



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

PROPOSED AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("MassDEP") 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 Massachusetts
Massachusetts Avenue
Amherst, MA 01003

FACILITY LOCATION:

University of Massachusetts
Massachusetts Avenue
Amherst, MA 01003

NATURE OF BUSINESS:

Educational Institution

RESPONSIBLE OFFICIAL:

Name: Donald A. Robinson
Title: Director,
Environmental Health & Safety

INFORMATION RELIED UPON:

[Ref. Appl. #1-O-96-063; Trans. #109060]
Appl. #1-O-07-009; Trans. #W116376

FACILITY IDENTIFYING NUMBERS:

AQ ID No.: 0420004
FMF FAC No.: 133008
FMF RO No.: 50003

Standard Industrial Code:

- 8221 – Colleges, Universities, and Professional Schools

North American Industrial Classification System Code:

- 61131 – Colleges, Universities, and Professional Schools

FACILITY CONTACT PERSON:

Name: Ms. Theresa Wolejko
Title: Assistant Director for Environmental
& Hazardous Materials Management
Phone: (413) 577-3632
Fax: (413) 577-3634
Email: twolejko@ehs.umass.edu

This operating permit shall expire on ___/___/____.
For the Department of Environmental Protection

PROPOSED

Michael Gorski
Regional Director
Department of Environmental Protection
Western Regional Office

Date

TABLE OF CONTENTS

Section	Special Conditions for Operating Permit	Page No.
1	Permitted Activities	3
2	Emission Unit Identification – Table 1	4-6
3	Identification of Exempt Activities – Table 2	6
4	Applicable Requirements	
	A. Emission Limits and Restrictions – Table 3	7-13
	B. Compliance Demonstration	
	- Monitoring/Testing Requirements – Table 4	14-21
	- Recordkeeping Requirements – Table 5	22-26
	- Reporting Requirements – Table 6	27-28
	C. General Applicable Requirements	28
	D. Requirements Not Currently Applicable – Table 7	28
5	Special Terms and Conditions – Table 8	29-35
6	Alternative Operating Scenarios	36
7	Emissions Trading	36
8	Compliance Schedule	36
Section	General Conditions for Operating Permit	Page No.
9	Fees	37
10	Compliance Certification	37
11	Noncompliance	38
12	Permit Shield	38
13	Enforcement	39
14	Permit Term	39
15	Permit Renewal	39
16	Reopening for Cause	40
17	Duty to Provide Information	40
18	Duty to Supplement	40
19	Transfer of Ownership or Operation	40
20	Property Rights	40
21	Inspection and Entry	40
22	Permit Availability	41
23	Severability Clause	41
24	Emergency Conditions	41
25	Permit Deviation	42
26	Operational Flexibility	43
27	Modifications	43
28	Ozone Depleting Substances	44
29	Prevention of Accidental Releases	45
30	Appeal Conditions for Operating Permit	46

SPECIAL CONDITIONS FOR OPERATING PERMIT

1. PERMITTED ACTIVITIES

In accordance with the provisions of 310 CMR 7.00: Appendix C and applicable rules and regulations, the Permittee (University of Massachusetts–Amherst, hereinafter “UMass–Amherst”) is authorized to operate the 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 is a state university that provides undergraduate and graduate education programs. The facility uses power and steam for heating from a Central Heating Plant which includes a combustion turbine/11 MW generator, heat recovery steam generator with duct burner, and 3 package boilers, all burning natural gas and/or ultra-low sulfur distillate oil. Other lesser sources of emissions include 19 emergency engines/generators, (16 of which are certified for operation under the MassDEP Environmental Results Program), parts degreasers, a spray booth, and a gasoline storage tank and dispenser.

Table 3 of this Operating Permit contains the emission unit emission limits and restrictions. The NSPS limits are not listed in Table 3 where MassDEP plan approval emission limits are more stringent. Table 4 contains monitoring/testing requirements. Table 5 contains record keeping requirements. Table 6 contains reporting requirements. Table 7 contains the requirements that are not currently applicable, which includes the requirements of 40 CFR Part 64: Compliance Assurance Monitoring (CAM) since the facility does not have an emission unit using control equipment to achieve compliance that has pre-control emissions of at least 100 percent of the major source amount for any applicable regulated air pollutant.

UMass–Amherst is a non-major source (area source) of Hazardous Air Pollutants. As such, Emission Unit 9 is subject to 40 CFR Part 63; Subpart HHHHHH (National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources), and emission Units 16a and 16b are subject to 40 CFR Part 63; Subpart JJJJJJ.

Also, as an area source of Hazardous Air Pollutants (HAPs), Emission Unit Nos. 17, 18a, 18b, and 19 are subject to federal regulations at 40 CFR Part 63 Subpart ZZZZ, “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.” This emission unit must meet the requirements of 40 CFR Part 63 Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart III, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.”

2. EMISSION UNIT IDENTIFICATION

The following emission units ("EU") are subject to and regulated by this operating permit.

EU #	Description of EU	EU Design Capacity	Pollution Control Device
EU 8	Parts degreasers	n/a	none
EU 9	Spray booth (for vehicles & vehicle parts)	n/a	filter pads
EU 12	Gasoline storage tank and dispenser	20,000 gallon	stage I vapor recovery
EU 15a	Combustion turbine/generator	CTG: 128 MMBtu/hr /11 MW	low NOx combustor, SCR, CO catalyst
EU 15b	Heat recovery steam generator/duct burner	duct burner: 91.8 MMBtu/hr	
EU 16a	1 high-pressure package boiler ⁽¹⁾	1 x 179.7 MMBtu/hr on natural gas	low NOx burners, SCR, CO catalyst
EU 16b	2 low-pressure package boilers ⁽¹⁾	2 x 162.1 MMBtu/hr on natural gas	
EU 17	Emergency engine; 2006 model year - compression ignition; diesel oil fuel	9.13 MMBtu/hr; 1357hp; 900 kW output	none
EU 18a (shaded in Table 1b)	Emergency engines; Compression Ignition; diesel oil fuel; Subject to Regulation 310 CMR 7.26: Industry Performance Standards and 40 CFR 60 Subpart IIII	various See Table 1b for list of engines. List will be maintained up-to-date in accordance with 310 CMR 7.26(42)(f).	none
EU 18b (non-shaded in Table 1b)	Emergency engines; Spark Ignition; natural gas fuel – ≤ 500 hp; Subject to Regulation 310 CMR 7.26: Industry Performance Standards and 40 CFR 60 Subpart JJJJ	various See Table 1b for list of engines. List will be maintained up-to-date in accordance with 310 CMR 7.26(42)(f).	none
EU 19	2 emergency engines; 2007 model year – John Deere Model No. 3029TF270D	~ 0.5 MMBtu/hr ea; 64hp ea; 48 kW output ea	none
EU 20	Emergency engines; Pre-2006	various	none

(1) Heat input ratings are based at ambient temperatures of 80°F.

2. EMISSION UNIT IDENTIFICATION (continued)

Table 1b

Address		Manufacturer	Model #	Manufacturer	Model #	Serial #	Capacity KW	Fuel	Installation Date
180 Clark Hill Road, Amherst	Van Meter	Cummins	DSHAA-5767797	Cummins		F060935056	150	oil	09/29/2006
651 N. Pleasant St., Amherst	Skinner Hall	Cummins	DSHAA-5788555	Cummins	QSL9-G2	46714511	247	oil	02/01/2008
661 North Pleasant St., Amherst	Integrated Sciences Building	Caterpillar	C27	Caterpillar	C27 Dita	MJE00576	800	oil	10/23/2008
255 Holdsworth Way, Amherst	Transit Services	Kohler	100REOZJD	John Deere	4045HF2851	2210755	118	oil	12/07/2008
131 Commonwealth Ave., Amherst	Boyden	Kohler	100 REOZJD	John Deere	4045HF2851	2242172	118	oil	03/19/2009
161 Commonwealth Ave., Amherst	Recreation center	Kohler	60 REOZJC	John Deere	5030HF285G	PE5030L006354	72	oil	08/04/2009
121 County Circle, Amherst	Berkshire House	Cummins	80DSFAE	Cummins	QSB5-G3 NR3	73005308	108	oil	08/25/2009
585 East Pleasant St., Amherst	Amherst Police Department	Cummins	500 DFEK	Cummins	QSX15-69 NR2	79430310	563	oil	07/21/2010
80 Campus Center Way, Amherst	Stockbridge Hall	Kohler	100REOZJE	John Deere	4045HF2851	PE4045L137556	118	oil	11/17/2010
161 Commonwealth Ave, Amherst	Recreation Building	Kohler	90REOZJC	John Deere	5030HF285	2220857	91	oil	2009
630 North Pleasant St., Amherst	Morrill Science building	Kohler	250REOZJE	John Deere	6090HF484	RG6090L102515	287	oil	07/25/2011
300 Campus Center Way, Amherst	Physical Plant	Milton Cat	D-80-6	Caterpillar	C4.4	ESM03229	97	oil	08/26/2011
Hicks Way, Amherst	Lincoln Campus Ctr. Parking Garage	Kohler	500REOZVB	Volvo	TAD 1641 GE	D16054849C3A	565	oil	05/16/2012
137 Hicks Way, Amherst	Central	Kohler	350REOZDD	Detroit Diesel	8DDXL14.0VLD	06R1020403	550 hp	oil	02/06/09
255 Holdsworth Way, Amherst	Transit Services	Kohler (SI)	60 RZG	Power Solutions	60RZG	33500014	73-105 HP	NG	02/24/2009
300 Stadium Dr., Amherst	McGuirk Stadium	Generac (SI)	SG200	Generac	10015540300	88486	268-309 HP	NG	03/19/2009
211 Natural Resources Rd., Amherst	Research & Education Greenhouse	Generac (SI)	SG150	Generac	6.8GLPNGD-150	BGNXB06.82C3	172-224 HP	NG	06/22/2011

Note: The engines in shaded rows are compression ignition engines subject to 40 CFR Part 60 Subpart IIII, and are designated as EU 18a. The other emergency engines are spark ignited emergency engines subject to 40 CFR Part 60 Subpart JJJJ, and are designated as EU 18b. An up-to-date list will be maintained at the facility in accordance with 310 CMR 7.26(42)(f).

Table 1c

Address		Manufacturer	Model #	Manufacturer	Model #	Serial #	Capacity KW	Fuel	Installation Date
351 Hicks Way, Amherst	Dickinson Hall	Caterpillar	SR4	Caterpillar	3304	4W-8957	111	oil	1999
630 North Pleasant St., Amherst	Morrill Science Building	Kato	D150MPZ4E	Cummins	NHR561PL	50899-1	150	oil	
Thatcher Way, Amherst	Brett Hall	Kohler	200R00ZIF	John Deere	6068HFG85	6068L920352	200	oil	
151 Infirmary Way, Amherst	Brett House	Caterpillar	SR4	Caterpillar	3304		111	oil	1999
154 Hicks Way, Amherst	Dubois Library – 27 th Floor	Onan	250FT4XR8/ 8473	Caterpillar	GV12-525-IP	0870251201	(250 kW)	NG	
154 Hicks Way, Amherst	Dubois Library – Node 1	Caterpillar	SR4B	Caterpillar	3306B	4FD02058	(250 kW)	NG	
154 Hicks Way, Amherst	Dubois Library – FP		B427	Continental	B427	126501	(35 kW)	NG	
161 Holdsworth Way, Amherst	Paige Lab	Kohler	68B588432		68B588432		(35 kW)	NG	
131 Southwest Circle, Southwest Residential Area, Amherst	Hampden Dining Hall	Onan	12RJC-3R8/13E	Onan	P2805	1G0857725	(12.5 kW)	NG	
740 North Pleasant Street, Amherst	Lederly LGRC	Onan	1.0AJ-1R/8390K	Onan	1.0AJ- 1R/8390K	1070256895	(1 kW)	NG	
260 Stockbridge Road, Amherst	Franklin Dining Hall	Onan	1010JC3R/1J	Onan	P2292	113C7-43248	(10 kW)	NG	
150 Infirmary Hall, Amherst	University Health Center	Newage	1456Z	Waukesha	145GZ	M07H21448701	(100 kW)	NG	

Note: The engines in shaded rows are compression ignition engines; the other emergency engines are spark ignited emergency engines.

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 MassDEP's Regional Office. Emissions from these activities shall be reported on the annual emissions statement pursuant to 310 CMR 7.12.	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 3a, 3b, 3c, 3d, 3e, and 3f, as follows:

Table 3a					
EU #	Fuel or Raw Material	Pollutant	Emission Limit/Standards	Operational and/or Production Limits	Applicable Regulation and/or Approval No.
EU 8	Solvent	VOC	n/a	≤ 100 gal/month solvent per degreaser solvent vapor pressure must be ≤ 1.0 mm Hg measured at 20 °C	310 CMR 7.03(8) 310 CMR 7.18(1) 310 CMR 7.18(8)
EU 9	Coatings applied in paint spray booth	VOC ⁽¹⁾	Pretreatment Wash Primer ≤ 6.5 lb/gal Primer/Primer Surfacer ≤ 4.8 lb/gal Primer Sealer ≤ 4.6 lb/gal Single or Two-Stage Topcoat ≤ 5.0 lb/gal Three or Four-Stage Topcoat ≤ 5.2 lb/gal Specialty Coating ≤ 7.0 lb/gal Prep./cleanup solution ≤ 1.67 lb/gal	< 670 gallons of VOC-containing compounds per month or < 2.5 tons VOC per month facility-wide See Table 8	310 CMR 7.03(16) 310 CMR 7.18(28) 40 CFR Part 63 Subpart HHHHHH
		Opacity	0%	n/a	310 CMR 7.03(16)(j)
EU 12	Gasoline Motor Vehicle Fuel	VOC	recover 95% by weight of motor vehicle fuel vapors displaced during the dispensing of motor vehicle fuel	Operate Stage 1 vapor recovery systems; restrict gasoline thruput to < 100,000 gallons per calendar month	310 CMR 7.03(13) 310 CMR 7.24(3) 310 CMR 7.24(6) 40 CFR Part 63 Subpart CCCCCC

(1) Emission limit is in pounds of VOC per gallon of coating.

Table 3b								
EU #	Fuel or Raw Material	Pollutant	Emission Limits/ Standards ^{(1) (2) (3)}				Operational and/or Production Limits	Applicable Regulation and/or Approval No.
			natural gas		ULSD oil			
EU 15a (CTG)	natural gas or ULSD oil	Particulate Matter ⁽⁴⁾	7.87 lb/hr	0.030 lb/MMBtu	8.09 lb/hr	0.030 lb/MMBtu	≤ 2,229,611 gallons ⁽⁶⁾ (combustion turbine only; rolling 12 month total)	MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) 40 CFR 60 Subpart KKKK ⁽⁷⁾ EPA PSD Permit No. 050-026-MA11 for PM10 emissions only (9/24/08; Rev. 1 – 12/19/2013)
		PM ₁₀ ⁽⁵⁾ - particulate matter ≤10 μm diameter	7.87 lb/hr	0.030 lb/MMBtu	9.71 lb/hr	0.036 lb/MMBtu		
EU 15b (duct burner)	only natural gas may be burned in the duct burner	VOC	4.73 lb/hr w/o duct burner	0.030 lb/MMBtu w/o duct burner	5.74 lb/hr w/o duct burner	0.036 lb/MMBtu w/o duct burner		
		SO ₂	0.50 lb/hr	0.0041 lb/MMBtu	0.87 lb/hr	0.0074 lb/MMBtu		
		CO	0.57 lb/hr	0.0022 lb/MMBtu	0.49 lb/hr	0.0018 lb/MMBtu		
		NO _x	3.12 lb/hr	5.0 ppmvd ⁽⁸⁾	3.01 lb/hr	5.0 ppmvd ⁽⁸⁾		
			2.56 lb/hr	2.5 ppmvd ⁽⁸⁾	5.94 lb/hr	6.0 ppmvd ⁽⁸⁾		
		NH ₃	19.0 lb/hr ⁽¹¹⁾	18.7 ppmvd ^(8,11)	19.0 lb/hr ⁽¹¹⁾	18.7 ppmvd ^(8,11)		
0.86 lb/hr	2.5 ppmvd ^(8,9)		0.88 lb/hr	4.0 ppmvd ^(8,9)				
	7.2 lb/hr ⁽¹²⁾	20.0 ppmvd ^(8,9,12)	7.2 lb/hr ⁽¹²⁾	20.0 ppmvd ^(8,9,12)				

- (1) The emission rates for the CTG/Duct burner are based on worst case emission rate (100% load, duct burner on except where noted, and 0°F ambient temp.),
- (2) The lb/hr and lb/MMBtu emission rates are based on a 1-hour block average and do not apply during startup or shutdown, except as noted otherwise. The ppmvd limits also do not apply during startup or shutdown.
- (3) The PM₁₀ emission limit is applicable during startup and shutdown. All other criteria pollutant mass emission rates during start-up and shutdown will be quantified during initial compliance testing and used in the determination of annual mass emissions.
- (4) Particulate matter measured as filterable particulate (front-half catch) using applicable procedures specified in 40 CFR Part 60 Appendix A, Method 5.
- (5) Particulate matter as measured by 40 CFR 51, Appendix M, Test Method 201 or 201A and Test Method 202.
- (6) Additional ULSD oil may be burned if a fuel BACT analysis is submitted to MassDEP and an approval is issued by MassDEP in writing.
- (7) MassDEP emission limits for NO_x and limits of sulfur content in fuel are more stringent than the specified federal New Source Performance Standard limits
- (8) “ppmvd” emission limits are corrected to 15% O₂ for CTG/Duct burner and corrected to 3% O₂ for the boilers.
- (9) Ammonia ppmvd limit is based on a 1-hour block average during NORMAL OPERATION, and a 24-hour block average for ALL OTHER TIMES.
- (10) Ammonia ppmvd limit is based on a 1-hour block average during TRANSIENT OPERATION.
- (11) NO_x emission limits during < 0°F ambient temperature conditions, which cannot exceed 300 hours per calendar year.
- (12) Ammonia emission limits during < 0°F ambient temperature conditions, which cannot exceed 300 hours per calendar year.

Table 3c										
EU #	Fuel or Raw Material	Pollutant	Emission Limits/ Standards ^{(1) (2) (3)}				Operational and/or Production Limits	Applicable Regulation and/or Approval No.		
			natural gas		ULSD oil					
EU 16a (High Pressure Boiler)	natural gas or ULSD oil	Particulate Matter ⁽⁴⁾	3.59 lb/hr	0.020 lb/MMBtu	3.47 lb/hr	0.020 lb/MMBtu	Oct. 1 – April 30 ≤ 15,508,252 gallons ⁽⁶⁾ May 1 – Sept. 30 ≤ 6,357,830 gallons ⁽⁶⁾	MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) EPA PSD Permit No. 050-026-MA11 for PM10 emissions only (9/24/08; Rev. 1 – 12/19/2013)		
		PM ₁₀ ⁽⁵⁾ ; particulate matter ≤10 μm diameter	3.59 lb/hr	0.020 lb/MMBtu	5.21 lb/hr	0.03 lb/MMBtu				
		VOC	0.95 lb/hr	0.0054 lb/MMBtu	0.44 lb/hr	0.0025 lb/MMBtu				
		SO ₂	0.40 lb/hr	0.0022 lb/MMBtu	0.28 lb/hr	0.0016 lb/MMBtu				
		CO	3.90 lb/hr	0.022 lb/MMBtu 20.0 ppmvd ⁽⁸⁾	4.54 lb/hr	0.026 lb/MMBtu 25.0 ppmvd ⁽⁸⁾				
		NO _x	1.60 lb/hr	0.009 lb/MMBtu 5.0 ppmvd ⁽⁸⁾	2.68 lb/hr	0.016 lb/MMBtu 9.0 ppmvd ⁽⁸⁾				
NH ₃	0.16 lb/hr	2.5 ppmvd ^(8,9) 7.5 ppmvd ^(8,10)	0.17 lb/hr	4.0 ppmvd ^(8,9) 10.0 ppmvd ^(8,10)						
EU 16b (Low Pressure Boilers)	natural gas or ULSD oil	Particulate Matter ⁽⁴⁾	3.24 lb/hr	0.020 lb/MMBtu	3.13 lb/hr	0.020 lb/MMBtu			Oct. 1 – April 30 ≤ 15,508,252 gallons ⁽⁶⁾ May 1 – Sept. 30 ≤ 6,357,830 gallons ⁽⁶⁾	MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) EPA PSD Permit No. 050-026-MA11 for PM10 emissions only (9/24/08; Rev. 1 – 12/19/2013)
		PM ₁₀ ⁽⁵⁾ ; particulate matter ≤10 μm diameter	3.24 lb/hr	0.020 lb/MMBtu	4.68 lb/hr	0.03 lb/MMBtu				
		VOC	0.87 lb/hr	0.0054 lb/MMBtu	0.39 lb/hr	0.0025 lb/MMBtu				
		SO ₂	0.36 lb/hr	0.0022 lb/MMBtu	0.25 lb/hr	0.0016 lb/MMBtu				
		CO	3.52 lb/hr	0.022 lb/MMBtu 20.0 ppmvd ⁽⁸⁾	4.08 lb/hr	0.026 lb/MMBtu 25.0 ppmvd ⁽⁸⁾				
		NO _x	1.45 lb/hr	0.009 lb/MMBtu 5.0 ppmvd ⁽⁸⁾	2.42 lb/hr	0.0155 lb/MMBtu 9.0 ppmvd ⁽⁸⁾				
NH ₃	0.14 lb/hr	2.5 ppmvd ^(8,9) 7.5 ppmvd ^(8,10)	0.15 lb/hr	4.0 ppmvd ^(8,9) 10.0 ppmvd ^(8,10)						

- (1) The boilers emission limits are for single boiler units operating at 100% load.
- (2) The lb/hr and lb/MMBtu emission rates are based on a 1-hour block average and do not apply during startup or shutdown, except as noted otherwise. The ppmvd limits also do not apply during startup or shutdown.
- (3) The PM₁₀ emission limit is applicable during startup and shutdown. All other criteria pollutant mass emission rates during start-up and shutdown will be quantified during initial compliance testing and used in the determination of annual mass emissions.
- (4) Particulate matter measured as filterable particulate (front-half catch) using applicable procedures specified in 40 CFR Part 60 Appendix A, Method 5.
- (5) Particulate matter as measured by 40 CFR 51, Appendix M, Test Method 201 or 201A and Test Method 202.
- (6) Additional ULSD oil may be burned if a fuel BACT analysis is submitted to MassDEP and an approval is issued by MassDEP in writing.
- (7) MassDEP emission limits for particulate and NO_x are more stringent than the specified federal New Source Performance Standard limits.
- (8) "ppmvd" emission limits are corrected to 15% O₂ for CTG/Duct burner and corrected to 3% O₂ for the boilers.
- (9) Ammonia ppmvd limit is based on a 1-hour block average during NORMAL OPERATION, and a 24-hour block average for ALL OTHER TIMES.

(10) Ammonia ppmvd limit is based on a 1-hour block average during TRANSIENT OPERATION.

Table 3d						
EU #	Fuel or Raw Material	Pollutant	Emission Limits/ Standards		Operational and/or Production Limits	Applicable Regulation and/or Approval No.
			natural gas	ULSD oil		
EU 15a EU 15b EU 16a EU 16b	ULSD oil or natural gas	Sulfur in fuel	≤ 0.8 grains / 100ft ³	≤ 0.0015 % by wt.	≤ 24,116,129 gallons ⁽⁴⁾ (rolling 12-month total)	MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) EPA PSD Permit No. 050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013)
EU 15a EU 15b	ULSD oil or natural gas	Smoke (during 1 st hour of startup or shutdown)	≤ 10% (6-minute average)	No. 1 of the Chart no more than 6 minutes during any one hour, no time to exceed No. 2 of the Chart ⁽¹⁾	n/a	MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13)
		Opacity ⁽³⁾ (during 1 st hour of startup or shutdown)	≤ 10% (6-minute average)	≤ 20%, except 20 to ≤ 40% for ≤ 2 minutes during any one hour.		
		Smoke/Opacity ⁽³⁾ (at all times except 1 st hour of startup or shutdown)	≤ 10% (6-minute average)			
EU 16a EU 16b	ULSD oil or natural gas	Smoke/Opacity ⁽³⁾	≤ 10% (6-minute average, including startup/shutdown/fuel transfer) ⁽²⁾			

- (1) "Chart" means the Ringelmann Scale for grading the density of smoke, as published by the United States Bureau of Mines and as referred to in the Bureau of Mines Information Circular No. 8333.
- (2) Procedures for responding to Smoke/Opacity from the boilers, as indicated by in-stack COMS, are found in the Boiler Opacity SOP approved by MassDEP August 24, 2012 and as amended.
- (3) Not counting measured opacity caused by water vapor condensation that is attributable to startup in cold weather conditions.
- (4) Additional ULSD oil may be burned if a fuel BACT analysis is submitted to MassDEP and an approval is issued by MassDEP in writing.

Table 3e					
EU #	Fuel or Raw Material	Pollutant	Emission Limits/ Standards	Operational and/or Production Limits	Applicable Regulation and/or Approval No.
			ULSD oil		
EU 17	ULSD oil	Sulfur in oil	≤ 0.0015 % by wt.	Allowed to operate only during emergency situations or for routine maintenance testing as recommended by the manufacturer. ≤ 300 hours of total operation during any 12 month period ≤ 100 hours of maintenance and testing operation during any 12-month period	40 CFR Part 60 Subpart IIII MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) EPA PSD Permit No. 050-026-MA11 for fuel sulfur limit related to PM10 emissions only (9/24/08; Rev. 1 – 12/19/2013) 310 CMR 7.06(1)(a) and (b)
		Smoke	< No. 1 of the Chart no more than 6 minutes during any one hour, at no time to exceed No. 2 of the Chart.		
		Opacity	≤ 20%, except 20 to ≤ 40% for ≤ 2 minutes during any one hour		
EU 18a EU 18b	ULSD oil or Natural Gas	Sulfur in oil	≤ 0.0015 % by wt.	Allowed to operate only during emergency situations or for routine maintenance testing as recommended by the manufacturer. ≤ 300 hours of total operation during any 12 month period ≤ 100 hours of maintenance and testing operation during any 12-month period	310 CMR 7.26(42) 40 CFR Part 60 Subpart IIII & JJJJ 310 CMR 7.06(1)(a) and (b)
		NMHC and NO _x	See Table 8; Special Terms and Conditions; Provisions 19, 20, 29, and 34		
		CO			
		PM			
		Smoke	< No. 1 of the Chart no more than 6 minutes during any one hour, at no time to exceed No. 2 of the Chart.		
Opacity	≤ 20%, except 20 to ≤ 40% for ≤ 2 minutes during any one hour				

Table 3f					
EU #	Fuel or Raw Material	Pollutant	Emission Limits / Standards	Operational and/or Production Limits	Applicable Regulation and/or Approval No.
			ULSD oil		
EU 19	ULSD oil	NO _x + HC	5.02g/bhp-hr; 0.067 tpy ea during any 12 month period	Allowed to operate only during emergency situations or for routine maintenance testing. ≤ 188 hours ea of operation during any 12 month period ≤ 100 hours of maintenance and testing operation during any 12-month period	MassDEP Approval #WE-12-014 (7/30/12) 40 CFR Part 60; Subpart IIII 310 CMR 7.06(1)(a) and (b)
		NO _x	4.65g/bhp-hr; 0.062 tpy ea during any 12 month period		
		CO	1.09 g/bhp-hr; 0.014 tpy ea during any 12 month period		
		VOC (or HC)	0.37 g/bhp-hr; 0.005 tpy ea during any 12 month period		
		PM ₁₀ ⁽²⁾ - particulate matter ≤10 μm diameter	0.12 g/bhp-hr; 0.002 tpy ea during any 12 month period		
		Sulfur in oil	≤ 0.0015 % by wt.		
		Smoke	< No. 1 of the Chart no more than 6 minutes during any one hour, at no time to exceed No. 2 of the Chart.		
EU 20	any	Opacity	≤ 20%, except 20 to ≤ 40% for ≤ 2 minutes during any one hour	Allowed to operate only during emergency situations or for routine maintenance testing. ≤ 300 hours ea of operation during any 12 month period	310 CMR 7.03(10) 310 CMR 7.06(1)(a) and (b)
			≤ 20% during the acceleration mode, and ≤15% during the lugging mode.		
Facility-Wide	any	Green House Gas ⁽¹⁾	n/a	n/a	310 CMR 7.71 [STATE ONLY]

(1) "Green House Gas" means any chemical or physical substance that is emitted into the air and that the MassDEP may reasonably anticipate will cause or contribute to climate change including, but not limited to, CO₂, CH₄, N₂O, SF₆, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

(2) Particulate matter as measured by 40 CFR 51, Appendix M, Test Method 201 or 201A and Test Method 202.

Definitions:

NORMAL OPERATION	A 1-hour block period during which the difference between the highest and lowest firing rate for the combustion turbine, duct burner, or a boiler is less than 30 MMBtu/hr.
TRANSIENT OPERATION	A 1-hour block period – and the subsequent hour – during which the difference between the highest and lowest firing rate for the combustion turbine, duct burner, or a boiler is 30 MMBtu/hr or greater.
ALL OTHER TIMES	A 24-hour block period, which may include both normal and transient operation.
STARTUP	Startup is defined as the time when a flame in the emission unit is initiated and the emission unit operation achieves minimum sustained operating load. The duration of startups shall be no greater than 4.0 hours.
SHUTDOWN	Shutdown is defined as the time when the emission unit operation is between minimum sustained operating load and flame-out in the emission unit occurs. The duration of shutdowns shall be no greater than 2.0 hours.
FUEL SWITCHING	Fuel Switching is defined as the time when the emission unit operation is changed from oil to natural gas, or from natural gas to oil. The duration of fuel switching shall be no greater than 2.0 hours.

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 contained in Table 3:

Table 4	
EU #	Monitoring/Testing Requirements
EU 8	UMass-Amherst shall 1) In accordance with 310 CMR 7.18(8)(h), upon request of the MassDEP, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(8).
EU 9	UMass-Amherst shall 2) In accordance with 310 CMR 7.18(28)(l), upon request of the MassDEP, perform or have performed tests to determine compliance with 310 CMR 7.18(28). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in 40 CFR Part 60, or by other methods approved by the MassDEP and USEPA.
EU 15a EU 15b EU 16a EU 16b	EMISSION TESTING UMass-Amherst shall 3) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that all emissions testing is conducted in accordance with MassDEP guidelines and in accordance with the Environmental Protection Agency test methods as specified in the 40 CFR Part 60, Appendix A, 40 CFR Part 60 Subpart KKKK and 40 CFR Part 60 Subpart Db (boilers), and 40 CFR Part 60 Subpart KKKK (duct burner), or by a methodology approved by MassDEP. All ammonia compliance stack testing shall be conducted in accordance with EPA Conditional Test Method 27 or an equivalent test method approved by the MassDEP and/or EPA.

Table 4 (continued)	
EU #	Monitoring/Testing Requirements
EU 15a EU 15b EU 16a EU 16b	<p>OPACITY MONITORING UMass-Amherst shall</p> <p>4) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) and 310 CMR 7.04(2), install, calibrate, operate, and maintain a Data Acquisition and Handling System(s) (DAHS) and opacity monitor to continuously monitor and record opacity from the subject emission unit stack(s).</p> <p>5) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), equip the opacity monitor with audible and visible alarms which activate when opacity exceeds the limits established herein.</p> <p>6) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), operate the opacity monitor at all times the subject emission unit is operating, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.</p> <p>7) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), obtain and record emission data from each opacity monitor (except for periods of calibration checks, zero and span adjustments, and preventive maintenance) as follows:</p> <p style="margin-left: 20px;">a. For at least 75% of the operating days in any calendar month, capture opacity data for at least 75% of the operating hours on those operating day(s),</p> <p style="margin-left: 40px;">(an operating day is any calendar day an emission unit operates for any length of time and at any load), (For instance if a boiler operated at any load and for any amount of time for 12 days in September, at least 9 of those days must have data capture for at least 75% of the hours operated that day)</p> <p style="margin-left: 20px;">b. Capture opacity data for at least 95% of the operating hours that the CTG or package boiler operates in each calendar quarter,</p> <p style="margin-left: 40px;">(an operating hour is any hour or part of an hour an emission unit operates at any load)</p> <p>8) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain on-site for the opacity monitor an adequate supply of spare parts to maintain the on-line availability and data capture requirements contained herein.</p> <p>9) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), use and maintain the opacity monitor as a “direct-compliance” monitor to measure compliance with the opacity limit contained herein. A “Direct-compliance” monitor generates data that legally documents the compliance status of a source. The MassDEP may also use the opacity monitor or any credible evidence in its determination of compliance with the limits and conditions specified in this approval.</p> <p>10) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that the opacity monitor equipment complies with MassDEP approved performance and location specifications, and conforms with the USEPA monitoring specifications in 40 CFR Part 60.</p>

Table 4 (continued)	
EU #	Monitoring/Testing Requirements
EU 15a EU 15b EU 16a EU 16b	<p>TEMPERATURE MONITORING UMass-Amherst shall</p> <p>11) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), install, calibrate, operate, and maintain a temperature monitoring system to continuously monitor and record the inlet temperatures to the SCR and the CO catalysts for the CTG/HRSG and the boilers.</p> <p>12) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), equip each temperature monitoring system with audible and visible alarms which activate when these temperatures deviate from normal operating temperatures established during the initial compliance testing as listed in the SOMP for this equipment.</p> <p>13) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), operate all temperature monitoring equipment at all times the CTG or a boiler is operating, except for periods of calibration checks, zero and span adjustments, and preventive maintenance.</p> <p>14) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), obtain and record temperature data from each temperature monitor specified herein (except for periods of calibration checks, zero and span adjustments, and preventive maintenance) as follows:</p> <p style="margin-left: 20px;">a. For at least 75% of the operating days in any calendar month, capture temperature monitor data for at least 75% of the operating hours on those operating day(s),</p> <p style="margin-left: 40px;">(an operating day is any calendar day an emission unit operates for any length of time and at any load),</p> <p style="margin-left: 40px;">(For instance if a boiler operated at any load and for any amount of time for 12 days in September, at least 9 of those days must have data capture for at least 75% of the hours operated that day)</p> <p style="margin-left: 20px;">b. Capture temperature monitor data for at least 95% of the operating hours that the CTG or package boiler operates in each calendar quarter,</p> <p style="margin-left: 40px;">(an operating hour is any hour or part of an hour an emission unit operates at any load)</p> <p>15) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain on-site for the temperature monitoring equipment an adequate supply of spare parts to maintain the on-line availability and data capture requirements contained herein.</p> <p>16) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that all temperature monitors and recording equipment comply with MassDEP approved performance and location specifications.</p>

Table 4 (continued)

EU #	Monitoring/Testing Requirements
EU 15a	CEMS MONITORING
EU 15b	UMass-Amherst shall
EU 16a	17) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), install, calibrate, operate, and maintain a data acquisition and handling system(s) (DAHS) and stack CEMs to continuously monitor and record flue gas emissions of NO _x , CO, NH ₃ , and diluent gas from the subject emission unit stack.
EU 16b	18) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), equip each CEMs with audible and visible alarms which activate when emissions exceed the limits established herein.
	19) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), operate all CEMs at all times the subject emission unit is operating, except for periods of CEMs calibration checks, zero and span adjustments, and preventive maintenance.
	20) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), obtain and record emission data from each CEMs (except for periods of calibration checks, zero and span adjustments, and preventive maintenance) as follows:
	a. For at least 75% of the operating days in any calendar month, capture CEM data for at least 75% of the operating hours on those operating day(s),
	(an operating day is any calendar day an emission unit operates for any length of time and at any load),
	(For instance if a boiler operated at any load and for any amount of time for 12 days in September, at least 9 of those days must have data capture for at least 75% of the hours operated that day)
	b. Capture CEM data for at least 95% of the operating hours that the CTG or package boiler operates in each calendar quarter,
	(an operating hour is any hour or part of an hour an emission unit operates at any load)
	21) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain on-site for the CEMs equipment an adequate supply of spare parts to maintain the on-line availability and data capture requirements contained herein.
	22) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), use and maintain all its CEMs systems as “direct-compliance” monitors to measure compliance with the emission limits contained herein. “Direct-compliance” monitors generate data that legally documents the compliance status of a source. The MassDEP may also use the CEMs or any credible evidence in its determination of compliance with the limits and conditions specified in this approval.
	23) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that the CEMS equipment complies with MassDEP approved performance and location specifications, and conforms with the USEPA monitoring specifications specified in 40 CFR Part 60.
	24) In accordance with 310 CMR 7.00 Appendix C(9), install, operate and maintain a NO _x differential CEMs for ammonia to calculate ammonia emissions. The CEMS shall satisfy the requirements of Performance Specification 2 of 40 CFR Part 60, Appendix A and Appendix F, but will also be considered passing under Performance Specification 4 if the average difference between the CEMs and reference method values plus the 2.5 percent confidence coefficient does not exceed 5.0 ppm.

Table 4 (continued)	
EU #	Monitoring/Testing Requirements
EU 16a EU 16b	<p>UMass–Amherst shall</p> <p>25) In accordance with 310 CMR 7.04(4)(a), ensure that each unit is inspected and tested in accordance with manufacturers recommendations 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 facility.</p> <p>26) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11214, ensure that a biennial tune-up of the boilers is conducted in accordance with §63.11223(b).</p> <p>27) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11223(b)(7), ensure that, if the boiler is not operating on the required date for a tune-up, the tune-up is conducted within one week of startup.</p> <p>28) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11223(a), ensure that each subsequent biennial tune-up is conducted no more than 25 months after the previous tune-up.</p>
EU 17	<p>UMass–Amherst shall</p> <p>29) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), monitor the hours of operation for the engine to ensure its operation does not exceed 300 hours per rolling 12-month period.</p> <p>30) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), monitor the circumstances of engine operation to ensure it operates only during</p> <ul style="list-style-type: none"> a. The normal maintenance and testing procedure as recommended by the manufacturer and/or National Fire Protection Association requirements, and b. Periods of electric power outage due to failure of the grid, in whole or in part, on-site disaster, local equipment failure, flood, fire or natural disaster. <p>31) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), monitor the circumstances of engine operation to ensure it operates only when the imminent threat of a power outage is likely due to failure of the electrical supply or when capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of 3% above or 5% below standard voltage, or periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels, or other emergency conditions.</p>
EU 18a EU 18b	<p>UMass–Amherst shall</p> <p>32) In accordance with 310 CMR 7.26(42)(c)2., MassDEP may require emission or other monitoring to assure compliance with the requirements of 301 CMR 7.26(42).</p> <p>33) In accordance with 310 CMR 7.26(42)(d)1., ensure that a non-turnback hour counter is installed, operated and maintained in good working order on each engine.</p> <p>34) In accordance with 310 CMR 7.26(42)(e)3., any testing when required shall comply with the following:</p> <ul style="list-style-type: none"> a. Tests to certify compliance with emission limitations must be performed in accordance with EPA reference Methods, California Air Resources Board Methods approved by EPA, or equivalent methods as approved by MassDEP and EPA. b. Particulate matter from liquid fuel reciprocating engines shall be determined using Method 8178 D2 of the International Organization for Standardization. c. Testing shall be conducted at the full design load of the emergency engine d. MassDEP may require emission or other testing to assure compliance with the emission limitations or

	fuel requirements.
--	--------------------

PROPOSED

Table 4 (continued)

EU #	Monitoring/Testing Requirements
EU 18a EU 18b	UMass–Amherst shall 35) In accordance with 310 CMR 7.26(42)(e)3., ensure that any testing when required comply with the following: <ul style="list-style-type: none"> a. Tests to certify compliance with emission limitations must be performed in accordance with EPA reference Methods, California Air Resources Board Methods approved by EPA, or equivalent methods as approved by the Department and EPA. b. Particulate matter from liquid fuel reciprocating engines shall be determined using Method 8178 D2 of the International Organization for Standardization. c. Testing shall be conducted at the full design load of the emergency engine or turbine.
EU 19	UMass–Amherst shall 36) In accordance with MassDEP Approval #WE-12-014 (7/30/12) and 310 CMR 7.26(42)(e)2., conduct emission testing or conduct other monitoring as required by MassDEP to assure compliance with the requirements of 310 CMR 7.26(42).
	37) In accordance with MassDEP Approval #WE-12-014 (7/30/12), 310 CMR 7.26(42)(d)1. and 40 CFR 60.4209(a), ensure that a non-turnback hour counter is installed, operated and maintained in good working order on each engine.
	38) In accordance with MassDEP Approval #WE-12-014 (7/30/12), monitor the hours of operation for each engine to ensure that each engine is not operated more than 188 hours per rolling 12-month period.
	39) In accordance with MassDEP Approval #WE-12-014 (7/30/12) and 310 CMR 7.26(42)(e)3., ensure that any testing required by MassDEP shall comply with the following: <ul style="list-style-type: none"> a. Tests to certify compliance with emission limitations must be performed in accordance with USEPA reference Methods, California Air Resources Board Methods approved by USEPA, or equivalent methods as approved by MassDEP and/or USEPA. b. Particulate matter from liquid fuel reciprocating engines shall be determined using Method 8178 D2 of the International Organization for Standardization. c. Testing shall be conducted at the full design load of the emergency engine. d. MassDEP may require emission or other testing to assure compliance with the emission limitations or fuel requirements.
	40) In accordance with MassDEP Approval #WE-12-014 (7/30/12), monitor fuel oil purchases such that only fuel oil containing no greater than 0.0015 sulfur percent by weight is purchased for use in [each] unit.
	41) In accordance with MassDEP Approval #WE-12-014 (7/30/12), monitor sulfur content of each new shipment of fuel oil received. Sulfur content of the fuel can be demonstrated through fuel analysis. The analysis of sulfur content of the fuel shall be in accordance with the applicable American Society for Testing Materials (ASTM) test methods or any other method approved by the MassDEP and USEPA. Fuel sulfur information may be provided by fuel suppliers.

Table 4 (continued)

EU #	Monitoring/Testing Requirements																																								
Facility-Wide	<p>NOISE TESTING UMass-Amherst shall</p> <p>42) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that the facility is operated and maintained such that at all times:</p> <ul style="list-style-type: none"> a. No condition of air pollution will be caused by emissions of sound as provided in 310 CMR 7.01; b. No sound emissions resulting in noise will occur as provided in 310 CMR 7.10 and the MassDEP's Policy 90-001 other than approved herein; and c. Sound emissions from the facility will not exceed the levels set forth in Table A. Locations referenced in Table A are: <ul style="list-style-type: none"> 1–Northern Residences along North Pleasant Street, 2–Site Property Boundary, 3–University Baseball field/Mullins Center, 4–University Southwest Dormitories (Southeast of Site), 5–Nearest Western Residences along Stockbridge Street, 6–Additional Western Residences along Roosevelt Street, and 7–Easternmost End of Stockbridge Street. <p>[STATE ONLY]</p>																																								
Table A																																									
A-Weighted Sound Level (dBA)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 12.5%;"></th> <th style="width: 12.5%;">Location 1</th> <th style="width: 12.5%;">Location 2</th> <th style="width: 12.5%;">Location 3</th> <th style="width: 12.5%;">Location 4</th> <th style="width: 12.5%;">Location 5</th> <th style="width: 12.5%;">Location 6</th> <th style="width: 12.5%;">Location 7</th> </tr> </thead> <tbody> <tr> <td>Lowest Measured Ambient Noise Level (L90)</td> <td style="text-align: center;">38.1</td> <td style="text-align: center;">43.2</td> <td style="text-align: center;">43.6</td> <td style="text-align: center;">45.0</td> <td style="text-align: center;">38.9</td> <td style="text-align: center;">34.2</td> <td style="text-align: center;">39.4</td> </tr> <tr> <td>Predicted Noise Level from New Equipment (LEQ)</td> <td style="text-align: center;">28.0</td> <td style="text-align: center;">51.1</td> <td style="text-align: center;">43.2</td> <td style="text-align: center;">28.9</td> <td style="text-align: center;">35.4</td> <td style="text-align: center;">29.5</td> <td style="text-align: center;">39.4</td> </tr> <tr> <td>Future Projected Ambient Noise Level</td> <td style="text-align: center;">38.5</td> <td style="text-align: center;">51.8</td> <td style="text-align: center;">46.4</td> <td style="text-align: center;">45.1</td> <td style="text-align: center;">40.5</td> <td style="text-align: center;">35.5</td> <td style="text-align: center;">42.4</td> </tr> <tr> <td>Broadband (A-Weighted) Ambient Increase</td> <td style="text-align: center;">+0.4</td> <td style="text-align: center;">+8.6</td> <td style="text-align: center;">+2.8</td> <td style="text-align: center;">+0.1</td> <td style="text-align: center;">+1.6</td> <td style="text-align: center;">+1.3</td> <td style="text-align: center;">+3.0</td> </tr> </tbody> </table>		Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Location 7	Lowest Measured Ambient Noise Level (L90)	38.1	43.2	43.6	45.0	38.9	34.2	39.4	Predicted Noise Level from New Equipment (LEQ)	28.0	51.1	43.2	28.9	35.4	29.5	39.4	Future Projected Ambient Noise Level	38.5	51.8	46.4	45.1	40.5	35.5	42.4	Broadband (A-Weighted) Ambient Increase	+0.4	+8.6	+2.8	+0.1	+1.6	+1.3	+3.0
	Location 1	Location 2	Location 3	Location 4	Location 5	Location 6	Location 7																																		
Lowest Measured Ambient Noise Level (L90)	38.1	43.2	43.6	45.0	38.9	34.2	39.4																																		
Predicted Noise Level from New Equipment (LEQ)	28.0	51.1	43.2	28.9	35.4	29.5	39.4																																		
Future Projected Ambient Noise Level	38.5	51.8	46.4	45.1	40.5	35.5	42.4																																		
Broadband (A-Weighted) Ambient Increase	+0.4	+8.6	+2.8	+0.1	+1.6	+1.3	+3.0																																		
	<p>43) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), the MassDEP reserves the right to require additional measurement periods, locations, or events if in the opinion of the MassDEP such additional measurements are necessary to determine compliance with the Air Pollution Control Regulations. [STATE ONLY]</p>																																								
	<p>44) In accordance with 310 CMR 7.00 Appendix C(9), monitor sulfur content of each new shipment of ULSD oil received. Compliance with % sulfur-in-fuel requirement can be demonstrated through testing (<u>testing certification</u>) or by maintaining a shipping receipt from the fuel supplier (<u>shipping receipt certification</u>).</p> <p>The <u>testing certification</u> or <u>shipping receipt certification</u> of % sulfur-in-fuel shall document that sulfur testing has been done in accordance with the applicable ASTM test methods (D4294-90), or any other method approved by the MassDEP and/or USEPA.</p>																																								
	<p>45) In accordance with 310 CMR 7.13, conduct stack testing, upon written request of the MassDEP, for any air contaminant for which the MassDEP has determined testing is necessary, to ascertain compliance with the MassDEP's regulations or design approval provisos. All such testing shall be conducted in accordance with 310 CMR 7.13 (1) and (2), and in accordance with the applicable procedures specified in 40 CFR 60 Appendix A or other method(s) if approved by the MassDEP and EPA.</p>																																								

Table 4 (continued)

EU #	Monitoring/Testing Requirements
Facility-Wide	UMass-Amherst shall 46) Ensure that stack testing is performed in accordance with 310 CMR 7.13, and 40 CFR Part 60, Appendix A (Method 7 for oxides of nitrogen (NO _x), Method 6 for sulfur dioxide (SO ₂), Method 10 for carbon monoxide (CO), Methods 1 to 5 for TSP, Method 3A for Oxygen (O ₂), Method 9 for opacity, or any other test method approved by the MassDEP or USEPA). Prior to stack testing, appropriate testing ports shall be constructed so as to accommodate the requirements as stipulated in 40 CFR Part 60, Appendix A.
	47) Monitor operations such that information may be compiled for the annual preparation of a Source Registration/Emission Statement Form as required by 310 CMR 7.12.
	48) In accordance with 310 CMR 7.71(1) and Appendix C(9), establish and maintain data systems or record keeping practices (e.g. fuel use records, SF ₆ usage documentation, Continuous Emissions Monitoring System) for greenhouse gas emissions to ensure compliance with the reporting provisions of M.G.L. c. 21N, the Climate Protection and Green Economy Act, St. 2008, c. 298, § 6. [STATE ONLY]

Table 5

EU #	Recordkeeping Requirements
EU 8	UMass-Amherst shall 1) In accordance with 310 CMR 7.18(8)(g), prepare and maintain daily records sufficient to demonstrate compliance consistent with an instantaneous averaging time as stated in 310 CMR 7.18(2)(a). Such records shall include, but are not limited to: <ul style="list-style-type: none"> a. identity, quantity, formulation, and density of solvent(s) used; b. quantity, formulation, and density of all waste solvent(s) generated; c. actual operational and performance characteristics of the degreaser and any appurtenant emissions capture and control equipment, if applicable, and d. any other requirements specified by the MassDEP in any approval(s) and/or order(s) issued to the operator.
EU 8 EU 9 EU 12	UMass-Amherst shall 2) In accordance with 310 CMR 7.03(6), establish and maintain a recordkeeping system on-site and in sufficient detail to document the date of construction, substantial reconstruction or alteration and that the respective emission rates pursuant to 310 CMR 7.03 are not exceeded.
EU 9	UMass-Amherst shall 3) In accordance with 310 CMR 7.03(16), prepare and maintain sufficient records to demonstrate compliance for each calendar month. Such records shall include, but are not limited to: <ul style="list-style-type: none"> a. For each coating, as applied: <ul style="list-style-type: none"> i. Gallons of coating used; ii. Coating density (Pounds per gallon); iii. Pounds of VOC per gallon of coating; iv. Pounds of solids per gallon of coating; v. Pounds of water per gallon of coating; vi. Pounds of other non-VOC liquid per gallon of coating; and vii. Pounds of VOC per gallon of solids as applied; b. Gallons of exempt/non-compliance coatings used; c. Gallons of cleanup solution and pounds VOC per gallon; and d. Maintenance records of filter pad replacement and disposal. 4) In accordance with 310 CMR 7.03(16)(l), as an alternative to 3) a. and 3) b. above, maintain purchase records of coating and surface preparation products on a monthly basis. The purchase records shall be summarized and include coating category, coating or coating component, and surface preparation product as identified on the container, the quantity of each coating or component, and surface preparation product, and the VOC content (in pounds per gallon) of each coating and surface preparation product, after mixing according to the manufacturer's instructions.

Table 5 (continued)

EU #	Recordkeeping Requirements
EU 9	<p>UMass-Amherst shall</p> <p>5) In accordance with 40 CFR 63.11177(a) and as specified therein, ensure that records are maintained that show each painter has completed the training specified in §63.11173(f) and is certified.</p> <p>6) In accordance with 40 CFR 63.11177(b) and as specified therein, ensure that documentation is maintained of the filter efficiency of any spray booth exhaust filter material, according to the procedure in §63.11173(e)(3)(i).</p> <p>7) In accordance with 40 CFR 63.11177(c) and as specified therein, ensure that documentation is maintained from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by MassDEP or USEPA to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in §63.11173(e)(4).</p> <p>8) In accordance with 40 CFR 63.11177(d) and as specified therein, ensure that copies are maintained of any notification submitted as required by §63.11175 and that copies are maintained of any report submitted as required by §63.11176.</p> <p>9) In accordance with 40 CFR 63.11177(g) and as specified therein, ensure that records are maintained of any deviation from the requirements in §§ 63.11173, 63.11174, 63.11175, or 63.11176.</p> <p>10) In accordance with 40 CFR 63.11177(h) and as specified therein, ensure that records are maintained of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.</p>

Table 5 (continued)

EU #	Recordkeeping Requirements
EU 12	<p>UMass-Amherst shall</p> <p>11) In accordance with 310 CMR 7.24(3)(f):</p> <ul style="list-style-type: none"> a. maintain records of all maintenance performed, including the type of maintenance performed and date the maintenance was performed; b. maintain records of malfunctions, including the type of malfunction, the date the malfunction was observed, and the date the malfunction was repaired, and; c. maintain records of the daily throughput of any organic material with a true vapor pressure of 1.5 psia or greater under actual storage conditions. <p>12) In accordance with 310 CMR 7.24(6)(b)2., maintain a current record of all persons trained as per 310 CMR 7.24(6)(b)2. Such record shall be maintained on site or, for tank trucks, at the address from which the tank truck is principally operated, and shall include the following:</p> <ul style="list-style-type: none"> a. the date the training was last received; b. the trainees name; and c. the personal signature of the trainee acknowledging receipt of the training. <p>13) In accordance with 310 CMR 7.24(6)(b)4., make available all records maintained pursuant to 310 CMR 7.24(6)(b) shall be made available to the MassDEP or the USEPA immediately upon the request of either. In the event requested records cannot be made immediately available, requested records shall be delivered to the MassDEP or the USEPA, as applicable, within 24 hours of the initial request.</p> <p>14) In accordance with 40 CFR 63.1117(d), have records available within 24 hours of a request by MassDEP or EPA to document a gasoline throughput of < 100,000 gallons per calendar month.</p>
EU 16a EU 16b	<p>UMass–Amherst shall</p> <p>15) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11225(c), ensure that copies are kept of each notification and report that you submitted to comply with Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.</p> <p>16) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11225(c), ensure that records are kept that identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer’s specifications to which the boiler was tuned, and records documenting the fuel type(s) used monthly by each boiler.</p>
EU 17	<p>UMass-Amherst shall</p> <p>17) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) and EPA PSD Permit No. 050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013), establish a recordkeeping system of sufficient detail that documents that the emergency engine does not exceed 300 hours operation each per rolling 12-month period.</p>
EU 18a EU 18b	<p>UMass-Amherst shall</p> <p>18) In accordance with 310 CMR 7.26(42)(f), the owner or operator shall maintain the records described in 310 CMR 7.26(42)(f)1. through 4. as specified below. Such records shall be maintained on site and shall be made available to MassDEP or its designee upon request. The owner or operator shall certify that records are accurate and true in accordance with 301 CMR 7.01(2)(a) through (c).</p> <ul style="list-style-type: none"> a. information on equipment type, make and model, and rated power output; and b. A monthly log of hours of operation, fuel type heating value and sulfur content for fuel oil. A monthly calculation of the total hours operated in the previous 12 months; and c. Purchase orders, invoices, and other documents to substantiate information in the monthly log; and d. Copies of certificates and documents from the manufacturer related to certificates.

Table 5 (continued)	
EU #	Recordkeeping Requirements
EU 18b	UMass-Amherst shall 19) In accordance with 40 CFR Part 60; Subpart JJJJ § 60.4245(a), maintain records of unit maintenance and certifications with applicable 40 CFR Part 60 Subpart JJJJ standards.
EU 19	UMass-Amherst shall 20) In accordance with 310 CMR 7.26(42)(f), maintain the records described in 310 CMR 7.26(42)(f)1. through 4. as specified below. Such records shall be maintained on site and shall be made available to MassDEP or its designee upon request. The Permittee shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c). a. Information on equipment type, make and model, and rated power output; and b. A monthly log of hours of operation, fuel type heating value and sulfur content for fuel oil. A monthly calculation of the total hours operated in the previous 12 months; and c. Purchase orders, invoices, and other documents to substantiate information in the monthly log; and d. Copies of certificates and documents from the manufacturer related to certificates. 21) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain oil analysis results used to demonstrate compliance with fuel oil sulfur content requirements. 22) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 3 of this Operating Permit. 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 15th 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 . 23) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain records of monitoring and testing as required in Table 4 of this Operating Permit, provisions 32-37 as applicable. 24) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain a copy on-site of the Approval, the underlying Application and the most up-to-date SOMP. 25) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain a record of routine maintenance activities performed on the engines and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed. 26) In accordance with MassDEP Approval #WE-12-014 (7/30/12), maintain a record of all malfunctions affecting air contaminant emission rates on the engines 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. 27) In accordance with MassDEP Approval #WE-12-014 (7/30/12), establish a recordkeeping system of sufficient detail that documents that each emergency engine does not exceed 188 hours operation each per rolling 12-month period.
EU 20	28) In accordance with 310 CMR 7.03(6), establish a recordkeeping system of sufficient detail that documents that each emergency engine does not exceed 300 hours of operation per rolling 12-month period.

Table 5 (continued)

EU #	Recordkeeping Requirements
EU 15a EU 15b EU 16a EU 16b EU 17 EU 18a EU 18b	<p>UMass-Amherst shall</p> <p>29) In accordance with 310 CMR 7.00 Appendix C(10), maintain records of the yearly boilers tune-ups required herein.</p> <p>30) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain a log to record problems, upsets or failures associated with the emission control system, CEMs, temperature monitors, or ammonia handling system.</p> <p>31) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) and EPA PSD Permit No. 050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013), maintain records of all periods of excess emissions, even if attributable to an emergency/malfunction or startup/shutdown, quantify these emissions, and include them in the determination of annual emissions.</p> <p>32) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain on-site permanent records of all measurements, CEMs output, performance evaluations, calibration checks, maintenance, and adjustments for each CEMS and temperature monitoring system device, and make these records available to the MassDEP and EPA on request.</p> <p>33) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), record for each unit on a daily basis the type(s) of fuel burned, heat content of each fuel, total heating value of the fuel consumed, and the actual emission rate for each pollutant for emission units demonstrating compliance with CEMS.</p> <p>34) In accordance with EPA PSD Permit No. 050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013) and MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain records of the testing certification or shipping receipt certification used to certify that each new shipment of ULSD oil fuel complies with the percent sulfur-in-fuel requirements specified herein.</p> <p>35) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), maintain for the life of the facility all operating and monitoring records and logs. UMass-Amherst shall make available to the MassDEP for inspection upon request the five most recent years' data.</p>
Facility-Wide	<p>UMass-Amherst shall</p> <p>36) In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records of all monitoring data and supporting information on-site for a period of at least five years from the date of the monitoring sample, measurement, report or initial operating permit application.</p> <p>37) In accordance with 310 CMR 7.12, maintain the records required to determine the nature and amounts of emissions from the facility.</p> <p>38) In accordance with 310 CMR 7.12(3)(b), retain copies of Source Registration and other information supplied to the MassDEP to comply with 310 CMR 7.12 for five years from the date of submittal.</p> <p>39) In accordance with 310 CMR 7.71 (6) b. and c. retain at the facility for five years and make available to the MassDEP upon request copies of the documentation of the methodology and data used to quantify emissions. [STATE ONLY]</p>

Table 6	
EU #	Reporting Requirements
EU 9	UMass-Amherst shall 1) In accordance with 40 CFR 63.11176(a) and as specified therein, ensure that reports are submitted in each calendar year in which information previously submitted in either the initial notification, Notification of Compliance, or a previous annual notification of changes report has changed. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred. 2) In accordance with 310 CMR 7.13(1) and 310 CMR 7.13(2), if and when the MassDEP has determined that stack testing is necessary to ascertain compliance with MassDEP’s regulations or design approval provisions, cause such stack testing to be summarized, analyzed, and submitted to the MassDEP within such time frame as agreed to in the approved test protocol.
EU 8 EU 9 EU 12	UMass-Amherst shall 2) In accordance with 310 CMR 7.03(5), report to the MassDEP any construction, substantial reconstruction or alteration, as described in 310 CMR 7.03, on the next required source registration.
EU 16a EU 16b	UMass–Amherst shall 4) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11225(a)(4)(i), ensure that a signed statement in the Notification of Compliance Status report is submitted that indicates that the boiler tune-up was conducted. 5) In accordance with 40 CFR 63 Subpart JJJJJJ and §63.11225(b), ensure that, by March 1 of each year a biennial compliance report is prepared (and submitted to the delegated authority upon request) for the previous calendar year containing the company name and address, and a statement by a responsible official, with the official’s name, title, phone number, e-mail address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with the boiler tune-up requirements.
EU 18a EU 18b	UMass-Amherst shall 6) In accordance with 310 CMR 7.26(42)(f), make available the monthly log(s) and records established under 310 CMR 7.26(42)(f) to MassDEP or its designee upon request. The owner or operator shall certify that the log is accurate and true in accordance with 310 CMR 7.01(2).
EU 19	UMass-Amherst shall 7) In accordance with 310 CMR 7.26(42)(f), make available the monthly log(s) and records established under 310 CMR 7.26(42)(f) to MassDEP or its designee upon request. The Permittee shall certify that the log is accurate and true in accordance with 310 CMR 7.01(2).
EU 20	UMass-Amherst shall 8) In accordance with 310 CMR 7.03(5), report any construction, substantial reconstruction or alteration, as described in 310 CMR 7.03, to MassDEP on the next required source registration.
Central Heating Plant-Wide	UMass-Amherst shall 9) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) and EPA PSD Permit No.050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013), submit to the MassDEP / EPA – New England in an acceptable format, a semi-annual report postmarked by January 30th and July 30th of each year, which minimally contains for the prior calendar 6-month period the following information: a. Reports from the facility CEMS and temperature monitors, containing summary data, and b. For each period of excess emissions or excursions from allowable operating conditions, UMass-Amherst shall list the duration, cause (including whether it is attributable to a malfunction or emergency), the response taken, and the amount of excess emissions. Periods of excess emissions shall include excess emissions that occur during periods of malfunction, emergency, and upsets or failures associated with the emission control system, CEMS or temperature monitors.

	c. A tabulation of periods of oil use.
--	--

Table 6 (continued)

EU #	Reporting Requirements
Facility Wide	UMass-Amherst shall
	10) In accordance with 310 CMR 7.12, submit a Source Registration/Emission Statement form to the MassDEP on an annual basis.
	11) In accordance with 310 CMR 7.00 Appendix C(10)(c), submit to the MassDEP two compliance summaries, one by January 30 for the time period July – December of the previous calendar year, and the other by July 30 for the time period January – June of the current calendar year. (See Provision 10 in “ GENERAL CONDITIONS FOR OPERATING PERMIT ”)
	12) In accordance with 310 CMR 7.13(1)(d), submit to the MassDEP any stack test results for any air contaminant obtained from stack testing required by the MassDEP within such time as agreed to in the approved test protocol.
	13) In accordance with 310 CMR 7.00 Appendix C(5)(b)9., submit annually a certification that the facility is maintaining the required records to assure the facility is in compliance with the applicable requirements designated in this permit. (See Provision 10 in “ GENERAL CONDITIONS FOR OPERATING PERMIT ”)
	14) In accordance with 310 CMR 7.00 Appendix C(10)(a), submit to the MassDEP any record relevant to this operating permit or to the emissions of any air contaminant from the facility within 30 days of the request by the MassDEP or USEPA.
	15) In accordance with 310 CMR 7.00 Appendix C(10)(f), the Permittee shall report to the MassDEP's Regional Bureau of Waste Prevention all instances of deviations from permit requirements. (See Provision 25 in “ GENERAL CONDITIONS FOR OPERATING PERMIT ”).
	16) In accordance with 310 CMR 7.71(5), by April 15 th , 2010 and April 15 th of each year thereafter report emissions of greenhouse gases from stationary emissions sources including, but not limited to, emissions from factory stacks, manufacturing processes and vents, fugitive emissions, and other process emissions; and owned or leased motor vehicles when stationary source greenhouse gas emissions are greater than 5,000 short tons CO ₂ e. Report greenhouse gas emissions electronically in a format that can be accommodated by the registry. [STATE ONLY]
	17) In accordance with 310 CMR 7.71(6), certify greenhouse gas emissions reports using a form provided by the MassDEP or the registry. [STATE ONLY]
	18) In accordance with 310 CMR 7.71(7), by December 31 st of the applicable year submit to the MassDEP documentation of triennial verification of the greenhouse gas emissions report. [STATE ONLY]

- 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	Description/Reason
40 CFR Part 63 Subpart T	National Emission Standards for Halogenated Solvent Cleaning
40 CFR Part 64	Compliance Assurance Monitoring

PROPOSED

5. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to the following special provisions that are not contained in Table 3, 4, 5, and 6:

Table 8	
EU #	Special Terms and Conditions
EU 8	UMass-Amherst shall 1) In accordance with 310 CMR 7.18(8)(a), not cause, suffer, allow or permit emissions of volatile organic compounds unless they comply with either 310 CMR 7.18(8)(a)1.–3.
EU 9	UMass-Amherst shall 2) In accordance with 310 CMR 7.03(16) and 310 CMR 7.18(28), operate in accordance with the following requirements: a. The spray guns shall utilize electrostatic spray application or High Volume Low Pressure (HVLP) spray application and be maintained and operated in accordance with the manufacturers' recommendations; b. The spray booth shall utilize two or more layers of dry fiber mat filter, with a total thickness of at least two inches, that achieves particulate control efficiency of at least 97% by weight. The filter material shall be disposed of in accordance with all applicable DEP regulations; c. The face velocity of air at the filter shall not exceed 200 feet per minute; d. Spray gun cleaning shall be performed inside a totally enclosed gun washer system and any used cleanup solution shall be recirculated, stored, or disposed of in a manner that will minimize evaporation to the atmosphere. Proper storage shall be in a container with a tight fitting cover; e. The stack shall conform to the following criteria: i. The stack shall discharge vertically upwards; ii. The stack shall not have rain protection of a type that restricts the vertical exhaust flow; iii. The stack gas exit velocity shall be greater than 40 feet per second; and iv. The minimum stack exit height shall be 35 feet above the ground or ten feet above roof level. f. Rags used during surface preparation or other solvent cleaning operations, fresh and spent solvent, coatings, and sludge shall be stored in tightly closed containers and disposed of or recycled properly; and g. All spray equipment operators shall receive training and instruction in the proper operation and maintenance of the spray equipment and spray equipment cleaning device. 3) In accordance with 40 CFR 63.11173(e)(1) and as specified therein, ensure that all painters are certified that to have completed training in the proper spray application of surface coatings and in the proper setup and maintenance of spray equipment. 4) In accordance with 40 CFR 63.11173(e)(2) and as specified therein, ensure that all spray-applied coatings are applied in a spray booth meeting the requirements of 40 CFR 63.11173(e)(2)(i) (98-percent capture of paint overspray) and meet the construction and air movement requirements of 40 CFR 63.11173(e)(2)(ii) and (iii). 5) In accordance with 40 CFR 63.11173(e)(3) and as specified therein, ensure that all spray-applied coatings are applied with a high volume, low pressure spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology. 6) In accordance with 40 CFR 63.11173(e)(4) and as specified therein, ensure that all paint spray gun cleaning is done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. 7) In accordance with 40 CFR 63.11173(f)(1) – (3) and as specified therein, ensure that all new and existing personnel who spray apply surface coatings are trained in the proper application of surface coatings and are certified.

Table 8 (continued)

EU #	Special Terms and Conditions
EU 9	<p>8) In accordance with 40 CFR 63.11173(g)(2) and as specified therein, ensure that all painters are trained and certified no later than 180 days after hiring.</p> <p>9) In accordance with 40 CFR 63.11173(g)(3) and as specified therein, ensure that all painters receive refresher training that meets the requirements specified in 40 CFR 63.11173(f)(1) – (3) and are recertified every five years.</p> <p>10) EU9 is subject to the requirements of 40 CFR 63.1-16, Subpart A, “General Provision” [as indicated in Table 1 to Subpart HHHHHH of 40 CFR 63]. Compliance with all applicable provisions therein is required.</p>
EU 12	<p>UMass-Amherst shall</p> <p>11) In accordance with 310 CMR 7.24, operate in compliance with the following requirements:</p> <ul style="list-style-type: none"> a. properly maintain and operate the vapor balance system; b. maintain all gauges, meters, or other specified testing devices in proper working order; c. ensure that the operators of the motor vehicle fuel dispensing facility receive training and instruction in the operation and maintenance of the vapor collection and control system; d. conspicuously post operating instructions for dispensing motor vehicle fuel using the vapor collection and control system in the motor vehicle fuel dispensing area. These instruction must at a minimum include a clear description of how to correctly dispense motor vehicle fuel using the system, a warning not to attempt continued refueling after automatic shutoff, and a telephone number to report problems experienced with the vapor collection and control system to the MassDEP; e. conspicuously post "Out of Order" signs on, any aboveground part of the vapor collection and control system which is not fully operative, until said vapor collection and control system has been repaired; f. take any steps necessary to prohibit the use of any aboveground part of the vapor collection and control system which is not fully operative and otherwise in compliance with the performance standards of 310 CMR 7.24(6)(c)4. <p>12) In accordance with 40 CFR 63.1116(a) and 40 CFR 63.1117(a), not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a. Minimize gasoline spills; b. Clean up spills as expeditiously as practicable; c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. <p>13) EU12 is subject to the requirements of 40 CFR 63.1-16, Subpart A, “General Provision” [as indicated in Table 3 to Subpart CCCCCC of 40 CFR 63]. Compliance with all applicable provisions therein is required.</p>
EU 15a	<p>UMass-Amherst shall</p> <p>14) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), burn natural gas in the CTG to the full extent of its availability, except as provided in provision 6 below.</p> <p>15) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), may burn ULSD oil in the CTG (and may burn ULSD oil in excess of the allotment specified herein) if supported by the results of a fuel BACT analysis that is approved by MassDEP in writing.</p>

Table 8 (continued)

EU #	Special Terms and Conditions
EU 16a EU 16b	<p>UMass-Amherst shall</p> <p>16) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), tune each boiler annually in accordance with procedures contained in EPA 340/1-83-023 “Combustion Efficiency Optimization Manual for Operators of Oil and Gas Fired Boilers” (or equivalent) with the goal of reducing air pollutant emissions, including NO_x and CO, to optimum levels.</p> <p>17) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), comply with all applicable NSPS requirements found in 40 CFR Part 60, Subpart Db for each of the boilers.</p> <p>18) EU16a and 16b are subject to the requirements of 40 CFR 63.1-16, Subpart A, “General Provision” [as indicated in Table 8 to Subpart JJJJJ of 40 CFR 63]. Compliance with all applicable provisions therein is required.</p>
EU 17	<p>UMass-Amherst shall</p> <p>19) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13) and EPA PSD Permit No.050-026-MA11 (9/24/08; Rev. 1 – 12/19/2013), ensure that the sulfur content of oil to be used as fuel in the emergency generator conforms with the then current sulfur limit applied to on-road specification oil as defined in the Code of Federal Regulations (at the time of issuance of this permit, defined in 40 CFR § 80.29(a)(i)).</p> <p>20) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that the emergency generator is equipped with an exhaust silencer, if necessary, so that sound emissions will not cause or contribute to a condition of air pollution.</p> <p>21) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), ensure that the emergency generator utilizes an exhaust stack that discharges in accordance with specifications provided in the air permit application air quality impact analysis so as to not cause a condition of air pollution (310 CMR 7.01(1)). Exhaust stacks shall be configured to discharge vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow, including but not limited to rain protection devices. Any emission impacts of exhaust stacks upon sensitive receptors including people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices includes avoiding locations that may be subject to downwash of the exhaust, and installing stacks of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors. The minimum stack height shall be ten feet above the facility rooftop or the emergency engine enclosure, whichever is higher.</p>
EU 18a EU 18b	<p>UMass-Amherst shall</p> <p>22) These units are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63.6580 and 63.6675 and shall comply with all applicable requirements.</p> <p>23) In accordance with 40 CFR 63.6590(c), a new stationary RICE located at an area source of HAP emissions does not have to meet the requirements of 40 CFR Part 63, Subpart ZZZZ and of 40 CFR Part 63 Subpart A by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines.</p> <p>24) In accordance with 310 CMR 7.26(42) (b)1., ensure that all emergency engines installed in accordance with the provisions of 310 CMR 7.26(42) and with a rated power output equal to or greater than 37 kW comply with the applicable emission limitations set by the US EPA for non-road engines (40 CFR 89 as in effect October 23, 1998) at the time of installation.</p>

Table 8 (continued)	
EU #	Special Terms and Conditions
EU 18a EU 18b	<p>25) In accordance with 310 CMR 7.26(42) (b)1., ensure that you obtain from the supplier a statement that a certificate of conformity has been obtained from the Administrator pursuant to 40 CFR 89.105 as in effect October 23, 1998. Any engine certified under the US EPA non-road standards is automatically certified to operate as an emergency engine pursuant to 310 CMR 7.26(42). For units that burn natural gas exclusively, a letter or other documentation from the supplier stating that the engine meets the applicable non-road emission limitation will satisfy the certificate of conformity requirement.</p>
	<p>26) In accordance with 310 CMR 7.26(42)(c), ensure that they accept delivery for burning in any engine or turbine subject to 310 CMR 7.26(42) only fuel that meets the applicable U.S. Environmental Protection Agency sulfur limits for fuel pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001.</p>
	<p>27) In accordance with 310 CMR 7.26(42)(b), ensure that the engine(s) complies with the emission limitations set forth in 310 CMR 7.26(42).</p>
	<p>28) In accordance with 310 CMR 7.26(42)(d)1., ensure that any emergency engine emergency turbine subject to 310 CMR 7.26(42) shall not be operated more than 300 hours during any rolling 12-month period. This operating restriction includes normal maintenance and testing procedures as recommended by the manufacturer.</p>
	<p>29) In accordance with 310 CMR 7.26(42)(d)2., ensure that each engine is operated and maintained in accordance with the manufacturer's recommended operating and maintenance procedures.</p>
	<p>30) In accordance with 310 CMR 7.26(42)(d)3., ensure that each engine and its associated equipment is constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10: Noise.</p>
	<p>31) In accordance with 310 CMR 7.26(42)(d)4.a., ensure that each engine utilizes an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)). Exhaust stacks shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted combustion gases, including but not limited to rain protection devices "shanty caps" and "egg beaters". Any emission impacts of exhaust stacks upon sensitive receptors including, but not limited to, people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:</p> <ul style="list-style-type: none"> a. Avoiding location that may be subject to downwash of the exhaust; and b. Installing stack(s) of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors.
	<p>32) In accordance with 310 CMR 7.26(42)(d)4.b., ensure that any engine with a rated power output equal to or greater than 300 kw, but less than 1 MW, is equipped with a stack minimally ten feet above the facility rooftop or the emergency engine enclosure, whichever is lower.</p>
	<p>33) In accordance with 310 CMR 7.26(42)(d)4.c., ensure that each engine with a rated power output equal to or greater than one megawatt is equipped with a stack with a minimum stack height of 1.5 times the height of the building on which the stack is located. If the stack is lower than 1.5 times the building height or lower than the height of a structure that is within 5L of the stack (5L being five times the lesser of the height or maximum projected width of the structure), an EPA Guideline air quality model shall be run to document that the operation of the applicable emergency engine will not cause an exceedance of any National Ambient Air Quality Standard.</p>

Table 8 (continued)

EU #	Special Terms and Conditions
EU 18a EU 18b	34) In accordance with 310 CMR 7.26(42)(e)1. ensure that no person shall cause, suffer, allow, or permit the installation and subsequent operation of an engine or turbine unless said person has certified compliance with the requirements of 310 CMR 7.26(42) in its entirety in accordance with the provisions of 310 CMR 70.00: <i>Environmental Results Program Certification</i> . Certification shall include a statement from the supplier that the installed engine or turbine is capable of complying with the emission limitations for the first three years of operation. A onetime certification shall be made to MassDEP within 60 days of commencement of operation; annual certification is not required.
EU 18a	UMass-Amherst shall 35) In accordance with 310 CMR 7.00 Appendix C(9) and (10), comply with any other applicable requirements found in 40 CFR Part 60 Subpart IIII.
EU 18b	UMass-Amherst shall 36) In accordance with 40 CFR Part 60; Subpart JJJJ § 60.4243(b), ensure that each engine has a model year certification or be able to demonstrate compliance with the model year requirements. 37) In accordance with 40 CFR Part 60; Subpart JJJJ § 60.4243(d), ensure that each engine operates no more than 100 hours per year total including 50 hours of maintenance testing and readiness checks. Peak shaving for these units is not permitted. 38) In accordance with 40 CFR Part 60; Subpart JJJJ § 60.4243(e), these engines may operate in emergency situations only and for less than 100 hours/yr while burning propane. If they operate for more than 100 hours/yr, the units must be tested to assure compliance with the emission standards. 39) In accordance with 40 CFR Part 60; Subpart JJJJ § 60.4233(d), § 60.4233(e) and § 60.4234, meet the applicable Table 1 emissions standards for the life of the units. 40) In accordance with 310 CMR 7.00 Appendix C(9) and (10), comply with any other applicable requirements found in 40 CFR Part 60 Subpart JJJJ.
EU 19	UMass-Amherst shall 41) EU #19 is subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200 through 60.4219 and shall comply with all applicable requirements. 42) EU #19 is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63.6580 and 63.6675 and shall comply with all applicable requirements. 43) In accordance with 40 CFR 63.6590(c), a new stationary RICE located at an area source of HAP emissions complying with the applicable requirements in 40 CFR Part 60 Subpart IIII does not have to meet the requirements of 40 CFR Part 63, Subpart ZZZZ and of 40 CFR Part 63 Subpart A. 44) In accordance with 310 CMR 7.26(42)(d)2., each engine shall be operated and maintained in accordance with the manufacturer's recommended operating and maintenance procedures. 45) In accordance with 310 CMR 7.26(42)(d)3., each engine and its associated equipment shall be constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10: <i>Noise</i> .

Table 8 (continued)

EU #	Special Terms and Conditions
EU 19	<p>46) In accordance with 310 CMR 7.26(42)(d)4.a., each engine shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)). Exhaust stacks shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted combustion gases, including but not limited to rain protection devices “shanty caps” and “egg beaters”. Any emission impacts of exhaust stacks upon sensitive receptors including, but not limited to, people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:</p> <ul style="list-style-type: none"> a. Avoiding location that may be subject to downwash of the exhaust; and b. Installing stack(s) of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors. <p>47) In accordance with 40 CFR 60.4207, beginning October 1, 2010, owners and operators of stationary compression ignition internal combustion engines subject to 40 CFR Part 60 Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80 .510(b) for non-road diesel fuel.</p> <p>48) In accordance with 40 CFR 60.4211(a):</p> <ul style="list-style-type: none"> a. Operate and maintain each engine according to the manufacturer’s emission-related written instructions; b. Change only those emission –related settings that are permitted by the manufacturer; and c. Meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as they apply to you. <p>49) In accordance with 40 CFR 60.4211(f), emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations under this provision (although MassDEP limits total annual operation to 300 hours/year). The owner or operator may petition the USEPA and MassDEP for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.</p>

Table 8 (continued)

EU #	Special Terms and Conditions
EU 19	<p>50) In accordance with 40 CFR 60.4211(g)(1), if you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.</p> <p>51) In accordance with 40 CFR 60.4212(c), exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:</p> $\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$ <p>Where: STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.</p> <p>Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.</p>
Central Heating Plant-Wide	<p>UMass-Amherst shall</p> <p>52) In accordance with MassDEP Approval #1-B-08-015 (12/31/09; amended 1/19/11, 9/14/12 & 6/14/13), properly train all personnel to operate the facility monitoring and control equipment in accordance with vendor specifications and all applicable regulations. This training shall be updated at least once annually.</p> <p>MassDEP personnel shall be informed of scheduled training sessions at least 30 days in advance and MassDEP personnel shall be allowed access to attend these training sessions.</p>
Facility-Wide	<p>UMass-Amherst shall</p> <p>53) In accordance with 310 CMR 7.10, not cause or allow emissions of sound of sufficient intensity and/or duration as to cause or contribute to a condition of air pollution. [STATE ONLY]</p> <p>54) In accordance with 310 CMR 7.09, not cause or allow emissions of odor or dust that cause or contribute to a condition of air pollution. [STATE ONLY]</p> <p>55) UMass-Amherst has indicated that it is subject to, and in compliance with, the requirements of 310 CMR 7.16, Reduction of Single Occupant Commuter Vehicle Use.</p> <p>56) UMass-Amherst has stated in its operating permit application that the facility is subject to, and in compliance with, the requirements of 40 CFR Part 82: Protection of Stratospheric Ozone. These requirements, which are enforced by the United States Environmental Protection Agency, are applicable to the facility.</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.
- B. Inter-facility emission trading
The facility did not request inter-facility emissions trading in its operating permit application.

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.

PROPOSED

GENERAL CONDITIONS FOR OPERATING PERMITS

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 MassDEP 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 MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

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 Operating Permit. The report shall be postmarked or delivered by January 30 to the MassDEP 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:

- 1) the terms and conditions of the Permit that are the basis of the certification;
- 2) the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- 3) the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
- 4) any additional information required by the MassDEP 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 MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- 1) the terms and conditions of the Permit that are the basis of the certification;
- 2) the current compliance status during the reporting period;
- 3) the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- 4) whether there were any deviations during the reporting period;
- 5) if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
- 6) whether deviations in the reporting period were previously reported;
- 7) if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- 8) if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
- 9) any additional information required by the MassDEP 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 MassDEP 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 MassDEP 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:
- 1) the liability of the source for any violation of applicable requirements prior to or at the time of Permit issuance.
 - 2) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
 - 3) 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, 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22, 7.70 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 MassDEP, 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 MassDEP's receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by the MassDEP on the renewal application.

In the event the MassDEP 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 MassDEP 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 MassDEP and/or EPA. The responsible official of the facility may request that the MassDEP terminate the facility's Operating Permit for cause. The MassDEP 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 MassDEP'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 MassDEP 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 MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to the MassDEP.

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 MassDEP.

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 MassDEP, 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 Operating Permit, including any amendments or attachments thereto, upon request by the MassDEP 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 based¹ emission limitations specified in this Permit as a result of an emergency². 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;

¹ 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.

² 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.

- 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
- D. the Permittee submitted notice of the emergency to the MassDEP 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 supersede the following deviation reporting requirements, if applicable.

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

- A. 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.
- B. 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.
- C. Exceedances of Permit operational limitations directly correlated to excess emissions.
- D. 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.
- E. 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 MassDEP Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via the MassDEP's web site, <http://www.mass.gov/dep/air/approvals/aqforms.htm#op>.

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, fax or electronic mail (e-mail) within 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 MassDEP written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(h) and (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.

28. OZONE DEPLETING SUBSTANCES

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

- A. The Permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
- 1) All containers containing a class I or class II substance that is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR 82.106.
 - 2) The placement of the required warning statement must comply with the requirements of 40 CFR 82.108.
 - 3) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR 82.110.
 - 4) No person may modify, remove or interfere with the required warning statement except as described in 40 CFR 82.112.
- B. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVAC) in Subpart B:
- 1) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices of 40 CFR 82.156.
 - 2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment of 40 CFR 82.158.
 - 3) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - 4) Persons disposing of small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152) must comply with recordkeeping requirements of 40 CFR 82.166.
 - 5) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair equipment requirements of 40 CFR 82.156.
 - 6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- C. If the Permittee manufactures, transforms, imports or exports a class I or class II substance, the Permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, "Production and Consumption Controls".
- D. If the Permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B,

"Servicing of Motor Vehicle Air Conditioners". The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

- E. The Permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

29. PREVENTION OF ACCIDENTAL RELEASES

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

Your facility is subject to the requirements of the General Duty Clause, under 112(r)(1) of the CAA Amendments of 1990. This clause specifies that owners or operators of stationary sources producing, processing, handling or storing a chemical in any quantity listed in 40 CFR Part 68 or any other extremely hazardous substance have a general duty to identify hazards associated with these substances and to design, operate and maintain a safe facility, in order to prevent releases and to minimize the consequences of accidental releases which may occur.

30. APPEAL CONDITIONS FOR OPERATING PERMIT

This Permit is an action of the MassDEP. 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 MassDEP'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 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.