention

\_\_\_\_\_  
Thomas P. Cusson, Permit Chief

\_\_\_\_\_  
Date

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057.

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## **SPECIAL CONDITIONS FOR OPERATING PERMIT**

A Legend to Abbreviated Terms found in the following Tables is located in Section 28 of the Operating Permit.

### **1. PERMITTED ACTIVITIES**

In accordance with the provisions of 310 CMR 7.00:Appendix C and applicable rules and regulations, the Permittee is authorized to operate air emission units as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C (5)(h) and (i). The units described in Table 1 are subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this permit.

#### **DESCRIPTION OF FACILITY AND OPERATIONS**

The University of Massachusetts Medical School (UMASS) is a hospital care, educational and research facility with a place of business located at 55 Lake Avenue North. The UMASS power plant provides heating and cooling for the hospital and teaching facilities. Steam generated in the power plant is also used to generate several megawatts of electricity for use on campus and in the event of a power failure.

The primary boilers are the Babcock and Wilcox high-pressure water tube boilers (boilers #3 and #4) equipped with low NOx burners and flue gas recirculation (FGR). Supplemental and standby boilers are the Cleaver Brooks boilers (#1 and #2) high-pressure water tube boilers. Natural gas is the primary fuel of use and residual oil with a sulfur content not in excess of 0.5 percent by weight remains as secondary. A 1400 KW diesel generator is for emergency backup power only.

The emissions from the four boilers are emitted through a refractory stack, the top of which is 206 feet above ground level with an inside exit diameter of 19 feet which provides for a maximum exit velocity of 58 feet per second at a temperature of 400° F.

**2. EMISSION UNIT IDENTIFICATION**

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

Table 1			
EU #	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY	POLLUTION CONTROL DEVICE
EU # 1 and #2	Cleaver Brooks - Model # CM4-32 High Pressure Water Tube Boiler	Oil – 923 Gallons / Hour Natural Gas- 148,282 CFH	Low NOx Burner
EU # 3 and #4	Babcock and Wilcox – Model #FM 117-97 High Pressure Water Tube Boiler	Oil – 653 Gallons / Hour Natural Gas – 144,118 CFH	Low NOx Burner Flue Gas Recirculation
EU #5	Gasoline Tank	2000 Gallons	Vapor recovery
EU #6	Emergency Generator	14.6 MMBtu/hr	Ignition timing-retard aftercooler

**3. IDENTIFICATION OF EXEMPT ACTIVITIES**

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C (5)(h):

Table 2	
DESCRIPTION OF CURRENT EXEMPT ACTIVITIES	REASON
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the Department’s Regional Office.	310 CMR 7.00:Appendix C (5)(h)

**4. APPLICABLE REQUIREMENTS**

**A. EMISSION LIMITS AND RESTRICTIONS**

The Permittee is subject to the emission limits/restrictions as contained in Table 3, 3A and 3B below:

The emission limits in Table 3 are based on one-hour averaging time, unless otherwise noted.

Table 3				
EU #	Fuel or Raw Material	Pollutant	Emission Limit/Standard	Applicable Regulation and/or (Approval No.)
EU #1, #2, #3 and #4	#6 Oil <sup>1</sup> (0.5 % Sulfur)	PM	0.10 lb/MMBtu	310 CMR 7.02(8) table 6 TR# W044653/W03896
		SO <sub>2</sub>	0.56 lb/MMBtu	40 CFR Part 60, Subpart Dc/ TR# W003896
		NO <sub>x</sub>	EU #1, #2 - 0.253 lb/MMBtu	ECP # 1012253 / CMR 310 CMR 7.19(4)
			EU #3, #4 - 0.3 lb/MMBtu	TR# W044653
		CO	200 PPMVD @ 3% O <sub>2</sub> (0.156 lb/MMBtu)	310CMR7.19(4)(f)
		VOC	0.008 lb/MMBtu	TR# W044653
	Natural Gas <sup>2</sup>	PM	0.05 lb/MMBtu	310CMR 7.02(8)table 6
		SO <sub>2</sub>	0.0006 lb/MMBtu	TR# W044653
		NO <sub>x</sub>	EU #1, #2 - 0.2 lb/MMBtu EU #3, #4 - 0.05 lb/MMbtu	ECP # 101225/TR# W044653
		CO	200 PPMVD @ 3% O <sub>2</sub> (0.148 lb/MMBtu)	310CMR 7.19(4)(f)
		VOC	EU #1, #2 - 0.003 lb/MMBtu EU #3, #4 - 0.001 lb/MMBtu	TR# W044653
	Waste oil	total halogens	< 4000 PPM in used fuel	310 CMR 7.05(8) TR# W003896
		arsenic	< 5 PPM in used fuel	310 CMR 7.05(8) TR# W003896
		lead	< 100 PPM in used fuel	310 CMR 7.05(8) TR# W003896
		cadmium	< 2 PPM in used fuel	310 CMR 7.05(8) TR# W003896
		chromium	< 10 PPM in used fuel	310 CMR 7.05(8) TR# W003896
		PCB's	< 50 PPM in used fuel	310 CMR 7.05(8) TR# W003896

<sup>1</sup> EU #3 and #4 are subject to 40 CFR Part 60 subpart Dc when burning fuel oil

<sup>2</sup> EU #3 and #4 are subject to 40 CFR Part 60 subpart Db when burning natural gas.

Table 3 continued				
EU #	Fuel or Raw Material	Pollutant	Emission Limit/Standard	Applicable Regulation and/or (Approval No.)
EU #1, #2, #3 and #4	#6 Oil Natural Gas Waste Oil	Smoke	Not to exceed # 1 of the Chart for a period or aggregate period of time in excess of 6 minutes during any one hour provided that at no time shall the shade, density or appearance be greater than No. 2 of the Chart.	310 CMR 7.06(1)(a)
		Opacity	Not to exceed 20% for a period or aggregate period in excess of 2 minutes during any one hour provided that at no time during the one hour shall the opacity exceed 40%	310 CMR 7.06(1)(b)
EU # 5	Gasoline	VOC	Submerged fill	Stage II vapor recovery
			Stage I vapor recovery	310 CMR 7.24(3)(b)
			Stage II vapor recovery	310 CMR 7.24(6)(a)2
EU #6	#2 Oil 0.05 % Sulfur	PM	0.032 lb/MMBtu.	TR# W014499
		SO <sub>2</sub>	0.056 lb/MMBtu	TR# W014499
		NO <sub>x</sub>	6.1 g/BHP-hr	TR# W014499
		CO	0.11 lb/MMBtu	TR# W014499
		VOC	0.040 lb/MMBtu	TR# W014499
		Opacity/smoke	Shall not exceed 10% or #1 of the chart at any time of operation including startups and shutdown.	TR# W014499

The total annual emissions from the fuel utilization facility are presented in Table 3A below.

Table 3A	
Annual Emissions – 12 Month Rolling Total (Tons Per Year)	
Pollutant	Tons Per Year
Particulate Matter	18.4 Tons Per Year
Sulfur Dioxide	181.8 Tons Per Year
Nitrogen Oxide	102.9 Tons Per Year
Carbon Monoxide	107.9 Tons Per Year
Volatile Organic Compounds	7.1 Tons Per Year

The Permittee shall comply with the restrictions presented in Table 3 B below.

Table 3B
Restrictions
<p><b>A. <u>BOILERS</u></b></p> <p>1. FUEL CAP EQUATION (Boilers #1, #2, #3 and #4): Allowable gallons of fuel oil 4,530,675 – (0.00113 x SCF of gas)            NOTE: There is a gas adjustment factor of 2.9 for boilers # 1 and #2, which have a NOx emission rate 2.9 times higher than that of #3 and #4 boilers.</p> <p style="margin-left: 20px;"><u>Maximum Fuel Consumption</u> (Boilers EU #1 – EU #4)            Fuel oil - 4,530,675 gal per 12 month rolling total.            Natural Gas – 2,518 MMcf/yr</p> <p>2. The sulfur content in the residual fuel oil shall not exceed 0.5 % by weight by monitoring as required in Table 4 of the Operating permit.</p> <p><b>B. <u>EMERGENCY GENERATOR</u></b></p> <p>3. The operation of the emergency diesel generator shall not exceed 300 hours of operation per 12 month rolling total.</p> <p>4. The generator shall not be operated as a load shaving unit, peak power production unit or standby engine in an energy assistance program.</p> <p>5. The sulfur content of the distillate fuel oil shall not exceed 0.05 weight percent.</p>

**B. COMPLIANCE DEMONSTRATION**

The Permittee is subject to the monitoring, testing, record keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10), and applicable requirements as contained in Table 3 and a requirement of the Final Approval Letter for the Power Plant Re-Powering (TR# W003896, dated July 28, 1999), Final Approval Letter for the generator (TR# W014499, dated July 2, 2001) and the Emission Control Plan (TR# 101225, dated April 14, 1995).

Table 4	
EU #	MONITORING/TESTING REQUIREMENTS
EU #1, #2, #3 and #4	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval (TR# W003896/TR# W014499) and the Emission Control Plan Approval (TR# 101225) the Permittee is subject to the terms and conditions presented in Table 4 and to other terms and conditions reference herein.</p> <ol style="list-style-type: none"> <li>1) The Permittee shall ensure that the continuous opacity emissions monitor (CEM) and recording device be calibrated, tested and maintained in accordance with the manufacturer's specifications, the Massachusetts Department of Environmental Protection and Federal U.S. EPA requirements.</li> <li>2) The Permittee shall obtain and maintain a shipping receipt from the fuel supplier for each shipment of oil delivered to demonstrate compliance with TR# 128788 and 40 CFR Part 60 Subpart Dc. The shipping receipt must certify that the shipment complies with the American Society for Testing and Materials (ASTM) specifications for residual No. 6 fuel oil. The Department may require testing of the residual No. 6 fuel oil if the shipping receipt does not clearly demonstrate compliance in accordance with 310 CMR 7.00: Appendix C(9)(b)2.</li> <li>3) In accordance with 310 CMR 7.19 (13) (a) 2., the Permittee shall perform an annual stack test to demonstrate compliance with NOx and CO emission standards in accordance with 310 CMR 7.19(13)(c).</li> <li>4) The Permittee shall conduct the compliance stack test in accordance with procedures set forth in Appendix A of 40 CFR Part 60 or another method approved by the Department and EPA.</li> <li>5) The Permittee using prescribed methodologies, analyze its waste oil used as a fuel source on an annual basis for the following parameters as provided at 310 CMR 7.05(8). <ul style="list-style-type: none"> <li>Halogens (as HCL) ASTM Method D808</li> <li>Flash Point ASTM Method D3828</li> <li>PCBs EPA Method 8080A</li> <li>Lead ASTM Method C1234</li> <li>Arsenic ASTM Method C1234</li> <li>Cadmium ASTM Method C1234</li> <li>Chromium ASTM Method C1234</li> </ul> </li> <li>6) In accordance with 310 CMR 7.04(2)(a) the Permittee shall. be equipped with a smoke density sensing instrument and recorder which are properly maintained in an accurate operating condition, operates continuously and is equipped with and audible alarm to signal the need for combustion equipment adjustment or repair.</li> </ol>
EU #3 and #4	7) The Permittee shall comply with the applicable monitoring/testing requirements contained in 40 CFR Part 60 subpart Db and Dc.



EU #	MONITORING/TESTING REQUIREMENTS
EU #5	<p>8) In accordance with 310 CMR 7.24(3)(f), maintain, and properly operate a Stage I vapor recovery system.</p> <p>9) In accordance with 310 CMR 7.24(6)(c), properly operate a certified Stage II vapor collection and control system.</p>
EU # 1, #2, #3 #4 and #6	<p>10) In accordance with 310 CMR 7.04(4) (a), each fuel utilization facility shall be inspected and maintained in accordance with the manufacturer's recommendation and tested for efficient operation at least once in each calendar year. The results of said inspection, maintenance and testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the permitted equipment.</p> <p>11) In accordance with 310 CMR 7.13 (1), conduct stack testing when the Department has determined that such stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos. Such stack testing shall be:</p> <ul style="list-style-type: none"> <li>(a) conducted by a person knowledgeable in stack testing, and</li> <li>(b) conducted in accordance with procedures contained in a test protocol which has been approved by the Department, and</li> <li>(c) in the presence of a representative of the Department when such is deemed necessary.</li> </ul> <p>12) Smoke and opacity limits shall be determined in accordance with EPA Method 9, as specified in 40 CFR 60, Appendix A and in accordance with 310 CMR 7.00 Appendix C (9)(b).</p> <p>13) Emission Testing to demonstrate compliance with the Emission Limits specified in Table 3 shall be in accordance with EPA approved reference test methods unless otherwise approved by EPA and the Department or unless otherwise specified and shall include test Methods 1 through 4 and for Particulate Matter (Method 5), Sulfur Dioxide (Method 6C), Nitrogen Oxides (Method 7E), Carbon Monoxide (Method 10), Gaseous Organic Compounds (Method 18), Total Gaseous Organic Concentration (Method 25A), Hydrogen Chloride (Method 26A) and Metals (Method 29).</p>
Facility Wide	<p>14) The Permittee shall monitor the operations of the entire facility such that necessary information is available for the preparation of the annual Source Registration/Emission Statement Forms as required by 310 CMR 7.12.</p>

Table 5

EU #	RECORDKEEPING REQUIREMENTS
EU #1, #2, #3 and #4	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval (TR# W003896/TR# W014499) and the ECP plan Approval (TR# 101225), the Permittee is subject to the terms and conditions presented in Table 5 and to other terms and conditions reference herein.</p> <p>1) The Permitted shall maintain on site the following records for five (5) years from the date of generation and have the records readily available to the Department and EPA personnel:</p> <ul style="list-style-type: none"> <li>a) Fuel purchase receipts in order to demonstrate compliance with sulfur content as provided in TR# W003896 and 40 CFR Part 60 subpart Dc;</li> <li>b) All fuel-oil and waste oil analyses completed on behalf of the Permittee;</li> <li>c) Inspection, maintenance, and testing results of the emission unit and the date upon which it was performed in accordance with 310 CMR 7.04(4)(a);</li> <li>d) Records of emissions testing conducted to demonstrate compliance with the applicable requirements in Table 3 in accordance with 310 CMR 7.13(1)(d).</li> <li>e) Records of continuous opacity monitor charts in accordance with 7.04(2)(a).</li> </ul> <p>2) In accordance with 310 CMR 7.19(13)(d):</p> <ul style="list-style-type: none"> <li>a) Measure and record for each unit on a daily basis: type of fuel(s) burned each day, heat content of each fuel, the total heating value of the fuel consumed for each day.</li> <li>b) Obtain a certification from the fuel supplier for each shipment of residual oil that includes the following information:                         <ul style="list-style-type: none"> <li>i) The name of the oil supplier,</li> <li>ii) The nitrogen content of each oil shipment (acceptable methods for determining nitrogen content of the oil are ASTM methods D3228 and D4629) or any other method approved by the Department or the EPA);</li> <li>iii) The location where the sample was drawn for analysis to determine the nitrogen content of the oil;</li> </ul> </li> </ul>

Table 5 continued	
EU #	RECORDKEEPING REQUIREMENTS
EU #1, #2, #3 and #4	<p>f) Maintain copies of all fuel supplier certifications of fuel oil analyses on site for a period of five years;</p> <p>g) Maintain all records required by 310 CMR 7.19(13)(d) for a period of five years in a permanently bound log book or any other form acceptable to the Department.</p>
EU #3 and #4	3) The Permittee shall comply with the recordkeeping requirements contained in 40 CFR Part 60 Subpart Db and Dc as applicable.
EU #5	<p>4) In accordance with 310 CMR 7.24(3)(f), maintain records of the following:</p> <p>a) All maintenance performed, including the type of maintenance performed, and the date maintenance was performed,</p> <p>b) All malfunctions, including the type of malfunction, the date the malfunction was observed, and the date the malfunction was repaired.</p>
EU #6	5) The Permittee shall comply with the recordkeeping requirements contained in TR# W014499.
Facility Wide	6) The Permittee shall maintain sufficient records of its operations and monitoring information for the preparation of a Source Registration/Emission Statement Form as required by 310 CMR 7.12. Also keep copies of source registration and other information submitted to the DEP for 5 years as required by 7.12.

Table 6	
EU #	REPORTING REQUIREMENTS
EU #1 #2, #3 and #4	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval (TR# W003896/TR# W014499) and the ECP plan approval letter (TR# 101225), the Permittee is subject to the terms and conditions presented in Table 6 and to other terms and conditions reference herein.</p> <p>1) The Permittee shall submit fuel-oil, waste oil analysis, obtained from the fuel supplier, to the Department upon request in accordance with 310 CMR 7.05(5).</p> <p>2) The Permittee shall summarize and submit to the Department the results of stack testing as prescribed in the Department's approved pretest protocol stack testing that was determined by the Department to be necessary to ascertain compliance with Department's regulations or design approval provisos in accordance with 310 CMR 7.13(1) and 310 CMR 7.13(2).</p> <p>3) In accordance with 310 CMR 7.19(13)(d)(9) submit compliance records within ten days of written request by the Department or EPA.</p> <p>4) The Permittee shall comply with the reporting requirements in accordance with 310 CMR 19(13)(c)</p>
EU #5	5) The Permittee shall comply with the reporting requirements in accordance with 310 CMR 7.24 Organic Material Storage and Distribution.

Table 6 continued	
EU #	REPORTING REQUIREMENTS
Facility Wide	<p>6) The Permittee shall submit a Source Registration/Emission Statement form to the Department on an annual basis as required by 310 CMR 7.12(2).</p> <p>7) In accordance with 310 CMR 7.12(3), the facility shall register on a form obtained from the Department such information as the Department may specify including:</p> <ul style="list-style-type: none"> <li>a. A description of the facility, including a description of process and combustion equipment, a description of facility operating hours and operating schedule, a description of all raw materials and fuels used at the facility.</li> <li>b. Information required by 310 CMR 7.12(3) shall be submitted pursuant to 310 CMR 7.12(2).</li> </ul> <p>8) The Permittee shall submit by January 30 and July 30 for the previous six months respectively, a summary of all monitoring data and related supporting information to the Department as required by 310 CMR 7.00: Appendix C (10)(c).</p> <p>9) All required reports must be certified by a responsible official of the Permittee as provided in 310 CMR 7.00: Appendix C (10)(h).</p> <p>10) Upon the Department's request, any records required by the applicable requirements identified in Section 4 of the operating permit, or the emissions of any air contaminant from the facility, shall be submitted to the Department within 30 days of the request by the Department, or within a longer time period if approved in writing by the Department. Said response shall be transmitted on paper, on computer disk, or electronically at the discretion of the Department, pursuant to 310 CMR 7.00 Appendix C (10)(a) incorporated herein by reference.</p> <p>11) The Permittee shall report to the Department of Environmental Protection, Bureau of Waste Prevention, Central Regional Office, Compliance and Enforcement Section within four (4) hours (or as soon as reasonably practical) by telephone, fax or electronically and in writing within three (3) days of discovery of any UPSETS or MALFUNCTIONS to facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and /or a condition of air pollution.</p>

**C. GENERAL APPLICABLE REQUIREMENTS**

The Permittee shall comply with all generally applicable requirements contained in 310 CMR 7.00 et. seq. and 310 CMR 8.00 et. seq., when subject.

**D. REQUIREMENTS NOT CURRENTLY APPLICABLE**

The Permittee is currently not subject to the following requirements:

Table 7	
REGULATION	REASON
310 CMR 7.25	Facility does not manufacturer or sell consumer and commercial products
42 U.S.C. 7401, §112	Does not exceed threshold
42 U.S.C. 7401, §112(r)	Facility does not store or process applicable chemicals above threshold

**5. SPECIAL TERMS AND CONDITIONS**

The Permittee is subject to the following special terms and conditions in accordance with the Final 7.02 Air Quality Plan Approval (TR# W003896) and (TR# W014499).

Table 8
SPECIAL TERMS AND CONDITIONS
<p>A. <u>Boilers</u> (EU #1 – EU #4)</p> <p>In the event of natural gas interruption whenever these boilers operate on oil, the Permittee shall utilize residual fuel oil with a sulfur content not in excess of 0.5 percent by weight.</p> <p>B. <u>General</u></p> <p>The Permittee has indicated that it is subject to the requirements of 310 CMR 7.16, Reduction of Single Occupant Commuter Vehicle Use. The facility is in compliance.</p> <p>The Permittee shall take all necessary precautions to ensure that noise form the facility during routine operation, including startups and shutdowns, does not exceed the Department noise guidelines and shall not cause a condition of air pollution as defined in Regulation 310 CMR 7.01 and 7.10.</p>

**6. ALTERNATIVE OPERATING SCENARIOS**

The Permittee did not request alternative operating scenarios in its operating permit application.

**7. EMISSIONS TRADING**

(a) Intra-facility emission trading

The facility did not request intra-facility emissions trading in its operating permit application.

Pursuant to 310 CMR 7.00: Appendix C(7)(b), emission trades, provided for in this permit, may be implemented provided the Permittee notifies The United States Environmental Protection Agency (EPA) and the Department at least fifteen (15) days in advance of the proposed changes and the Permittee provides the information required in 310 CMR 7.00: Appendix C(7)(b)3.

Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: Appendix C(7)(b)2 is required to be submitted to the Department pursuant to 310 CMR 7.00: Appendix B.

(b) Inter-facility emission trading

The Permittee did not request inter-facility emissions trading in its operating permit application.

All increases in emissions due to emission trading, must be authorized under the applicable requirements of 310 CMR 7.00: Appendix B (the "Emissions Trading Program") and the 42 U.S.C. §7401 et seq. (the "Act"), and provided for in this permit.

**8. COMPLIANCE SCHEDULE**

The Permittee has indicated that the facility is in compliance and shall remain in compliance with the applicable requirements contained in Sections 4 and 5.

In addition, the Permittee shall comply with any applicable requirements that become effective during the permit term.

**GENERAL CONDITIONS FOR OPERATING PERMIT**

**9. FEES**

The Permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

**10. COMPLIANCE CERTIFICATION**

All documents submitted to the Department shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall be in compliance with 310 CMR 7.01(2) and contain the following language:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

The "Operating Permit Reporting Kit" contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring Summary Report and Certification. The "Operating Permit Reporting Kit" is available to the Permittee via the Department's web site, <http://www.state.ma.us/dep/bwp/daqc/aqforms.htm>.

(a) Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 to the Department and to the Regional Administrator, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
- iv. any additional information required by the Department to determine the compliance status of the source.

(b) Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30 and July 30 to the Department. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- iv. whether there were any deviations during the reporting period;
- v. if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
  
- vi. whether deviations in the reporting period were previously reported;
- vii. if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- viii. if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
- ix. any additional information required by the Department to determine the compliance status of the source.

## **11. NONCOMPLIANCE**

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act, and is grounds for enforcement action, for permit termination or revocation, or for denial of an operating permit renewal application by the Department and/or EPA. Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00; and civil penalties under M.G.L. c.111, §142A and 142B. This permit does not relieve the Permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this permit.



**12. PERMIT SHIELD**

(a) This facility has a permit shield provided that it operates in compliance with the terms and conditions of this permit. Compliance with the terms and conditions of this permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, and 7, for the emission units as described in the Permittee's application and as identified in this permit.

Where there is a conflict between the terms and conditions of this permit and any earlier approval or permit, the terms and conditions of this permit control.

(b) The Department has determined that the Permittee is not currently subject to the requirements listed in Section 4, Table 7.

(c) Nothing in this permit shall alter or affect the following:

- (i) the liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.
- (ii) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
- (iii) the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

**13. ENFORCEMENT**

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.02(8)(i), 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A

All other terms and conditions contained in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the Department, EPA and citizens as defined under the Act.

A Permittee shall not claim as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**14. PERMIT TERM**

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date 5 years after issuance of this permit.

Permit expiration terminates the Permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

**15. PERMIT RENEWAL**

Upon the Department's receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by the Department on the renewal application.

In the event the Department has not taken final action on the operating permit renewal application prior to this permit's expiration date, this permit shall remain in effect until the Department takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C(13).

**16. REOPENING FOR CAUSE**

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by the Department and/or EPA. The responsible official of the facility may request that the Department terminate the facility's operating permit for cause. The Department will reopen and amend this permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the Permittee for an operating permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any operating permit condition.

**17. DUTY TO PROVIDE INFORMATION**

Upon the Department's written request, the Permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records that the Permittee is required to retain by this permit.

**18. DUTY TO SUPPLEMENT**

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a complete renewal application was submitted but prior to release of a draft permit.

The Permittee shall promptly, on discovery, report to the Department a material error or omission in any records, reports, plans, or other documents previously provided to the Department.

**19. TRANSFER OF OWNERSHIP OR OPERATION**

This permit is not transferable by the Permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between current and new Permittee, has been submitted to the Department.

**20. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

**21. INSPECTION AND ENTRY**

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of the Department, and EPA to perform the following:

(a) enter upon the Permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;

(b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times any substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements as per 310 CMR 7.00 Appendix C(3)(g)(12).

**22. PERMIT AVAILABILITY**

The Permittee shall have available at the facility, at all times, a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the permit, including any amendments or attachments thereto, upon request by the Department or EPA.

**23 SEVERABILITY CLAUSE**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**24. EMERGENCY CONDITIONS**

The Permittee shall be shielded from enforcement action brought for noncompliance with technology based<sup>1</sup> emission limitations specified in this permit as a result of an emergency<sup>2</sup>. In order to use emergency as an affirmative defense to an action brought for noncompliance, the Permittee shall demonstrate the affirmative defense through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) an emergency occurred and that the Permittee can identify the cause(s) of the emergency;

(b) the permitted facility was at the time being properly operated;

(c) during the period of the emergency, the Permittee took all reasonable steps as expeditiously as possible, to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and

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<sup>1</sup> Technology based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standards.

<sup>2</sup> An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

(d) the Permittee submitted notice of the emergency to the Department within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

If an emergency episode requires immediate notification to the Bureau of Waste Site Cleanup/Emergency Response immediate notification to the appropriate parties should be made as required by law.

## **25. PERMIT DEVIATION**

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this permit.

Reporting a permit deviation is not an affirmative defense for action brought for noncompliance. Any reporting requirements listed in Table 6 of this Operating Permit shall supercede the following deviation reporting requirements, if applicable.

The Permittee shall report to the Department's Regional Bureau of Waste Prevention the following deviations from permit requirements, by telephone or fax, within three (3) days of discovery of such deviation:

- Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.
- Exceedances of parameter limits established by your Operating Permit or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- Exceedances of permit operational limitations directly correlated to excess emissions.
- Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, your Operating Permit, or other approvals.
- Failure to perform QA/QC measures as required by your Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, three (3) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the Massachusetts Department of Environmental Protection Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via the Department's web site, <http://www.state.ma.us/dep/bwp/daqc/aqforms.htm>.

This report shall include the deviation, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone or fax within three (3) days of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Waste Prevention within ten (10) days of discovery. For deviations, which do not require 3-day verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

## **26. OPERATIONAL FLEXIBILITY**

The Permittee is allowed to make changes at the facility consistent with 42 U.S.C. §7401, §502(b)(10) not specifically prohibited by the permit and in compliance with all applicable requirements provided the Permittee gives the EPA and the Department written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the facility's permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

## **27. MODIFICATIONS**

(a) Administrative Amendments - The Permittee may make changes at the facility which are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).

(b) Minor Modifications - The Permittee may make changes at the facility which are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).

(c) Significant Modifications - The Permittee may make changes at the facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).

(d) No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission trading program and other similar programs or processes, for changes that are provided in this operating permit. A revision to the permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an operating permit revision under any other applicable requirement.

## **APPEAL CONDITONS FOR OPERATING PERMIT**

This permit is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C (6), with respect to the Department's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the facility must continue to comply with all existing federal and state applicable requirements to which the facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the facility shall not be in violation of the Act for operating without a permit.

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 permit 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) must be mailed to: The Commonwealth of Massachusetts, Department of Environmental Protection, P.O. Box 4062, Boston, MA 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.

**28. LEGEND TO ABBREVIATED TERMS IN OPERATING PERMIT**

<p>&lt; - Less Than          ≤ - less than or equal to          &gt; - Greater Than</p> <p>lb/hr - Pounds Per Hour</p> <p>10<sup>6</sup> BTU/hr - 1,000,000 British Thermal Units per Hour</p> <p>AQCR - Air Quality Control Region</p> <p>ASTM - American Society of Testing Materials</p> <p>ABC/TBC – Augmented Backside Cooling/ Thermal Barrier Control</p> <p>CEM - Continuous Emission Monitor</p> <p>CFR- Code of Federal Regulation</p> <p>CMR – Code of Massachusetts Regulations</p> <p>CO – Carbon Monoxide</p> <p>ECP – Emission Control Plan</p> <p>EPA - Environmental Protection Agency</p> <p>EU - Emission Unit</p> <p>EU# - Emission Unit Number</p> <p>FMF FAC. NO. - Facility Master File Number</p> <p>RTO – Regenerative Thermal Oxidizer</p> <p>FMF RO NO. - Facility Master File Regulated Object Number</p> <p>FTt<sup>3</sup>/YR – cubic feet per year</p> <p>GPH – gallons per hour</p> <p>HAPs – Hazardous Air Pollutants</p> <p>HC – Hydrocarbons</p> <p>HHV - Higher Heating Value</p> <p>HP – horse power</p>	<p>MADEP – Massachusetts Department of Environmental Protection</p> <p>MMBtu - million British Thermal Units</p> <p>MMBtu/hr – Million British Thermal Units Per Hour</p> <p>MMcf/yr – 1,000,000 cubic feet per year</p> <p>Mgal – 1000 gallons</p> <p>NA – not applicable</p> <p>NH<sub>3</sub> - Ammonia</p> <p>NIST – National Institute of Standards and Technology</p> <p>NO. – number</p> <p>NOx – Oxides of Nitrogen</p> <p>% - Percent</p> <p>PB - Lead</p> <p>PLT ID – Plant Identification</p> <p>lb/MMBtu – pounds per million British Thermal Units</p> <p>PM – Particulate Matter</p> <p>PM<sub>10</sub> Particulate Matter less than 10 microns in aerodynamic diameter</p> <p>PPM – Parts Per Million</p> <p>PPMVD – parts per million by volume, dry measure at 15% O<sub>2</sub></p> <p>PS – Pressure Sensitive</p> <p>PM – particulate matter</p> <p>PTE – Potential to Emit</p> <p>QA/QC – Quality Assurance/Quality Control</p> <p>SO<sub>2</sub> – Sulfur Dioxide</p> <p>SSEIS – Stationary Source Emission Inventory System</p> <p>FT<sup>3</sup>/day - Cubic Feet Per Day</p> <p>TPM – Tons Per Month</p> <p>TPY – tons per twelve month rolling total</p> <p>TR# - Transmittal Number</p> <p>USC - United States Code</p> <p>VOC – Volatile Organic Compounds</p> <p>ISO - Represent 59°F, 60% Relative Humidity, 29.92 Inches Mercury At Sea Level</p>
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\*Not all abbreviations are present in every Operating Permit