



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
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PROPOSED AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection (“Department” or “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"]:

Browning-Ferris Industries, Inc.
5600 Niagara Falls Boulevard
Niagara Falls, New York 14304

FACILITY LOCATION:

Browning-Ferris Industries, Inc.
Fall River Landfill
1080 Airport Road
Fall River, Massachusetts 02720

NATURE OF BUSINESS:

Municipal Solid Waste Landfill

RESPONSIBLE OFFICIAL:

Name: Christopher Ford
Title: Environmental Manager

INFORMATION RELIED UPON:

Application No. 4V08045 (Renewal); 4P94191;
4P11003; SE-12-017
Transmittal (TR) No. X223705; 96146; X236027;
N/A

FACILITY IDENTIFYING NUMBERS:

AQ ID: 1200866
FMF FAC NO. 132278
FMF RO NO. 206505

Standard Industrial Classification (SIC): 4953
North American Industrial Classification System
(NAICS): 562212

FACILITY CONTACT PERSON:

Name: Christopher Ford
Title: Environmental Manager
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This Operating Permit shall expire on PROPOSED

For the Department of Environmental Protection

PROPOSED
Permit Chief, Bureau of Air and Waste

12-09-19 - PROPOSED
Date

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

A. DESCRIPTION OF FACILITY AND OPERATIONS

Browning-Ferris Industries, Inc. (BFI) owns and operates the BFI Fall River Landfill facility (BFI FRLF) that is located at 1080 Airport Road, Fall River, Massachusetts. BFI FRLF was issued Final Air Quality Operating Permit (OP) No. 4V95067 on February 18, 2004 and Minor Modification No. 4M08044 to OP No. 4V95067 on December 18, 2008. BFI FRLF has a capacity of approximately 10.6 million tons of municipal solid waste (MSW) and has been in operation since 1930. All portions of the landfill are closed and encapsulated within the final cover. Decomposing waste encapsulated within the landfill produces a gas that is primarily composed of methane and carbon dioxide, with other trace gases. An active gas collection and control system (GCCS) collects the landfill gas (LFG) from the capped areas of the landfill via a network of perforated and solid piping. All collected LFG is sent to BFI's LFG Hydrogen Sulfide (H₂S) Pretreatment System, identified as Pollution Control Device (PCD) - 3. In accordance with Approval No. 4P11003, re-issued on January 10, 2012 (Approval No. 4P11003), PCD-3 reduces the level of H₂S in the LFG to 200 ppmv or less. BFI is required to reduce LFG H₂S content to 200 ppmv or less before the LFG is combusted in BFI's enclosed combustors/flares (PCD-1 and PCD-2). MassDEP issued Approval No. SE-12-017 for PCD-3 Standard Operating and Maintenance Procedures on June 27, 2012.

Any collected LFG exiting PCD-3 that is *not* combusted in BFI'S PCD-1 and/or PCD-2 is sent off-site to Gas Recovery Systems, LLC Fall River Facility (GRS FRF), a separate entity, subject to Final Air Quality Operating Permit (OP) No. 4V10026 issued October 7, 2015. GRS FRF owns and operates a LFG Treatment System (EU-2) which filters, de-waters and compresses LFG. As required by 40 CFR 60 Subpart WWW, the LFG is treated (i.e. filtered, de-watered and compressed) by GRS FRF prior to combusting in their combustion gas turbine electric generator set. In accordance with 40 CFR 60 Subpart WWW, BFI (landfill owner and operator) is responsible for ensuring LFG treatment prior to sale or use off-site. BFI is subject to the LFG treatment requirements contained in 40 CFR 60 Subpart WWW, 40 CFR 63 Subpart AAAA and this Operating Permit (OP No. 4V08045). On May 30, 2017, the Permittee supplemented Application No. 4V08045 to include standard operating and maintenance procedures (SOMP) for EU-2. The SOMP was prepared by GRS FRF, the owner and operator of EU-2. The submitted SOMP for EU-2, revision dated September 12, 2014, describes LFG treatment, including monitoring, recordkeeping and reporting employed to ensure sufficient filtering, de-watering and compression is accomplished. Upon promulgation of revisions to 40 CFR Part 60, Subpart WWW, the facility may become subject to more stringent requirements. If so, the Permittee will be required to modify this Operating Permit.

BFI FRLF has four (4) OP Emission Units (EU):

- **EU-1** - the landfill, consisting of: EU-1A (Phase I & Phase II landfill areas), EU-1B (Phase III landfill area), EU-1C (Phase I/II SSVE landfill area), EU-1D (Phase I/II AIII landfill area) and EU-1E (Phase I/II AIIIE landfill area);
- **EU-2** – GRS FRF LFG Treatment System (GRS FRF owned and operated, off-site);
- **EU-3** - paint spray booth; and

- **EU-4** - solvent metal degreaser (aqueous cleaner) that operates in compliance with 310 CMR 7.02(2)(b) Exemptions 24. Plan Approval by Rule. As such the degreaser must conform to the design, operation, maintenance, testing, record keeping and reporting requirements contained in 310 CMR 7.02(2)(d),(e) and (f), 310 CMR 7.03(1), (3), (5), (6), (7) and (8), 310 CMR 7.18(1),(2) and 7.18(8) U Solvent Metal Degreasing (d) Aqueous Cleaning and 7.18(8) (g) and (h).

BFI FRLF is subject to Federal Clean Air Act (CAA) requirements at 40 CFR Part 60, Subpart WWW because the MSW landfill commenced construction, reconstruction or modification on or after May 30, 1991 and 40 CFR Part 63, Subpart AAAA because it has accepted waste since November 8, 1987 and as an area source landfill has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m³) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC.

The BFI Fall River MSW landfill is subject to 310 CMR 7.00: Appendix C: Operating Permit and Compliance Program and is required to obtain an Operating Permit for the following reasons:

1. Pursuant to 310 CMR 7.00 Appendix C(2)(a)1., the facility has federal potential CO emission in amounts which equal or exceed 100 tons per year and federal potential VOC emissions in amounts which equal or exceed 50 tons per year;
2. Pursuant to 310 CMR 7.00 Appendix C(2)(a)2., the facility is subject to 40 CFR Part 63 Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills;
3. Pursuant to 310 CMR 7.00 Appendix C(2)(a)3. and 40 CFR 60.752(b).

The U.S. Environmental Protection Agency (USEPA) published updated landfill gas (LFG) rules in the Federal Register on August 29, 2016. These rules include an Emission Guideline (EG) rule under Title 40 Code of Federal Regulations (40 CFR) Part 60, Subpart Cf and a New Source Performance Standard (NSPS) rule under 40 CFR Part 60, Subpart XXX. NSPS and EG affect newly-defined NSPS facilities (i.e., “new” landfills that are new or modified (expanded in capacity) after July 17, 2014) and existing facilities (i.e. “existing” landfills that have not been expanded after July 17, 2014), respectively.

The determining factor in whether a landfill is subject to the NSPS rule under Subpart XXX versus the EG rule is defined under 40 CFR 60.760(a), which states, “*The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction, or modification after July 17, 2014.*” BFI previously established a permitted design capacity for the most recent expansion, Phase I/II Area III Expansion (EU-1E), before the July 2014 trigger date. The Area III Expansion began receiving waste in 2013, before the July 2014 trigger date. Therefore, the Landfill does not conform to the applicability criteria of 60.760(a) and is therefore an “existing” source subject to Subpart Cf (i.e. not subject to Subpart XXX). The BFI Fall River landfill will be subject to the MassDEP-prepared EG rules, after approval by the EPA or EPA promulgates Federal Plan.

As part of the Operating Permit (OP) renewal process, MassDEP evaluated the relationship between the BFI Fall River Landfill Facility and Gas Recovery Systems, LLC Fall River Facility. The evaluation was performed to determine if the above mentioned parties were under common control for purposes of implementing the Title V Operating Permit program. Based on a review of supplemental information dated June 22, 2018, submitted by SCS Engineers on behalf of BFI Fall River Landfill Facility, including documents and determination letters from the United States Environmental Protection Agency, the MassDEP determined that the BFI Fall River Landfill Facility and Gas Recovery Systems, LLC Fall River Facility do not meet the criteria for common control, and therefore, the two entities should continue to be considered separate sources.

Operating Permit 4V08045 Table 3 restricts facility-wide HAP emissions. Emissions from OP EU's, miscellaneous equipment and operations (such as natural gas fired heating units, insignificant activities etc.), including fugitive landfill gas emissions not collected by the GCCS shall be less than twenty-five (25) tons per year (aggregate total HAPs) and less than ten (10) tons per year (any Single HAP), as restricted; as such, the BFI Fall River Landfill Facility is considered an Area Source for Hazardous Air Pollutants (HAPs).

BFI Fall River Landfill Facility's active Gas Collection and Control System (GCCS) is not subject to 40 CFR Part 64 Compliance Assurance Monitoring, as it is subject to 40 CFR 60 New Source Performance Standards and 40 CFR 63 National Emission Standards for Hazardous Air Pollutants (Sections 111 and 112 of the Clean Air Act) promulgated after 1990.

The Permittee is subject to the requirements of Greenhouse Gas Emissions Reporting as defined by MassDEP in 310 CMR 7.71(3)(a).

Operating Permit Section 4, Tables 3, 4, 5 and 6 and Section 5, Table 8 list the facility emission, operational limits etc. along with monitoring, testing, record-keeping and reporting requirements. Operating Permit Section 4, Table 7 lists regulations that are not applicable to the facility at this time.

2. EMISSION UNIT IDENTIFICATION

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

Table 1			
Emission Unit (EU)	Description of Emission Unit	EU Design Capacity	Pollution Control Device (PCD)
EU-1 Landfill	<u>LFG collected and controlled</u> EU-1A + EU-1B + EU-1C + EU-1D ⁽¹⁾ + EU-1E ⁽¹⁾	10.6 MM tons of MSW (approx)	PCD-1: Enclosed Combustor/Flare PCD-2: Enclosed Combustor/Flare PCD-3: LFG H ₂ S Pretreatment System
	<u>LFG uncollected and uncontrolled</u> EU-1A + EU-1B + EU-1C + EU-1D ⁽¹⁾ + EU-1E ⁽¹⁾		None
EU-2	GRS FRF LFG Treatment System (owned and operated by GRS FRF)	4050 scfm of LFG	None
EU-3	Spray Booth <ul style="list-style-type: none"> DeVilbiss Model TTB-64-3 	37.5 lbs paint per hr	PCD-4: Spray Booth PM Filters
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): <ul style="list-style-type: none"> Safety-Kleen, Model AQ-1 	>1 liter of solvent	None

Table 1 Footnote:

(1) EU-1D and EU-1E have required actions to be completed in accordance with applicable MassDEP Solid Waste and Air Quality Approvals issued and timeframes stipulated therein, as referenced in Operating Permit No. 4V08045, including 310 CMR 7.02(2)(b)7. De minimis Increase in Emissions determinations rendered by MassDEP on May 20, 2010 and June 28, 2012.

Table 1 Key:

MassDEP Massachusetts Department of Environmental Protection
 CMR Code of Massachusetts Regulations
 EU Emission Unit
 BFI Browning-Ferris Industries Incorporated
 GRS FRF Gas Recovery Systems, LLC Fall River Facility
 EU-1 EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
 EU-1A Phase I and Phase II landfill areas
 EU-1B Phase III landfill area

Table 1 Key (Cont'd):

EU-1C	Phase I/II South Side Vertical Expansion or Phase I/II SSVE landfill area
EU-1D	Phase I/II North Side Area II Expansion or Phase I/II AIIE landfill area
EU-1E	Phase I/II Area III Expansion or Phase I/II AIIE landfill area
EU-2	GRS FRF LFG Treatment System: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1
PCD	Pollution Control Device
PCD-1	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 84.12 MMBtu/hr
PCD-2	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 71.0 MMBtu/hr
PCD-3	BFI LFG H ₂ S Pretreatment System
PCD-4	Spray Booth PM Filters
LFG	Landfill Gas
MSW	Municipal Solid Waste
>	Greater than
+	Plus
lbs	Pounds
hr	Hour
approx	Approximately
MMBtu/hr	Million British thermal units per hour
H ₂ S	Hydrogen Sulfide
No.	Number
Max.	Maximum
MM	Million
PM	Particulate matter
Cont'd	Continued
scfm	Standard cubic feet per minute

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 the exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the MassDEP's Southeast 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)

Table 2 Key:

MassDEP
 Southeast Regional Office
 CMR

Massachusetts Department of Environmental Protection
 MassDEP, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347
 Code of Massachusetts Regulations

4. APPLICABLE REQUIREMENTS

A. OPERATIONAL AND/OR PRODUCTION, EMISSION LIMITS AND RESTRICTIONS

The Permittee is subject to the limits/restrictions as contained in Table 3 below:

Table 3					
EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards	Applicable Regulation and/or Approval No.
EU-1	LFG	NMOC	40 CFR Part 60 Subpart WWW §60.752(b)(2) §60.753(a)-(g)	<p>Landfill gas extraction, control, and treatment system – NSPS for Municipal Solid Waste Landfills: MSW landfill owner/operator (BFI) shall:</p> <p>Operate and maintain a collection and control system that captures the gas generated within the landfill. The system shall be designed and operated to: 1) reduce NMOC by 98 weight-percent, or, reduce the outlet NMOC concentration to less than 20 ppm by volume, dry basis as hexane at 3% O₂; or 2) route the collected gas to a treatment system that filters, de-waters and compresses the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of §60.752(b)(2)(iii)(A) or (B)</p>	40 CFR Part 60 Subpart WWW §60.752(b)(2) §60.753(a)-(g)
		HAP	40 CFR Part 63 Subpart AAAAA §63.1955(a)(1) §63.1955(b)	<p>Landfill gas extraction, control, and treatment system – NESHAP for Municipal Solid Waste Landfills: MSW landfill owner/operator (BFI) shall:</p> <p>Comply with the requirements of 40 CFR 60 Subpart WWW in addition to the requirements in §§63.1960 through 63.1985 and with the general provisions of this part specified in Table 1 of Subpart AAAAA of Part 63</p>	40 CFR Part 63 Subpart AAAAA §63.1955(a)(1) §63.1955(b)

Table 3

EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards			Applicable Regulation and/or Approval No.
EU-1	LFG	NMOC ⁽¹⁾	N/A	49.5 TPY ⁽⁴⁾			
		VOC ⁽¹⁾	N/A	49.5 TPY ⁽⁴⁾			
		HAP ⁽²⁾ (Single)	N/A	9.5 TPY ⁽⁴⁾			
		HAP ⁽³⁾ (Total)	N/A	24.5 TPY ⁽⁴⁾			
		HOC ⁽¹⁾	N/A	49.5 TPY ⁽⁴⁾			
EU-1A + EU-1B + EU-1C + EU-1D + EU-1E to PCD-3 then to PCD-1	LFG Collected & Sent to PCD-3 then to PCD-1	NO _x	H ₂ S in LFG routed to PCD-1 after PCD-3 : ≤ 200 ppmv ⁽¹⁴⁾ LFG heat input PCD-1: ≤ 62,585 MMBtu/mo ⁽⁵⁾ LFG heat input PCD-1: ≤ 367,840 MMBtu/yr ⁽⁶⁾ Flare operating temperature: 1400°- 1750°F ⁽⁷⁾	0.100 lb/MMBtu	3.13 TPM ⁽⁹⁾	18.39 TPY ⁽⁴⁾	Approval No. 4P11003 Approval No. SE-12-017
		CO		0.400 lb/MMBtu	12.52 TPM ⁽⁹⁾	73.57 TPY ⁽⁴⁾	
		PM		0.022 lb/MMBtu	0.69 TPM ⁽⁹⁾	4.05 TPY ⁽⁴⁾	
		SO ₂ ⁽¹¹⁾⁽¹⁴⁾		0.065 lb/MMBtu ⁽¹⁴⁾	2.03 TPM ⁽⁹⁾	12.02 TPY ⁽⁴⁾	
		NMOC ⁽¹⁾		PCD-1: Reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppm by volume, dry basis as hexane at 3% O ₂			
				0.056 lb/MMBtu	1.75 TPM ⁽⁹⁾	10.30 TPY ⁽⁴⁾	
		VOC ⁽¹⁾⁽¹²⁾		1.68 TPM ⁽⁹⁾		9.88 TPY ⁽⁴⁾	
		HAP ⁽²⁾⁽³⁾⁽¹²⁾		0.073 TPM ⁽⁹⁾		0.429 TPY ⁽⁴⁾	
		HOC ⁽¹⁾⁽¹²⁾		0.012 TPM ⁽⁹⁾		0.072 TPY ⁽⁴⁾	

Table 3

EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards			Applicable Regulation and/or Approval No.
EU-1A + EU-1B + EU-1C + EU-1D + EU-1E to PCD-3 then to PCD-1	LFG Collected & Sent to PCD-3 then to PCD-1	Visible Emissions	N/A	Stack emissions shall not exceed 0% opacity (no visible emissions) with the exception of up to five (5) minutes during startup. During startup visible emissions shall comply with the provisions of 310 CMR 7.06 Flare shall be operated with no visible emissions exception for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours. 40 CFR 60 Appendix A Method 22 shall be used to determine compliance with the visible emission limit			Approval No. 4P11003 310 CMR 7.06
EU-1A + EU-1B + EU-1C + EU-1D + EU-1E to PCD-3 then to PCD-2 ⁽¹³⁾	LFG Collected & Sent to PCD-3 then to PCD-2	NO _x	H ₂ S in LFG routed to PCD-2 after PCD-3 treatment: ≤ 200 ppmv ⁽¹⁴⁾ LFG heat input PCD-2: ≤ 52,824 MMBtu/mo ⁽⁵⁾ LFG heat input PCD-2: ≤ 621,960 MMBtu/yr ⁽⁶⁾ Flare operating temperature: 1600°-2000°F ⁽⁸⁾	0.100 lb/MMBtu	2.64 TPM ⁽⁹⁾	31.10 TPY ⁽⁴⁾	Approval No. 4P11003 Approval No. SE-12-017
		CO		0.400 lb/MMBtu	10.56 TPM ⁽⁹⁾	124.39 TPY ⁽⁴⁾	
		PM		0.022 lb/MMBtu	0.58 TPM ⁽⁹⁾	6.84 TPY ⁽⁴⁾	
		SO ₂ ⁽¹¹⁾⁽¹⁴⁾		0.065 lb/MMBtu ⁽¹⁴⁾	1.72 TPM ⁽⁹⁾	20.33 TPY ⁽⁴⁾	
		NMOC ⁽¹⁾		PCD-2: Reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppm by volume, dry basis as hexane at 3% O ₂			
				0.056 lb/MMBtu	1.48 TPM ⁽⁹⁾	17.41 TPY ⁽⁴⁾	
		VOC ⁽¹⁾⁽¹²⁾		1.42 TPM ⁽⁹⁾		16.70 TPY ⁽⁴⁾	
		HAP ⁽²⁾⁽³⁾⁽¹²⁾		0.0605 TPM ⁽⁹⁾		0.726 TPY ⁽⁴⁾	
HOC ⁽¹⁾⁽¹²⁾	0.010 TPM ⁽⁹⁾		0.122 TPY ⁽⁴⁾				

Table 3

EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards	Applicable Regulation and/or Approval No.
EU-1A + EU-1B + EU-1C + EU-1D + EU-1E to PCD-3 then to PCD-2	LFG Collected & Sent to PCD-3 then to PCD-2	Visible Emissions	N/A	Stack emissions shall not exceed 0% opacity (no visible emissions) with the exception of up to five (5) minutes during startup. During startup visible emissions shall comply with the provisions of 310 CMR 7.06 Flare shall be operated with no visible emissions exception for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours. 40 CFR 60 Appendix A Method 22 shall be used to determine compliance with the visible emission limit	Approval No. 4P11003 310 CMR 7.06
EU-1A + EU-1B + EU-1C + EU-1D + EU-1E to PCD-3 then to PCD-1 + PCD-2 (total)	LFG Collected & Sent to PCD-3 then to PCD-1 + PCD-2	NO _x CO PM SO ₂ ⁽¹¹⁾⁽¹⁴⁾ NMOC ⁽¹⁾ VOC ⁽¹⁾ HAP ⁽²⁾⁽³⁾ HOC ⁽¹⁾	H ₂ S in LFG routed to PCD-1 and/or PCD-2 after PCD-3: ≤ 200 ppmv ⁽¹⁴⁾ LFG heat input PCD-1 + PCD-2: ≤ 115,409 MMBtu/mo ⁽⁵⁾ LFG heat input PCD-1 + PCD-2: ≤ 989,800 MMBtu/yr ⁽⁶⁾ PCD-1 and PCD-2 shall be operated at all times when LFG is routed to the PCD's	49.5 TPY ⁽⁴⁾ 198.0 TPY ⁽⁴⁾ 10.9 TPY ⁽⁴⁾ 32.35 TPY ⁽⁴⁾ 27.7 TPY ⁽⁴⁾ 26.6 TPY ⁽⁴⁾ 1.16 TPY ⁽⁴⁾ 0.20 TPY ⁽⁴⁾	Approval No. 4P11003 Approval No. SE-12-017

Table 3					
EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards	Applicable Regulation and/or Approval No.
EU-1A	N/A	N/A	Phase I & II are closed and capped. Waste shall not be placed in Phase I & II	LFG: generation rates, collection and control and emission rates (See OP Section 5. <u>Special Terms and Conditions</u> , Table 8)	Approval No. 4P11003
EU-1B	N/A	N/A	Phase III is closed and capped. Waste shall not be placed in Phase III	LFG: generation rates, collection and control and emission rates (See OP Section 5. <u>Special Terms and Conditions</u> , Table 8)	Approval No. 4P11003
EU-1C	N/A	N/A	Phase I/II SSVE is closed and capped. Waste shall not be placed in Phase I/II SSVE ⁽¹⁵⁾	LFG generation rates, collection and control and emission rates: (See OP Section 5. <u>Special Terms and Conditions</u> , Table 8)	Approval No. 4P11003
EU-2	LFG exiting PCD-3 sent to EU-2	NMOC and HAP	Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of §60.752(b)(2)(iii)(A) or (B). Develop a written Start-up, Shutdown, Malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3).		40 CFR Part 60 Subpart WWW §60.752(b)(2)(iii)(C) and 40 CFR Part 63 Subpart AAAA §63.1955(a)(1), §63.1955(b) and 63.1955(c) Approval No. 4P11003

Table 3							
EU	Fuel/Raw Material	Pollutant	Operational and/or Production Limits	Emission Limits/Standards			Applicable Regulation and/or Approval No.
EU-3	N/A	VOC	N/A	< 1.00 TPM ⁽⁹⁾	≤ 4.9 TPY ⁽⁴⁾	≤ 6.1 lbs of VOC per gallon of solids as applied	Approval No. 4P94191
		PM	N/A	≤ 0.22 TPY ⁽⁴⁾		Opacity, exclusive of uncombined water vapor: ≤ 10% at all times	
EU-4	Non Halogenated Organic Solvent	VOC	< 100 Gal/month solvent consumption per degreaser	Comply with 310 CMR 7.03 and 7.18(8)			310 CMR 7.03(7) and (8) and 310 CMR 7.18(1) and (8), 7.02(2)(d), (e) and (f)
			Water soluble organic (5% or less by wgt, excluding soaps) cleaning fluid specifications, emissions, operating, testing and recordkeeping requirements identified in 310 CMR 7.18(8)(d),(g) and (h)				
Facility-wide	All	HAP ⁽²⁾ (Single)	N/A	< 10 TPY ⁽⁴⁾⁽¹⁶⁾			Operating Permit No. 4V08045
		HAPs ⁽³⁾ (Total)		< 25 TPY ⁽⁴⁾⁽¹⁶⁾			
		Greenhouse Gas (GHG) Emissions ⁽¹⁰⁾	N/A	N/A			310 CMR 7.71 (State-only requirement)

Table 3 Notes:

- (1) VOC and HOC are as defined in 310 CMR 7.00 and are a subset of NMOC per Approval No. 4P11003
- (2) HAP (single) = any one individual HAP, as listed in the 1990 CAA Amendments, Section 112(b)
- (3) HAPs (total) = aggregate of all HAPs, as listed in the 1990 CAA Amendments, Section 112(b)
- (4) TPY (i.e. tons per year) = tons per consecutive 12-month period. To calculate the amount of a consecutive 12 month rolling period take the current calendar month amount and add it to the previous 11 calendar months total amount
- (5) mo = calendar month
- (6) Year or yr = consecutive 12-month period
- (7) PCD-1: The enclosed flare operating temperature range shall be maintained at 1400-1750°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following:
 - Bottom thermocouple height 15.5 feet at LFG rate less than 34 MMBtu/hr
 - Middle thermocouple height 25.5 feet at LFG rate equal to or above 34 MMBtu/hr
 - Top thermocouple height 35.5 feet at LFG rate above 78 MMBtu/hr
- (8) PCD-2: The enclosed flare operating temperature range shall be maintained at 1600-2000°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following:

Table 3 Notes (Cont'd):

- Bottom thermocouple height 15.0 feet at LFG rate less than 34 MMBtu/hr
 - Middle thermocouple height 25.0 feet at LFG rate equal to or above 34 MMBtu/hr
 - Top thermocouple height 35.0 feet at LFG rate above 66 MMBtu/hr
- (9) TPM = tons per month
- (10) Greenhouse gas (GHG) 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: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs)
- (11) Reflects LFG at 200 ppmv H₂S
- (12) Emission factors from AP-42 Table 2.4-1, as specified in Approval No. 4P11003 issued 1/10/12
- (13) Enclosed flare PCD-2 TPY emissions reflect 71.0 MMBtu/hr at 8760 hours/year
- (14) H₂S in LFG routed to PCD-1 and/or PCD-2 after PCD-3: ≤ 200 ppmv other than during short periods of H₂S Pretreatment System downtime for maintenance, not to exceed eight (8) hours, or during an “Emergency” as defined in 310 CMR 7.00 Appendix C(1). PCD-3 shall operate in accordance with Approval No. SE-12-017 and Approval No. 4P11003, which includes, but is not limited to criteria/parameters specified in Approval No. 4P11003 Attachment No. 1 “Equipment and Design Schedule” (also listed in OP No. 4V08045 Section 5.0 Table 8.A.)
- (15) The maximum permitted limit of 400,000 tons of MSW for Phase I/II SSVE allowed pursuant to Approval No. 4P11003 has been reached, as notified by SCS Engineers (on behalf of BFI FRLF) in June 1, 2012 revisions submitted for Operating Permit No. 4V08045; waste shall no longer be placed in Phase I/II SSVE
- (16) HAP facility-wide emissions from Operating Permit No. 4V08045 emission units EU-1 thru EU-4, including miscellaneous and/or insignificant operations, 310 CMR 7.02 plan approval exempt equipment and fugitive LFG emissions

Table 3 Key:

OP	Operating Permit
Permit	Operating Permit
EU	Emission Unit
LFG	Landfill Gas
GRS FRF	Gas Recovery Systems, LLC Fall River Facility
BFI	Browning-Ferris Industries Incorporated
BFI FRLF	Browning-Ferris Industries Incorporated Fall River Landfill Facility
Phase I	Phase I landfill area
Phase II	Phase II landfill area
Phase III	Phase III landfill area
Phase I/II SSVE	Phase I/II South Side Vertical Expansion
Phase I/II AIIE	Phase I/II North Side Area II Expansion
EU-1	EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
EU-1A	Phase I and Phase II landfill areas
EU-1B	Phase III landfill area
EU-1C	Phase I/II South Side Vertical Expansion or Phase I/II SSVE landfill area
EU-1D	Phase I/II North Side Area II Expansion or Phase I/II AIIE landfill area
EU-1E	Phase I/II Area III Expansion or Phase I/II AIIE landfill area
EU-2	GRS FRF LFG Treatment System: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1
PCD	Pollution Control Device
PCD-1	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 84.12 MMBtu/hr
PCD-2	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 71.0 MMBtu/hr
PCD-3	BFI LFG H ₂ S Pretreatment System
PCD-4	BFI Spray Booth PM Filters
GCCS	Gas Collection and Control System (active)
MassDEP	Massachusetts Department of Environmental Protection
CMR	Code of Massachusetts Regulations

Table 3 Key (Cont'd):

U.S. EPA	United States Environmental Protection Agency
N/A	Not Applicable
CFR	Code of Federal Regulations
NSPS	New Source Performance Standards, 40 CFR Part 60
NESHAP	National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63
AP-42	U.S. EPA Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition
§	Section
§§	Sections
MSW	Municipal Solid Waste
NMOC	Non-methane organic compounds
NO _x	Nitrogen oxides, as defined in 310 CMR 7.00
VOC	Volatile organic compounds, as defined in 310 CMR 7.00
HOC	Halogenated organic compound, as defined in 310 CMR 7.00
HAP	Hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
CO	Carbon monoxide, as defined in 310 CMR 7.00
PM	Particulate matter, as defined in 310 CMR 7.00
SO ₂	Sulfur dioxide, as defined in 310 CMR 7.00
H ₂ S	Hydrogen Sulfide
GHG	Greenhouse Gas
TPM	Tons per Month
TPY	Tons per consecutive 12-month period
mo	Calendar month
Year or yr	Consecutive 12-month period
O ₂	Oxygen
lbs	Pounds
Wgt	Weight
Gal	Gallon
MM	Million
Btu	British thermal units
MMBtu	Million British thermal units
lb/MMBtu	Pounds per million Btu
Gal/Month	Gallons per month
mm	Millimeters
#	Number
Max.	Maximum
/	Per
<	Less than
>	Greater than
≤	Less than or equal to
≥	Greater than or equal to
+	Plus
-	Minus
=	Equals
±	Plus or minus
°F	Degree Fahrenheit
%	Percent
ppmv	Parts per million volume
SSM	Start-up, Shutdown, Malfunction
@	At
&	And
Cont'd	Continued
No.	Number

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), as well as applicable requirements contained in Table 3:

Table 4	
EU	Monitoring and Testing Requirements
EU-1	<p>1. In accordance with 40 CFR 60 Subpart WWW and 40 CFR 63 Subpart AAAA, the Permittee shall comply with all applicable monitoring and testing requirements of §60.754, 60.755 and 60.756 to include but not limited to:</p> <p>a. In accordance with §60.756(a), install a sampling port and a thermometer, or other temperature measuring device, or access port for temperature measurements at each wellhead, and;</p> <p>(i) Measure the gauge pressure in the gas collection header on a monthly basis as provided in §60.755(a)(3).</p> <p>(ii) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5).</p> <p>(iii) Monitor temperature of the landfill on a monthly basis as provided in §60.755(a)(5).</p> <p>b. In accordance with §60.756(b), calibrate, maintain, and operate according to the manufacturer’s specifications, the following equipment:</p> <p>(i) For the enclosed combustors (PCD-1, PCD-2), a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater.</p> <p>(ii) A device that records flow to, or bypass of, the control device at least every 15 minutes as required by §60.756(b)(2)(i).</p> <p>c. In accordance with §60.756(f), monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or site specific established spacing) for each collection area as provided for at §§60.755(c) and 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.</p>
	<p>2. In accordance with Approval No. 4P11003 Proviso D.2. and Operating Permit No. 4V08045, landfill gas (LFG) flow recorders shall be maintained so that an on-site record of the volume of LFG fired in each enclosed flare (PCD-1, PCD-2) will be available by date and time period. Records will be made at least every 15 minutes and the records shall be maintained on-site.</p>
	<p>3. In accordance with Approval No. 4P11003 Proviso D.1. and Operating Permit No. 4V08045, PCD-1 and PCD-2 temperature shall be monitored by thermocouple continuously and recorded at least every 15 minutes to document enclosed flare operating temperature and must provide detail sufficient to document date and clock time. Records of this information shall be maintained on-site.</p>
	<p>4. In accordance with Approval No. 4P11003 Proviso D.3. and Operating Permit No. 4V08045, PCD-3 (H₂S Pretreatment System) Oxidation/Reduction Potential (ORP) and pH shall be maintained, monitored continuously and recorded at least every 15 minutes to document that the Hydrogen Sulfide Pretreatment System ORP (redox potential) and pH are within the approved ranges specified in OP No. 4V08045 Table 8 – Special Terms and Condition A. <u>Hydrogen Sulfide Pretreatment System - PCD-3</u>. Records of this information shall be maintained on-site.</p>
	<p>5. In accordance with Approval No. 4P11003 Proviso D.5. and Operating Permit No. 4V08045, perform monitoring such that records of the volume of LFG (scf) fired in each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined) for each hour, month and for each consecutive twelve month period, are available and maintained on-site.</p>

Table 4

EU	Monitoring and Testing Requirements
	<p>6. In accordance with Approval No. 4P11003 Proviso D.6. and Operating Permit No. 4V08045, perform monitoring such that records of the heat input of LFG (Btu/hr) fired in each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined) for each hour, month and for each consecutive twelve month period, are available and maintained on-site. These heat input records may be generated by gas chromatograph and/or field measurements.</p>
	<p>7. In accordance with Approval No. 4P11003 Proviso D.7. and Operating Permit No. 4V08045, perform monitoring such that records of NO_x, CO, NMOC, PM, SO₂, HAPs, VOCs and HOCs emitted (in tons) per month and consecutive twelve month period for each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined) are available and maintained on-site.</p>
	<p>8. In accordance with Approval No. 4P11003 Proviso E.1. and Operating Permit No. 4V08045, the facility shall be constructed to accommodate the emission testing requirements contained in 40 CFR 60, Appendix A.</p>
	<p>9. In accordance with Approval No. 4P11003 Proviso E.2. and Operating Permit No. 4V08045, compliance emission testing, shall be conducted in accordance with the test methods and procedures contained in 40 CFR 60, Appendix A.</p>
	<p>10. In accordance with Approval No. 4P11003 Proviso C.3. and Operating Permit No. 4V08045, the determination of compliance with the visible emission limit for PCD-1 and PCD-2 shall be done using 40 CFR 60 Appendix A Method 22.</p>
EU-1	<p>11. In accordance with Operating Permit No. 4V08045, perform monthly visible emissions observations of each exhaust (PCD-1 and PCD-2) in accordance with 40 CFR 60 Appendix A Method 22, while PCD-1 and PCD-2 are operating. If PCD-1 or PCD-2 does NOT combust LFG during the month, then visible emission observation is NOT required for the non-operational flare for that month.</p>
	<p>12. In accordance with Approval No. 4P11003 Proviso A.7. and Operating Permit No. 4V08045 for PCD-1 (Enclosed Combustor No. 1 - Unit No. 1): The enclosed flare operating temperature range shall be maintained at 1400-1750°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following:</p> <ul style="list-style-type: none"> • Bottom thermocouple height 15.5 feet at LFG rate less than 34 MMBtu/hr. • Middle thermocouple height 25.5 feet at LFG rate equal to or above 34 MMBtu/hr. • Top thermocouple height 35.5 feet at LFG rate above 78 MMBtu/hr.
	<p>13. In accordance with Approval No. 4P11003 Proviso A.10. and Operating Permit No. 4V08045 for PCD-2 (Enclosed Combustor No. 2 - Unit No. 2): The enclosed flare operating temperature range shall be maintained at 1600-2000°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following:</p> <ul style="list-style-type: none"> • Bottom thermocouple height 15.0 feet at LFG rate less than 34 MMBtu/hr. • Middle thermocouple height 25.0 feet at LFG rate equal to or above 34 MMBtu/hr. • Top thermocouple height 35.0 feet at LFG rate above 66 MMBtu/hr.

Table 4

EU	Monitoring and Testing Requirements
EU-1	14. In accordance with Approval No. 4P11003 Proviso D.8. and Operating Permit No. 4V08045, perform monitoring via a maintained LFG flow recorder so that an on-site record of the volume of LFG collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) is available by date and time period (daily LFG totals will be recorded).
	15. In accordance with Approval No. 4P11003 Proviso D.9. and Operating Permit No. 4V08045, perform monitoring via a maintained LFG flow recorder so that an on-site record of the volume of LFG standard cubic feet (scf) collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) is available for each month and for each consecutive twelve month period.
	16. In accordance with Approval No. 4P11003 Proviso D.10. and Operating Permit No. 4V08045, perform monitoring such that on-site records are available of NMOC, HAPs (total), HAPs (max single), VOCs and HOCs emitted (in tons) per month and consecutive twelve month period from uncollected and/or uncontrolled LFG from EU-1 Phases I, II, III and Phase I/II SSVE.
	17. In accordance with Approval No. 4P11003 Proviso D.11. and Operating Permit No. 4V08045, the H ₂ S concentrations (ppm _v) of the LFG collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) prior to H ₂ S pretreatment system (PCD-3) and after H ₂ S pretreatment system (PCD-3) shall be monitored at least once per week. If monitoring with indicator tubes, three (3) indicator tubes shall be used during each monitoring session. A record shall be maintained of H ₂ S (ppm _v) levels and the date and time monitoring was conducted.
	18. In accordance with Approval No. 4P11003 Proviso D.12. and Operating Permit No. 4V08045, within eleven (11) months after initial waste is placed in an area/cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE), the Permittee shall take monthly measurements from the gas sampling ports of each leachate cleanout collector of the following parameters: a. Wellhead static pressure b. Oxygen percentage c. Methane percentage d. Temperature
	19. In accordance with Approval No. 4P11003 Provisos D.13. and G.10. and Operating Permit No. 4V08045, within 90 days of each vertical well installation of EU-1B (Phase III), the Permittee shall take monthly measurements from the gas sampling ports of each vertical well of the following parameters: a. Wellhead static pressure b. Oxygen percentage c. Methane percentage d. Temperature
20. In accordance with Approval No. 4P11003 Proviso D.14. and Operating Permit No. 4V08045, monitoring for LFG parameters for EU-1 Phases I, II, III and Phase I/II SSVE shall be conducted using a Landtec GEM-500 or equivalent. Monitoring data shall be recorded along with date, time and weather conditions at the time of monitoring.	

Table 4

EU	Monitoring and Testing Requirements
EU-1	<p>21. In accordance with Approval No. 4P11003 Proviso D.15. and Operating Permit No. 4V08045:</p> <p>For EU-1B (Phase III) <u>Landfill Gas Collection Schedule</u>: monitor, prepare and maintain sufficient records to demonstrate compliance with Approval No. 4P11003 Provisos G.8. thru G.16. (Operating Permit No. 4V08045 Table 8. Provisos C.1. thru C.9.) and;</p> <p>For EU-1C (Phase I/II SSVE) <u>Landfill Gas Collection Schedule</u>: monitor, prepare and maintain sufficient records to demonstrate compliance with Approval No. 4P11003 Provisos G.4. and G.17. (Operating Permit No. 4V08045 Table 8. Proviso D.1.).</p> <p>For EU-1B and EU-1C, include the:</p> <ol style="list-style-type: none"> a. Date initial waste was placed in each area/cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE). b. Dates and all monthly parameters measurements. c. Dates of vertical well installation. d. Dates leachate cleanout pipes & vertical wells were connected to the gas conveyance system. e. Dates when a leachate cleanout pipe or vertical well is activated based on meeting the criteria established in Approval No. 4P11003 Provisos G.9. and G.11. and Provisos G.4. and G.17. f. Date each cell reaches final grade or has stopped accepting waste. <p>22. In accordance with Approval No. 4P11003 Proviso D.17. and Operating Permit No. 4V08045, quarterly surface monitoring will be initiated in each area of each cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE) once the cell has intermediate cover placed or within 24 months of receiving waste, whichever comes first.</p> <ol style="list-style-type: none"> a. When conducting the quarterly surface monitoring, the following shall be monitored in accordance with NSPS Subpart WWW, 40 CFR 60.753(d): <ol style="list-style-type: none"> (i) Areas which the monitoring technician can visually observe distressed vegetation; (ii) Areas where there are visible cracks in the landfill cover; (iii) Areas exhibiting seeps in the landfill cover. b. Monitoring shall be performed during typical meteorological conditions. c. Monitoring procedures shall be in accordance with NSPS Subpart WWW 40 CFR 60.755(c). d. At no time shall an area that is actively receiving waste be monitored due to safety concerns. Any area excluded due to a safety concern will be documented and kept on file at the site. e. Once an area is under final cover and has demonstrated three (3) consecutive clean quarters of surface emission monitoring (SEM), the area may switch to annual monitoring. If any area under annual monitoring exceeds 500 ppmv during SEM, that area will return to quarterly monitoring until three (3) consecutive quarters demonstrate less than 500 ppmv. Records for quarterly SEM shall be maintained onsite. f. Maintain records of all surface monitoring events, methane concentrations that exceed 500 ppmv and the corrective action taken. g. Monitor on the border between capped and uncapped areas of the landfill. h. Monitor at the base, and any other openings to the atmosphere, of the gas collection wells and other structural components protruding from the landfill surface to determine if the landfill settling has created openings between the structures and the waste though which the LFG could escape and to ensure the continuing effectiveness of the LFG collection well seals. i. Monitoring shall only be performed on days that are free of measurable precipitation in Fall River, Massachusetts and on which the average wind speed during the monitoring event does not exceed 12 miles per hour, based on average hourly data measured at the closest meteorological monitoring station with public information.

Table 4

EU	Monitoring and Testing Requirements
EU-1	23. In accordance with Approval No. 4P11003 Proviso D.18. and Operating Permit No. 4V08045: EU-1B (Phase III) LFG flow shall be measured once per month using a Pitot tube or equivalent. The flow shall be monitored in such a way as to determine only the flow from EU-1B (Phase III).
	24. In accordance with Approval No. 4P11003 Proviso D.21. and Operating Permit No. 4V08045 all operating and monitoring records, including emission test reports and H ₂ S levels in LFG burned shall be maintained for a period of five (5) years as a minimum and these records shall be maintained on-site.
	25. In accordance with Approval No. 4P11003 Proviso D.19. and Operating Permit No. 4V08045, a copy of the Standard Operating and Maintenance Procedures for all subject equipment shall be maintained on-site for all equipment referenced herein.
	26. In accordance with Operating Permit No. 4V08045, monitor as necessary and maintain on-site an operation log, or other record keeping system at a level of detail sufficient to document compliance with Operating Permit No. 4V08045, which includes, but is not limited to applicable limits/restrictions (such as emission, operational, production), monitoring, testing, reporting, recordkeeping requirements and provisions/conditions therein.
EU-2	27. In accordance with 40 CFR 60.756(d), 40 CFR 63.1960, 310 CMR 7.00: Appendix C(9) and Operating Permit No. 4V08045, monitor the GRS FRF LFG Treatment System (EU-2) parameters (e.g. LFG temperature, pressure and pressure differential) as indicated in the “Preventative Maintenance Plan for Landfill Gas Treatment System” dated September 12, 2014 (submitted as part of Operating Permit Renewal Application No. 4V08045), or MassDEP approved revisions, to ensure proper operation of the treatment system and treatment of the LFG.
	28. In accordance with 40 CFR 60.756(d), 40 CFR 63.1960, 310 CMR 7.00 Appendix C(9) and Operating Permit No. 4V08045, monitor the LFG flow to or bypass of the treatment system at least once every 15 minutes.
EU-3	29. In accordance with Approval No. 4P94191 <u>Special Conditions</u> No. 1. and No. 2. and Operating Permit No. 4V08045, monitor as necessary and maintain on-site an operation log or other record keeping system, at a level of detail sufficient to document compliance with Approval No. 4P94191 and Operating Permit No. 4V08045, which includes, but is not limited to applicable limits/restrictions (such as emission, operational, production), monitoring, testing, reporting, recordkeeping requirements and provisions/conditions therein.
EU-4	30. In accordance with 310 CMR 7.18(8)(h), upon request of the MassDEP, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with a method approved by the MassDEP and U.S. EPA.
Facility-Wide	31. In accordance with 310 CMR 7.71(1) and Appendix C(9), the Permittee shall 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 requirement)
	32. In accordance with 310 CMR 7.00 Appendix C (9)(b), the Permittee shall; <ul style="list-style-type: none"> a. Comply with all emissions monitoring and analysis procedures or test methods required under the applicable requirements, including those promulgated pursuant to 42 U.S.C. 7401, §§ 504(a) and 504(b) or 114(a)(3); b. If the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring (which may consist of record keeping designed to serve as monitoring), then the Permittee shall perform periodic monitoring sufficient to yield reliable data from the relevant time period that is representative of the source’s compliance with the permit. Such monitoring requirements shall assure the use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Record keeping provisions may be sufficient to meet the requirements; and c. The Permittee shall comply with requirements concerning the use, maintenance and installation of monitoring equipment or methods as the MassDEP deems appropriate.

Table 4	
EU	Monitoring and Testing Requirements
Facility-Wide	33. In accordance with Approval No. 4P11003, Approval No. 4P94191, Operating Permit No. 4V08045 and 310 CMR 7.13, all compliance emission testing shall be conducted in accordance with MassDEP's <u>Guidelines for Source Emission Testing</u> and with 310 CMR 7.13 and test methods and procedures contained in 40 CFR Part 60 Appendix A.
	34. 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.

Table 4 Key:

OP	Operating Permit
Permit	Operating Permit
EU	Emission Unit
LFG	Landfill Gas
GRS FRF	Gas Recovery Systems, LLC Fall River Facility
BFI	Browning-Ferris Industries Incorporated
Phase I	Phase I landfill area
Phase II	Phase II landfill area
Phase III	Phase III landfill area
Phase I/II SSVE	Phase I/II South Side Vertical Expansion
Phase I/II AIIE	Phase I/II North Side Area II Expansion
Phase I/II AIIE	Phase I/II Area III Expansion
EU-1	EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
EU-1A	Phase I and Phase II landfill areas
EU-1B	Phase III landfill area
EU-1C	Phase I/II South Side Vertical Expansion or Phase I/II SSVE landfill area
EU-1D	Phase I/II North Side Area II Expansion or Phase I/II AIIE landfill area
EU-1E	Phase I/II Area III Expansion or Phase I/II AIIE landfill area
EU-2	GRS FRF LFG Treatment System: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1
PCD	Pollution Control Device
PCD-1	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 84.12 MMBtu/hr
PCD-2	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 71.0 MMBtu/hr
PCD-3	BFI LFG H ₂ S Pretreatment System
PCD-4	BFI Spray Booth PM Filters
M.G.L.	Massachusetts General Law

Table 4 Key (Cont'd):

MassDEP	Massachusetts Department of Environmental Protection
CMR	Code of Massachusetts Regulations
c.	Chapter
U.S.C.	United States Code
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
NSPS	New Source Performance Standards, 40 CFR Part 60
NESHAP	National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63
§	Section
§§	Sections
NMOC	Non-methane organic compounds
NO _x	Nitrogen oxides, as defined in 310 CMR 7.00
VOC	Volatile organic compounds, as defined in 310 CMR 7.00
HOC	Halogenated organic compound, as defined in 310 CMR 7.00
HAP	Hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
CO	Carbon monoxide, as defined in 310 CMR 7.00
PM	Particulate matter, as defined in 310 CMR 7.00
SO ₂	Sulfur dioxide, as defined in 310 CMR 7.00
H ₂ S	Hydrogen Sulfide
SF ₆	Sulfur Hexafluoride
SEM	Surface emissions monitoring
ORP	Oxidation/Reduction Potential
mo	Calendar month
±	Plus or minus
°F	Degree Fahrenheit
%	Percent
ppmv	Parts per million volume
ppm	Parts per million
Btu/hr	British thermal units per hour
MMBtu/hr	Million British thermal units per hour
scf	Standard cubic foot
No.	Number
e.g.	For example
Cont'd	Continued
pH	The logarithm of the reciprocal of hydrogen ion concentration in gram atoms per liter, used to express the acidity or alkalinity of a solution on a scale of 0 to 14

Table 5

EU	Record Keeping Requirements
EU-1	<p>1. In accordance with Operating Permit No. 4V08045, 310 CMR 7.00: Appendix C(10), 40 CFR 60 Subpart WWW and 40 CFR 63 Subpart AAAAA, the Permittee shall comply with all applicable record keeping requirements of §60.758 and §63.1980, to include but not limited to:</p> <ul style="list-style-type: none"> a. Keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. b. Keep up-to-date, readily accessible records for the life of the control equipment of specified data as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of control equipment vendor specifications shall be maintained until removal. c. Keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. d. Keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector. e. As required by §63.1980(b), keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63. f. For the enclosed combustors (PCD-1, PCD-2), record the average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test. In addition, record the percent reduction of NMOC or NMOC outlet concentration achieved by the control device as specified in §60.752(b)(2)(iii)(B). <ul style="list-style-type: none"> (i) keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63 including items such as SSM plans and SSM plan reports.
	<p>2. In accordance with Approval No. 4P11003 Proviso D.2. and Operating Permit No. 4V08045, landfill gas (LFG) flow recorders shall be maintained so that an on-site record of the volume of LFG fired in each enclosed flare (PCD-1, PCD-2) will be available by date and time period. Records will be made at least every 15 minutes and the records shall be maintained on-site.</p>
	<p>3. In accordance with Approval No. 4P11003 Proviso D.1. and Operating Permit No. 4V08045, PCD-1 and PCD-2 temperature shall be monitored by thermocouple continuously and recorded at least every 15 minutes to document enclosed flare operating temperature and must provide detail sufficient to document date and clock time. Records of this information shall be maintained on-site.</p>
	<p>4. In accordance with Approval No. 4P11003 Proviso D.3. and Operating Permit No. 4V08045, PCD-3 (H₂S Pretreatment System) Oxidation/Reduction Potential (ORP) and pH shall be monitored continuously and recorded at least every 15 minutes to document that the Hydrogen Sulfide Pretreatment System ORP (redox potential) and pH are maintained within the approved ranges. Records of this information shall be maintained on-site.</p>
	<p>5. In accordance with Approval No. 4P11003 Proviso D.5. and Operating Permit No. 4V08045, maintain records of the volume of LFG (scf) fired in each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined) for each hour, month and for each consecutive twelve month period, available and maintained on-site.</p>
	<p>6. In accordance with Approval No. 4P11003 Proviso D.6. and Operating Permit No. 4V08045, maintain records of the heat input of LFG (Btu/hr) fired in each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined) for each hour, month and for each consecutive twelve month period, available and maintained on-site. These heat input records may be generated by gas chromatograph and/or field measurements.</p>

Table 5

EU	Record Keeping Requirements
EU-1	7. In accordance with Approval No. 4P11003 Proviso D.7. and Operating Permit No. 4V08045, maintain records of NO _x , CO, NMOC, PM, SO ₂ , HAPs, VOCs and HOCs emitted (in tons) per month and consecutive twelve month period for each enclosed combustor individually (PCD-1, PCD-2) and in total (PCD-1 and PCD-2 combined), available and maintained on-site.
	8. In accordance with Approval No. 4P11003 Proviso D.19., Approval No. SE-12-017 and Operating Permit No. 4V08045 a copy of the Standard Operating and Maintenance Procedures for all subject equipment (including H ₂ S Pretreatment System, PCD-3) shall be maintained on-site for all equipment referenced herein.
	9. In accordance with Department Regulations and Operating Permit No. 4V08045, keep copies of the Source Registration/Emission Statements Forms submitted to MassDEP as required by 310 CMR 7.12.
	10. Maintain records of any determination of compliance with the visible emission limit(s) for PCD-1 and PCD-2 pursuant to Approval No. 4P11003 Proviso C.3. and Operating Permit No. 4V08045. Records shall include but not be limited to: monthly visible emissions observation results and the date and time period of those observations and a description of facility operations at the time of the observations.
	11. In accordance with Approval No. 4P11003 Proviso A.7. and Operating Permit No. 4V08045 for PCD-1 (Enclosed Combustor No. 1 - Unit No. 1): The enclosed flare operating temperature range shall be maintained at 1400-1750°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following: <ul style="list-style-type: none"> • Bottom thermocouple height 15.5 feet at LFG rate less than 34 MMBtu/hr. • Middle thermocouple height 25.5 feet at LFG rate equal to or above 34 MMBtu/hr. • Top thermocouple height 35.5 feet at LFG rate above 78 MMBtu/hr.
	12. In accordance with Approval No. 4P11003 Proviso A.10. and Operating Permit No. 4V08045 for PCD-2 (Enclosed Combustor No. 2 - Unit No. 2): The enclosed flare operating temperature range shall be maintained at 1600-2000°F based on a 3-hour average. The minimum operating temperature shall be monitored and documented by one of three thermocouples. The specific thermocouple used to document the above temperature range shall be based upon the below heat input values within 10% of the following: <ul style="list-style-type: none"> • Bottom thermocouple height 15.0 feet at LFG rate less than 34 MMBtu/hr. • Middle thermocouple height 25.0 feet at LFG rate equal to or above 34 MMBtu/hr. • Top thermocouple height 35.0 feet at LFG rate above 66 MMBtu/hr.
	13. In accordance with Approval No. 4P11003 Proviso D.8. and Operating Permit No. 4V08045, based on monitoring performed via the LFG flow recorder, maintain an on-site record of the volume of LFG collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) available by date and time period (daily LFG totals will be recorded).
	14. In accordance with Approval No. 4P11003 Proviso D.9. and Operating Permit No. 4V08045, based on monitoring performed via the LFG flow recorder, maintain an on-site record of the volume of LFG standard cubic feet (scf) collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) for each month and for each consecutive twelve month period.
	15. In accordance with Approval No. 4P11003 Proviso D.10. and Operating Permit No. 4V08045, based on monitoring performed maintain on-site records of NMOC, HAPs (total), HAPs (max single), VOCs and HOCs emitted (in tons) per month and consecutive twelve month period from uncollected and/or uncontrolled LFG from EU-1 Phases I, II, III and Phase I/II SSVE.

Table 5

EU	Record Keeping Requirements
	<p>16. In accordance with Approval No. 4P11003 Proviso D.11. and Operating Permit No. 4V08045, the H₂S concentrations (ppm_v) of the LFG collected from EU-1 Phases I, II, III and Phase I/II SSVE (combined) prior to H₂S pretreatment system (PCD-3) and after H₂S pretreatment system (PCD-3) shall be monitored at least once per week. If monitoring with indicator tubes, three (3) indicator tubes shall be used during each monitoring session. A record shall be maintained of H₂S (ppm_v) levels and the date and time monitoring was conducted.</p>
	<p>17. Maintain records as necessary to verify compliance with Approval No. 4P11003 Proviso D.12. and Operating Permit No. 4V08045 which requires: within eleven (11) months after initial waste is placed in an area/cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE), the Permittee shall take monthly measurements from the gas sampling ports of each leachate cleanout collector of the following parameters:</p> <ol style="list-style-type: none"> Wellhead static pressure Oxygen percentage Methane percentage Temperature
	<p>18. Maintain records as necessary to verify compliance with Approval No. 4P11003 Provisos D.13. and G.10. and Operating Permit No. 4V08045, which requires: within 90 days of each vertical well installation of EU-1B (Phase III), the Permittee shall take monthly measurements from the gas sampling ports of each vertical well of the following parameters:</p> <ol style="list-style-type: none"> Wellhead static pressure Oxygen percentage Methane percentage Temperature
EU-1	<p>19. In accordance with Approval No. 4P11003 Proviso D.14. and Operating Permit No. 4V08045, monitoring for LFG parameters shall be conducted using a Landtec GEM-500 or equivalent. Monitoring data shall be recorded along with date, time and weather conditions at the time of monitoring.</p>
	<p>20. In accordance with Approval No. 4P11003 Proviso D. 21. and Operating Permit No. 4V08045 all operating and monitoring records, including emission test reports and H₂S levels in LFG burned shall be maintained for a period of five (5) years as a minimum and these records shall be maintained on-site.</p>
	<p>21. Maintain records as necessary to verify compliance with Approval No. 4P11003 Proviso D.17. and Operating Permit No. 4V08045, which requires: quarterly surface monitoring will be initiated in each area of each cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE) once the cell has intermediate cover placed or within 24 months of receiving waste, whichever comes first.</p> <ol style="list-style-type: none"> When conducting the quarterly surface monitoring, the following shall be monitored in accordance with NSPS Subpart WWW, 40 CFR 60.753(d): <ol style="list-style-type: none"> Areas which the monitoring technician can visually observe distressed vegetation; Areas where there are visible cracks in the landfill cover; Areas exhibiting seeps in the landfill cover. Monitoring shall be performed during typical meteorological conditions. Monitoring procedures shall be in accordance with NSPS Subpart WWW 40 CFR 60.755(c). At no time shall an area that is actively receiving waste be monitored due to safety concerns. Any area excluded due to a safety concern will be documented and kept on file at the site. Once an area is under final cover and has demonstrated three (3) consecutive clean quarters of surface emission monitoring (SEM), the area may switch to annual monitoring. If any area under annual monitoring exceeds 500 ppmv during SEM, that area will return to quarterly monitoring until three (3) consecutive quarters demonstrate less than 500 ppmv. Records for quarterly SEM shall be maintained onsite. Maintain records of all surface monitoring events, methane concentrations that exceed 500 ppmv and the corrective action taken. Monitor on the border between capped and uncapped areas of the landfill.

Table 5

EU	Record Keeping Requirements
EU-1	<p>h. Monitor at the base, and any other openings to the atmosphere, of the gas collection wells and other structural components protruding from the landfill surface to determine if the landfill settling has created openings between the structures and the waste through which the LFG could escape and to ensure the continuing effectiveness of the LFG collection well seals.</p> <p>i. Monitoring shall only be performed on days that are free of measurable precipitation in Fall River, Massachusetts and on which the average wind speed during the monitoring event does not exceed 12 miles per hour, based on average hourly data measured at the closest meteorological monitoring station with public information.</p>
	<p>22. In accordance with Operating Permit No. 4V08045, based on monitoring performed, maintain on-site an operation log, or other record keeping system at a level of detail sufficient to document compliance with Operating Permit No. 4V08045, which includes, but is not limited to applicable limits/restrictions (such as emission, operational, production), monitoring, testing, reporting, recordkeeping requirements and provisions/conditions therein.</p>
	<p>23. In accordance with Approval No. 4P11003 Proviso D.15. and Operating Permit No. 4V08045:</p> <p>For EU-1B (Phase III) <u>Landfill Gas Collection Schedule</u>: monitor, prepare and maintain sufficient records to demonstrate compliance with Approval No. 4P11003 Provisos G.8. thru G.16. (Operating Permit No. 4V08045 Table 8. Provisos C.1. thru C.9.) and;</p> <p>For EU-1C (Phase I/II SSVE) <u>Landfill Gas Collection Schedule</u>: monitor, prepare and maintain sufficient records to demonstrate compliance with Approval No. 4P11003 Provisos G.4. and G.17. (Operating Permit No. 4V08045 Table 8. Proviso D.1.).</p> <p>For EU-1B and EU-1C, include the:</p> <ol style="list-style-type: none"> Date initial waste was placed in each area/cell of EU-1B (Phase III) and EU-1C (Phase I/II SSVE). Dates and all monthly parameters measurements. Dates of vertical well installation. Dates leachate cleanout pipes & vertical wells were connected to the gas conveyance system. Dates when a leachate cleanout pipe or vertical well is activated based on meeting the criteria established in Approval No. 4P11003 Provisos G.9. and G.11. and Provisos G.4. and G.17. Date each cell reaches final grade or has stopped accepting waste.
	<p>24. In accordance with Approval No. 4P11003 Proviso D.16. and Operating Permit No. 4V08045, all records for EU-1 Phases I, II, III and Phase I/II SSVE shall be kept for five (5) years and maintained up-to-date such that year-to-date information is readily available for MassDEP examination.</p>
	<p>25. Maintain records as necessary to verify compliance with Approval No. 4P11003 Proviso D.18. and Operating Permit No. 4V08045, which requires: EU-1B (Phase III) LFG flow shall be measured once per month using a Pitot tube or equivalent. The flow shall be monitored in such a way as to determine only the flow from EU-1B (Phase III).</p>
	<p>26. Maintain records as necessary to verify compliance with Approval No. 4P11003, Approval No. SE-12-017 and Operating Permit No. 4V08045, which includes but is not limited to Operating Permit Section 5. <u>Special Terms and Conditions</u>.</p>
	EU-2

Table 5

EU	Record Keeping Requirements
EU-2	<ul style="list-style-type: none"> b. In accordance with 310 CMR 7.00: Appendix C(10) and the “Preventative Maintenance Plan for Landfill Gas Treatment System” dated September 12, 2014, or MassDEP approved revisions, maintain documentation of maintenance conducted on the LFG Treatment System. c. In accordance with 40 CFR §60.758(c) and §63.1980(b) maintain readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow. d. In accordance with 40 CFR §60.758(c) and §63.1980(b) keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63 including items such as SSM plans and SSM plan reports.
EU-3	<p>28. In accordance with Approval No. 4P94191, the Permittee shall establish and continue an on-site recording system. All records shall be maintained up-to-date such that year-to-date information is readily available for MassDEP examination. Record keeping shall, at a minimum, include:</p> <ul style="list-style-type: none"> a. A record of all malfunctions including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the facility returned to compliance. b. Records shall be maintained documenting the air contaminant emission analysis supporting the response to BWP AQ-01B, Section E, Items 1a, 1b, and 2. c. Records shall be maintained demonstrating compliance with the emission limits listed in Approval No. 4P94191 and Operating Permit No. 4V08045. <p>All records shall be kept onsite for three (3) years and shall be made available to MassDEP personnel upon request.</p> <p>29. In accordance with Approval No. 4P94191 and Operating Permit No. 4V08045, the Permittee shall maintain a daily detailed record keeping system to track VOC emissions. The record keeping system shall be in an enforceable format and shall include:</p> <ul style="list-style-type: none"> a. Identity, quantity and VOC content of all coating(s), diluent(s), & clean-up solvent(s) used. b. Solids content of any coating(s) used. c. Quantity of product processed. <p>30. In accordance with Approval No. 4P94191, the Permittee shall maintain a detailed record keeping system to track particulate matter (PM) emissions on a monthly basis, based on a 12-month rolling period.</p> <p>31. In accordance with Approval No. 4P94191 <u>Special Conditions</u> No. 1. and No. 2. and Operating Permit No. 4V08045 maintain on-site an operation log or other record keeping system at a level of detail sufficient to document compliance with Approval No. 4P94191 and Operating Permit No. 4V08045, which includes, but is not limited to: applicable limits/restrictions (such as emission, operational, production), monitoring, testing, reporting, recordkeeping requirements and provisions/conditions therein.</p>
EU-4	<p>32. In accordance with 310 CMR 7.18(8)(d) and 7.18(8)(g), 310 CMR 7.03(6) and 7.03(8) BFI shall prepare and maintain daily records sufficient to demonstrate continuous compliance. Records kept to demonstrate compliance shall be kept on site for five (5) years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:</p> <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; d. Monthly solvent usage to demonstrate compliance with solvent usage restriction contained in 310 CMR 7.03(8), and e. Any other records specified by the Department in any approval(s) and/or order(s) issued to the person.

Table 5	
EU	Record Keeping Requirements
EU-4	33. In accordance with 310 CMR 7.03(6) Record-keeping : A record-keeping system shall be established and continued in sufficient detail to document the date of construction, substantial reconstruction or alteration and that the respective emission rates, operational limitations, equipment specifications and other requirements pursuant to 310 CMR 7.03 are met. All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination.
Facility Wide	34. In accordance with 310 CMR 7.00, Appendix C(10)(b) and Operating Permit No. 4V08045, the Permittee shall maintain comprehensive and accurate records onsite to demonstrate compliance with the facility-wide HAP emission limits contained in Table 3. Records shall include the actual emissions of all HAPs emitted for each calendar month and for each consecutive twelve month period. These records shall be compiled no later than the 15 th day following each month.
	35. In accordance with 310 CMR 7.71(6)b. and c, the Permittee shall keep on site at the facility documents of the methodology and data used to quantify emissions for a period of 5 years from the date the document is created. The Permittee shall make these documents available to MassDEP upon request. (State-only requirement) .
	36. Maintain records of facility operations such that information may be reported as required for compliance with 310 CMR 7.12. Keep copies of all information supplied to MassDEP pursuant to 310 CMR 7.12 onsite for five (5) years (unless otherwise specified in OP No. 4V08045) after the date the report is submitted in accordance with 310 CMR 7.12(3)(c).
	37. In accordance with 310 CMR 7.00, Appendix C(10)(b), the Permittee shall maintain onsite records of all monitoring data and supporting information required by this Operating Permit for five (5) years from the date of generation, and these records shall be readily available to MassDEP and/or U.S. EPA personnel.

Table 5 Key:

OP	Operating Permit
Permit	Operating Permit
EU	Emission Unit
LFG	Landfill Gas
GRS FRF	Gas Recovery Systems, LLC Fall River Facility
BFI	Browning-Ferris Industries Incorporated
Phase I	Phase I landfill area
Phase II	Phase II landfill area
Phase III	Phase III landfill area
Phase I/II SSVE	Phase I/II South Side Vertical Expansion
Phase I/II AIIE	Phase I/II North Side Area II Expansion
Phase I/II AIIE	Phase I/II Area III Expansion
EU-1	EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
EU-1A	Phase I and Phase II landfill areas
EU-1B	Phase III landfill area
EU-1C	Phase I/II South Side Vertical Expansion or Phase I/II SSVE landfill area
EU-1D	Phase I/II North Side Area II Expansion or Phase I/II AIIE landfill area
EU-1E	Phase I/II Area III Expansion or Phase I/II AIIE landfill area
EU-2	GRS FRF LFG Treatment System: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1

Table 5 Key (Cont'd):

PCD	Pollution Control Device
PCD-1	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 84.12 MMBtu/hr
PCD-2	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 71.0 MMBtu/hr
PCD-3	BFI LFG H ₂ S Pretreatment System
PCD-4	BFI Spray Booth PM Filters
MassDEP	Massachusetts Department of Environmental Protection
M.G.L.	Massachusetts General Law
CMR	Code of Massachusetts Regulations
c.	Chapter
U.S. EPA	United States Environmental Protection Agency
U.S.C.	United States Code
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
NSPS	New Source Performance Standards, 40 CFR Part 60
NESHAP	National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63
SSM	Start-up, Shutdown, Malfunction
§	Section
§§	Sections
NMOC	Non-methane organic compounds
NO _x	Nitrogen oxides, as defined in 310 CMR 7.00
VOC	Volatile organic compounds, as defined in 310 CMR 7.00
HOC	Halogenated organic compound, as defined in 310 CMR 7.00
HAP	Hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
CO	Carbon monoxide, as defined in 310 CMR 7.00
PM	Particulate matter, as defined in 310 CMR 7.00
SO ₂	Sulfur dioxide, as defined in 310 CMR 7.00
H ₂ S	Hydrogen Sulfide
SF ₆	Sulfur Hexafluoride
SEM	Surface emissions monitoring
ORP	Oxidation/Reduction Potential
mo	Calendar month
±	Plus or minus
°F	Degree Fahrenheit
%	Percent
ppmv	Parts per million volume
ppm	Parts per million
Btu/hr	British thermal units per hour
MMBtu/hr	Million British thermal units per hour
scf	Standard cubic foot
BWP AQ-01B	Limited Plan Application Form BWP AQ-01B for Application No. 4P94191 (TR No. 96146) approved 02-01-1995
TR No.	Transmittal Form Number
No.	Number
Cont'd	Continued
pH	The logarithm of the reciprocal of hydrogen ion concentration in gram atoms per liter, used to express the acidity or alkalinity of a solution on a scale of 0 to 14

Table 6

Table 6	
EU	Reporting Requirements^(see Table 6 Note 1.)
EU-1	<p>1. Comply with all applicable reporting requirements contained in Operating Permit No. 4V08045, 310 CMR 7.00: Appendix C(10), 40 CFR 60, Subpart WWW (60.752 through 60.759) and 40 CFR 63 Subpart AAAA (63.1960 through 63.1985), to include but not limited to:</p> <ul style="list-style-type: none"> a. An amended design capacity report shall be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in §60.758(f). b. Submit an NMOC emission rate report to the Administrator annually. This report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in §60.754(a) or (b), as applicable. c. The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions. d. Submit a closure report to the Administrator within 30 days of waste acceptance cessation. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under §60.7(a)(4). e. Submit to the Administrator semi-annual reports of the recorded information listed below: <ul style="list-style-type: none"> (i) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c) and (d). (ii) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756. (iii) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating. (iv) Startup, shutdown and malfunction (SSM) reports as required by 40 CFR Part 63, Subpart AAAA and § 63.6(5)(i). (v) In accordance with 40 CFR Part 63, Subpart AAAA and Subpart A , submit immediate (i.e. within two (2) working days after commencing actions inconsistent with the SSM plan followed by letter within 7 working days after the end of event) startup shutdown and malfunction (SSM) reports as required at § 63.6(5)(ii). (vi) All periods when the collection system was not operating in excess of 5 days. (vii) The location of each exceedance of the 500 ppm methane concentration. (viii) The date of installation and the location of each well or collection system expansion added.
	<p>2. In accordance with Approval No. 4P11003 Proviso F.3. and Operating Permit No. 4V08045, notification shall be provided within 24-hours should the H₂S Pretreatment System (PCD-3) LFG outlet H₂S concentration exceed 200 ppm_v for eight (8) hours while undergoing maintenance or during an “Emergency” as defined in 310 CMR 7.00 Appendix C(1).</p>
	<p>3. In accordance with Approval No. 4P11003, the emissions from the facility approved herein shall be reported on subsequent source registrations as required by 310 CMR 7.12.</p>
	<p>4. In accordance with Approvals No. 4P11003, MassDEP’s Permit Chief (above) at this Office must be notified by telephone or fax within 24 hours, and with written notification within ten (10) days, after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and/or a condition of air pollution.</p>
EU-2	<p>5. In accordance with 40 CFR Part 60, §60.757(f), 40 CFR Part 63, §63.1980(a) and 310 CMR 7.00: Appendix C(10), the Permittee shall submit with the semi-annual monitoring summary report and certification, the following recorded information:</p> <ul style="list-style-type: none"> a. Value and length of time for exceedance of applicable parameters monitored under §60.756(d), including the “Preventative Maintenance Plan for Landfill Gas Treatment System” dated September 12, 2014, or MassDEP approved revisions.

Table 6	
EU	Reporting Requirements <small>(see Table 6 Note 1.)</small>
EU-2	<p>b. Description, duration and disposition (e.g. alternative control device, release to atmosphere) of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow as specified under §60.756.</p> <p>c. Startup, shutdown and malfunction (SSM) reports as required by 40 CFR Part 63, Subpart AAAA and § 63.6(5)(i).</p>
	<p>6. In accordance with 40 CFR Part 63, Subpart AAAA and Subpart A, submit immediate (i.e. within 2 working days after commencing actions inconsistent with the SSM plan followed by letter within 7 working days after the end of event) startup shutdown and malfunction reports as required at § 63.6(5)(ii).</p>
EU-3	<p>7. In accordance with Approval No. 4P94191, any construction, substantial reconstruction or alteration, as described in 310 CMR 7.02, at a facility subject to the reporting requirements of 310 CMR 7.12, shall be reported to MassDEP on the next required source registration.</p>
	<p>8. In accordance with Approval No. 4P94191, the Southeast Regional Office, Bureau of Air and Waste must be notified by telephone or fax as soon as possible after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in excess emission to the air and a condition of air pollution.</p>
	<p>9. In accordance with Approval No. 4P94191, visible emissions or opacity that exceed the limits set forth in Approval No. 4P94191 and OP No. 4V08045 Table 3 shall be reported to the Department in writing or by fax within seven (7) days of the occurrence.</p>
EU-4	<p>10. In accordance with 310 CMR 7.02(2)(e) <u>Reporting</u>:</p> <p>a. The owner or operator of a facility subject to the Source Registration reporting requirements of 310 CMR 7.12, shall report the construction, substantial reconstruction or alteration activities that qualified for exemption in the next required Source Registration. Quantification of emissions from exempt activities is not required unless specifically requested.</p>
	<p>11. In accordance with 310 CMR 7.03(5) <u>Reporting</u>: Any construction, substantial reconstruction or alteration, as described in 310 CMR 7.03, at a facility subject to the reporting requirements of 310 CMR 7.12, shall be reported to the Department on the next required source registration.</p>
Facility-Wide	<p>12. In accordance with 310 CMR 7.12, the Permittee shall submit a Source Registration/Emission Statement Form to MassDEP on an annual basis.</p>
	<p>13. In accordance with 310 CMR 7.71(5), by April 15th, 2010 and April 15th 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 CO₂e. Report greenhouse gas emissions electronically in a format that can be accommodated by the registry (State-only requirement).</p>
	<p>14. 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 requirement).</p>
	<p>15. In accordance with 310 CMR 7.71(7), by December 31st of the applicable year submit to the MassDEP documentation of triennial verification of the greenhouse gas emissions report (State-only requirement).</p>
	<p>16. In accordance with 310 CMR 7.00, Appendix C(10)(a), the Permittee, upon MassDEP's request shall transmit any record relevant to the Operating Permit within 30 days of the request by MassDEP or within a longer time period if approved in writing by MassDEP. The record shall be transmitted on paper, on computer disk, or electronically at the discretion of MassDEP.</p>

Table 6

EU	Reporting Requirements ^(see Table 6 Note 1.)
Facility-Wide	17. In accordance with 310 CMR 7.00, Appendix C(10)(c), the Permittee shall report a summary of all monitoring data and related supporting information to MassDEP at least every six months (January 30 and July 30 of each calendar year).
	18. In accordance with General Condition 10 of this Permit, the Permittee shall submit the Annual Compliance report to MassDEP and EPA by January 30 of each year.
	19. In accordance with 310 CMR 7.00, Appendix C(10)(f), report to MassDEP all instances of deviations from permit requirements. This report shall include the deviation itself, including those attributable to upset conditions as defined in the permit, the probable cause of the deviation, and any corrective actions or preventive measures taken.
	20. In accordance with 310 CMR 7.00, Appendix C(10)(h), all required reports must be certified by a responsible official.
	21. In accordance with 310 CMR 7.13(1) and 7.13(2), if determined by MassDEP that stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos, the Permittee shall cause such stack testing to be summarized and submitted to MassDEP as prescribed in the agreed to pretest protocol.
	22. All notifications & reporting ⁽¹⁾ required by Approval No. 4P11003, Approval No. 4P94191, Approval No. SE-12-017 and Operating Permit 4V08045 shall be made to the attention of: <p style="text-align: center;">Department of Environmental Protection Bureau of Air and Waste 20 Riverside Drive, Lakeville, Massachusetts 02347 ATTN: Chief, Permit Section Telephone: (508) 946-2824 Fax:(508) 947-6557 or (508) 946-2865</p>

Table 6 Note:

- The annual Source Registration/Emission Statement shall be submitted to the DEP Office specified in the instructions. **All other reports, including both 6-month summary reports, are to be submitted to the Southeast Regional Office address, as specified on the letterhead of this Operating Permit.**

Table 6 Key:

OP	Operating Permit
Permit	Operating Permit
EU	Emission Unit
GRS FRF	Gas Recovery Systems, LLC Fall River Facility
BFI	Browning-Ferris Industries Incorporated
LFG	Landfill Gas
EU-1	EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
EU-2	GRS FRF LFG Treatment System: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1

Table 6 Key (Cont'd):

PCD	Pollution Control Device
PCD-3	BFI LFG H ₂ S Pretreatment System
NMOC	Non-methane organic compound
MassDEP	Massachusetts Department of Environmental Protection
DEP	Massachusetts Department of Environmental Protection
CMR	Code of Massachusetts Regulations
U.S. EPA	United States Environmental Protection Agency
NSPS	New Source Performance Standards, 40 CFR Part 60
NESHAP	National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63
CFR	Code of Federal Regulations
SSM	Start-up, Shutdown, Malfunction
CO _{2e}	Carbon Dioxide equivalent
H ₂ S	Hydrogen Sulfide
§ or §§	Section or Sections
ppmv	Parts per million volume
ppm	Parts per million
ATTN	Attention
Cont'd	Continued
No.	Number

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 shall comply with any applicable requirements that become effective during the permit term.

The Permittee is currently not subject to the following requirements:

Table 7	
Regulation	Reason
310 CMR 7.16	Reduction of Single Occupant Commuter Vehicle Use: Below Applicability Threshold
40 CFR Part 64	Compliance Assurance Monitoring; No subject emission units

Table 7 Key:

CMR Code of Massachusetts Regulations

CFR Code of Federal Regulations

5. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to and shall comply with the following special terms and conditions that are not contained in Tables 3, 4, 5 and 6.

Table 8	
Special Terms and Conditions	
In accordance with Approval No. 4P11003 and Approval No. SE-12-017:	
A. <u>Hydrogen Sulfide Pretreatment System, Enclosed Combustors and Landfill Specifications:</u>	
<u>Hydrogen Sulfide Pretreatment System: PCD-3</u>	
<u>Primary Scrubber</u>	
Manufacturer	Hydros Environmental Diagnostics, Inc.
Model No.	SJ104
Design Description	4-stage packed bed gravity spray tower
Capacity	4,200 scfm
Operating Parameter	> -250 ORP and > 8.5 pH hourly average at recirculation pump skid > 8.5 pH hourly average
Chemicals Used	NaOH, NaOCl, H ₂ O
Air Contaminant	H ₂ S
Reaction Products	NaSO ₄ , NaCl, H ₂ O
<u>Secondary Scrubber</u>	
Manufacturer	Hydros Environmental Diagnostics, Inc.
Model No.	None – patent pending
Design Description	1-stage packed bed gravity spray tower
Capacity	4,200 scfm
Operating Parameter	> -250 ORP and > 8.5 pH hourly average at recirculation pump skid > 8.5 pH hourly average
Chemicals Used	NaOH, NaOCl, H ₂ O
Air Contaminant	H ₂ S
Reaction Products	NaSO ₄ , NaCl, H ₂ O
<u>Enclosed Combustor: PCD-1 (identified as Unit No. 1 per Approval No. 4P11003)</u>	
Manufacturer	Callidus Technologies, Inc.
Model No.	F-93-0923
Max. Heat Input	84.12 MMBtu/hr
Fuel	Landfill Gas (LFG)
Effective Chamber Height:	30.0 feet
Effective Chamber Volume	2,203 cubic feet
Stack Material	Steel
Stack Height	40 feet above ground
Stack Exit Diameter	9.67 feet

Table 8

Special Terms and Conditions

Enclosed Combustor: PCD-2 (identified as Unit No. 2 per Approval No. 4P11003)

Manufacturer	Callidus Technologies, Inc.
Model No.	G-9705-050021-HT
Max. Heat Input	71.0 MMBtu/hr
Fuel	Landfill Gas (LFG)
Effective Chamber Height:	30.0 feet
Effective Chamber Volume	2,203 cubic feet
Stack Material	Steel
Stack Height	40 feet above ground
Stack Exit Diameter	9.67 feet

Landfill: EU-1A (identified as Unit No. 3 per Approval No. 4P11003)

Unit No. 3 is the combined mound from Phase I and Phase II operations, with a total waste footprint of approximately 109 acres, located in the north/northeast portion of the site. Closure activities were completed in 2005.

Landfill: EU 1B (identified as Unit No. 4 per Approval No. 4P11003)

Phase III is a separate landfill mound with a total waste footprint of approximately 32 acres, located to the east of the existing Unit No. 3 (Phase I and Phase II) landfill mound, separated by the North Watuppa Diversion Ditch.

Landfill: EU-1C (identified as Unit No. 5 per Approval No. 4P11003)

Phase I/Phase II South Side Vertical Expansion (Phase I/II SSVE) located on the southerly side of Phase I/Phase II of approximately 13.5 acres.

B. Landfill Emissions for EU-1A, EU-1B and EU-1C:

1. In accordance with Approval No. 4P11003 Proviso C.8. and Operating Permit No. 4V08045: For EU-1C, landfill gas generation rates for NMOCs, VOCs, single maximum HAP, total HAPs, and HOCs shall be calculated from the LFG model presented in the application in standard cubic feet (“scf”) by the appropriate pollutant concentrations from the latest site-specific testing or, with respect to HAPs or HOCs, AP-42 values in the absence of site-specific data, and the collection efficiency specified in Operating Permit No. 4V08045 Table 8. Proviso B.2. “Collection and Control Variables”. For EU-1A and EU-1B, landfill gas generation rates for NMOCs, VOCs, single maximum HAP, total HAPs, and HOCs shall be calculated from the measured LFG flow rate (after accounting for flow from EU-1C) for the month in standard cubic feet (“scf”) by the appropriate pollutant concentrations from the latest site-specific testing or, with respect to HAPs or HOCs, AP-42 values in the absence of site-specific data, and the collection efficiency specified in Operating Permit No. 4V08045 Table 8. Proviso B.2. “Collection and Control Variables” and Operating Permit No. 4V08045 Table 8. Proviso B.3. (Approval No. 4P11003, Proviso C.10.). Currently, NMOC concentration shall be assumed to be equal to the most recent NMOC sampling results, 540 ppmv as hexane. VOC concentration shall be assumed to be equal to the most recent VOC sampling results, 518 ppmv as hexane.

Table 8

Special Terms and Conditions

2. In accordance with Approval No. 4P11003 Proviso C.9. and Operating Permit No. 4V08045: For EU-1C, landfill gas emission rates for NMOCs, VOCs, single maximum HAP, total HAPs, and HOCs shall be calculated from the LFG model presented in the application in scf and pollutant concentrations from the latest site-specific testing or industry-accepted compilations. For EU-1A and EU-1B, landfill gas emission rates for NMOCs, VOCs, single maximum HAP, total HAPs, and HOCs shall be calculated using the measured LFG flow rate (after accounting for flow from EU-1C) for the month in scf and pollutant concentrations from the latest site-specific testing or industry-accepted compilations. Currently, NMOC concentration shall be assumed to be equal to the most recent NMOC sampling results, 540 ppmv as hexane. VOC concentration shall be assumed to be equal to the most recent VOC sampling results, 518 ppmv as hexane. Values for control efficiency & collection efficiency are as provided below:

Collection and Control Variables	
Equation Variable	Value (unitless)
n_{coll-EU-1A} (collection efficiency, Phase I & II)	0.95 ^(a)
n_{coll-EU-1B} (collection efficiency, Phase III)	Approval No. 4P11003 Proviso C.10. ^(c)
n_{cnt} (control efficiency, combustors, PCD-1 and PCD-2)	0.98 ^(b)
Expansion n_{coll-EU-1C} (collection efficiency, Phase I/II SSVE)	0.95 ^(c)
Expansion n_{coll-EU-1D} (collection efficiency, Phase I/II AIIIE)	0.75 ^(d)
Expansion n_{coll-EU-1E} (collection efficiency, Phase I/II AIIIE)	0 ^(e)

Collection and Control Variables Notes:

- (a) Estimated value for a closed and capped landfill.
- (b) Conditional Approval No. 4P11003.
- (c) The collection efficiency for Phase III and the Phase I/II SSVE will increase to 0.95 once these areas are fully closed and capped.
- (d) In accordance with Approval No. 4P11003 and MassDEP's May 20, 2010 and June 28, 2012 De minimis Increase in Emissions (310 CMR 7.02(2)(b)7.) applicability determinations made for Area II (Phase I/II AIIIE) and Area III (Phase I/II AIIIE) Landfill Expansions, the collection efficiency for the Phase I/II AIIIE for year 2012 and 2013 will be 0.75. Once Phase I/II AIIIE is closed and capped and a LFG collection system installed, at which time the estimated value will increase to 0.95. Alternative values may be used if approved by the Department.
- (e) The collection efficiency for Phase I/II AIIIE will be assumed to be zero until the area is closed and capped and a LFG collection system installed, at which time the estimated value will increase to 0.95. Alternative values may be used if approved by the Department.

Table 8

Special Terms and Conditions

3. In accordance with Approval No. 4P11003 Proviso C.10. and Operating Permit No. 4V08045: Collection efficiency for EU-1B (Phase III cells) shall be assumed to be 75% if the most recent methane surface monitoring in each Phase III cell did not exceed 500 ppmv after corrective action. If perimeter monitoring shows lateral gas migration is greater than 25% of the LEL, the site will need to determine if the cause of the migration was due to the landfill. Such determination shall be made within 90 days of receipt of perimeter monitoring data exceeding the 25% of LEL criterion. Collection efficiency for Phase III cells shall be 85% if a cell is capped with a 40 CFR Part 258, Subtitle D cap, shows no signs of cracks or distressed vegetation, if the most recent methane surface monitoring of the landfill did not exceed 500 ppmv after corrective action, and perimeter monitoring shows lateral gas migration from the landfill is less than 25% LEL. If the landfill does not meet these conditions after corrective action or an alternative timeline has been requested, Southeast Region, MassDEP, Bureau of Waste Prevention, Permit Section Chief shall be notified by fax or e-mail within 2 business days of obtaining actual knowledge that the conditions are not met. The Permittee may propose an alternative demonstration of the collection efficiency for Phase III that shall include consideration of at least the following factors: the number of exceedances; the extent of each exceedance over 500 ppmv; and any other relevant factors. Any alternative collection efficiency must be approved by MassDEP prior to its use in future calculations or record keeping.
4. In accordance with Approval No. 4P11003 Proviso C.11. and Operating Permit No. 4V08045: Emissions from uncollected and/or uncontrolled landfill gas for NMOCs, single maximum HAP, total HAPs, VOCs, and HOCs shall be calculated by BFI based on the LFG generation rates calculated pursuant to Operating Permit No. 4V08045 Table 8. Proviso B.1. (Approval No. 4P11003, Proviso C.8.) and the collection efficiencies listed in Operating Permit No. 4V08045 Table 8. Proviso B.2. "Collection and Control Variables" and Operating Permit No. 4V08045 Table 8. Proviso B.3. (Approval No. 4P11003, Proviso C.10.)
5. In accordance with Approval No. 4P11003 Proviso C.12. and Operating Permit No. 4V08045: The facility shall limit uncollected and uncontrolled, plus controlled emissions for EU-1 Phase I and II, Phase III and Phase I/II SSVE MSW landfill areas and associated approved PCD(s), as specified in Section 4. A. Emission Limits and Restrictions, Table 3 of OP No. 4V08045 (Approval No. 4P11003 Table C-12.).
6. In accordance with Approval No. 4P11003 Proviso G.3. and Operating Permit No. 4V08045, LFG collected from EU-1A (Phase I and II), EU-1B (Phase III) and EU-1C (Phase I/II SSVE) shall be directed to PCD-1 (Unit No. 1 combustor) and/or PCD-2 (Unit No. 2 combustor) at all times.

C. Landfill Gas Collection Schedule for EU-1B:

1. In accordance with Approval No. 4P11003 Proviso G.8. and Operating Permit No. 4V08045, before accepting waste in an area/cell of Phase III, install leachate cleanout connectors and pipes, as described in CPA No. 4P06034 and the MassDEP's July 12, 2006 Solid Waste Conditional Approval (i.e. July 12, 2006 Conditional Approval of the Landfill – Major Modification application, Expansion of Existing Landfill Gas Control System, for Phase III, Cell A, BWP SW 11, Transmittal Number: W084827), expanding the existing landfill gas control system.
2. In accordance with Approval No. 4P11003 Proviso G.9. and Operating Permit No. 4V08045, within thirty (30) days after the parameters meet the following criteria and when the landfill gas flow is sustainable, activate each leachate cleanout pipe to the gas conveyance system:
 - a. Wellhead static pressure ≥ 0.5 inch water column
 - b. Oxygen concentration ≤ 5 percent (%)
 - c. Methane concentration ≥ 45 %
 - d. Temperature $\leq 131^{\circ}\text{F}$

Leachate cleanout pipes may be activated prior to meeting the above criteria, as necessary to control odors and migration or to meet other gas collection and control objectives at the facility.

Table 8

Special Terms and Conditions

3. In accordance with Approval No. 4P11003 Proviso G.10. and Operating Permit No. 4V08045, within eighteen (18) months of achieving final grade, install vertical wells, as described in CPA No. 4P08054 and MassDEP's Solid Waste July 12, 2006 Conditional Approval of the Landfill – Major Modification application, Expansion of Existing Landfill Gas Control System, for Phase III, Cell A, BWP SW 11, Transmittal Number: W084827.
4. In accordance with Approval No. 4P11003 Proviso G.11. and Operating Permit No. 4V08045, within thirty (30) days after the parameters meet the following criteria and when the landfill gas flow is sustainable, activate each vertical well to the gas conveyance system:
 - a. Wellhead static pressure ≥ 0.5 inch water column
 - b. Oxygen concentration $\leq 5\%$
 - c. Methane concentration $\geq 45\%$
 - d. Temperature $\leq 131^{\circ}\text{F}$

Vertical wells may be activated prior to meeting the above criteria, as necessary to control odors and migration or to meet other gas collection and control objectives at the facility.
5. In accordance with Approval No. 4P11003 Proviso G.12. and Operating Permit No. 4V08045, operate the leachate cleanouts and vertical wells with the following parameters when connected to the gas conveyance system and when the landfill gas flow is sustainable:
 - a. Wellhead vacuum ≥ 0.1 inch water column
 - b. Oxygen concentration $\leq 5\%$
 - c. Methane concentration $\geq 45\%$
 - d. Temperature $\leq 131^{\circ}\text{F}$
6. In accordance with Approval No. 4P11003 Proviso G.13. and Operating Permit No. 4V08045: leachate cleanouts and vertical wells that have been previously activated per Approval No. 4P11003 Provisos G.9. and G.11. (Operating Permit No. 4V08045, Table 8, Provisos C.2. and C.4.) may be deactivated if the methane quality cannot be sustained at greater than 45% or if other parameters in Approval No. 4P11003 Proviso G.12. (Operating Permit No. 4V08045, Table 8, C.5.) cannot be met. The Permittee may continue to operate leachate cleanouts and vertical wells outside the specified parameters in Approval No. 4P11003 Proviso G.12. (Operating Permit No. 4V08045, Table 8, Proviso C.5.) as necessary in order to control potential odors and migration or to meet other gas collection and control objectives at the facility. If leachate cleanouts and vertical wells are deactivated because they are unable to operate within the specified parameters of Approval No. 4P11003 Proviso G.12. (Operating Permit No. 4V08045, Table 8, Proviso C.5.), or because landfill gas flow is not sustainable, they will be re-monitored during the next scheduled monthly event and will be reactivated if the criteria in Approval No. 4P11003 - Provisos G.9. and G.11. (Operating Permit No. 4V08045, Table 8, Provisos C.2. and C.4.) are achieved.
7. In accordance with Approval No. 4P11003 Proviso G.14. and Operating Permit No. 4V08045 leachate cleanout connectors and vertical wells shall have at least one sample port in accordance with 40 CFR 60.756(a).
8. In accordance with Approval No. 4P11003 Proviso G.15. and Operating Permit No. 4V08045, leachate cleanout connectors and vertical wells which become subject to the monitoring, recordkeeping and reporting provisions of 40 CFR 60 NSPS Subpart WWW per waste age requirements of 40 CFR 60.752(b)(2)(ii)(A)(2), will no longer be subject to: Approval No. 4P11003 Provisos D.12., D.13. and D.14 (Operating Permit No. 4V08045, Table 4 – Provisos 18., 19. and 20.) and Approval No. 4P11003 Provisos G.9., G.11., G.12. and G.13. (Operating Permit No. 4V08045, Table 8 - Provisos C.2., C.4., C.5. and C.6.). 40 CFR 60 Subpart WWW monitoring, recordkeeping and reporting provisions will supersede only these conditions of Approval No. 4P11003 and Operating Permit No. 4V08045, Table 8 - Provisos C.2., C.4., C.5. and C.6.

Table 8

Special Terms and Conditions

9. In accordance with Approval No. 4P11003 Proviso G.16. and Operating Permit No. 4V08045, areas of Phase III (Unit No.4) which become subject to the surface emission monitoring, recordkeeping and reporting provisions of 40 CFR 60 Subpart WWW per waste age requirements of 40 CFR 60.752(b)(2)(ii)(A)(2) will no longer be subject to Approval No. 4P11003 Proviso D.17. (Operating Permit No. 4V08045, Table 4 - Proviso 22.). 40 CFR 60 Subpart WWW monitoring, recordkeeping and reporting provisions will supersede only this condition of Approval No. 4P11003 and Operating Permit No. 4V08045, Table 4 - Proviso 22.

D. Landfill Gas Collection Schedule for EU-1C:

1. In accordance with Approval No. 4P11003 Proviso G.4. and G.17. and Operating Permit No. 4V08045, gas collectors/devices for the proposed Phase I/Phase II South Side Vertical Expansion (Unit No. 5) shall be installed in accordance with the schedule and criteria as detailed in the May 28, 2009 Conditional Approval of the Landfill – Major Expansion permit for the Phase I/Phase II, South Side Vertical Expansion, BWP SW 26, Transmittal No. X223503) issued by MassDEP, Southeast Regional Office (SERO), Bureau of Waste Protection (BWP), Solid Waste Management Section.

E. Landfill Gas Collection Schedule for EU-1D:

1. In accordance with Approval No. 4P11003 Proviso G.5. and Operating Permit No. 4V08045, gas collectors/devices for the proposed Phase I/Phase II North Area II Expansion (Phase I/II AIIIE) shall be installed in accordance with the schedule and criteria as detailed in the April 12, 2010 Conditional Approval of the Landfill – Major Expansion permit for the Area II Expansion, BWP SW 26, Transmittal No. X223722) issued by MassDEP, Southeast Regional Office (SERO), Bureau of Waste Protection (BWP), Solid Waste Management Section. Operate in accordance with 310 CMR 7.02(2)(b)7. *De minimis* Increase in Emissions and the MSW landfill expansion determinations rendered by MassDEP’s SERO BWP Air Permit Section on May 20, 2010 and June 28, 2012, which includes, but not is limited to: submittal of information made by BFI to MassDEP for “*De minimis*” purposes, recordkeeping and reporting per 310 CMR 7.02(2)(d) and (e).

F. Landfill Gas Collection Schedule for EU-1E:

1. In accordance with Operating Permit No. 4V08045, gas collectors/devices for the proposed Phase I/ II Area III Expansion (Phase I/II AIIIE) shall be installed in accordance with the schedule and criteria as detailed in the July 23, 2012 Final Conditional Approval of the Landfill – Major Expansion permit for the Area III Expansion, BWP SW 26, Transmittal No. X250785) issued by MassDEP, Southeast Regional Office (SERO), Bureau of Waste Protection (BWP), Solid Waste Management Section. Operate in accordance with 310 CMR 7.02(2)(b)7. *De minimis* Increase in Emissions and the MSW landfill expansion determination rendered by MassDEP’s SERO BWP Air Permit Section on June 28, 2012, which includes, but not is limited to: submittal of information made by BFI to MassDEP for “*De minimis*” purposes, recordkeeping and reporting per 310 CMR 7.02(2)(d) and (e).

G. Other:

1. In accordance with Approval No. 4P11003, the Permittee shall allow Department and/or USEPA personnel access to the plant site, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
2. In accordance with Approval No. 4P11003, PCD-1 and PCD-2 sound impacts shall be ≤ 10 dB(A) above background and shall not cause a puretone condition as defined in MassDEP DAQC Policy No. 90-001 (**State-only requirement**).
3. In accordance with Approval No. 4P94191, noise from the facility during construction, initial startup and routine operation, including startups and shutdowns, shall not exceed the Department’s noise guidelines and shall not cause a condition of air pollution as defined in 310 CMR 7.01 and 7.10 (**State-only requirement**).

Table 8

Special Terms and Conditions

4. In accordance with Approval No. 4P94191, the facility shall be constructed and operated in a manner to prevent the occurrence of dust or odor conditions which cause or contribute to a condition of air pollution as defined in 310 CMR 7.01 and 7.09 (**State-only requirement**).
5. In accordance with Approval No. 4P94191, all waste paints and spent solvents shipped offsite to be claimed as a credit against VOC usage must be confirmed by data supplied by the waste disposal contractor.
6. In accordance with 40 CFR 63, Subpart AAAAA, Section 63.1960 and Operating Permit No. 4V08045, the Permittee shall develop and implement a written startup, shutdown, and malfunction (SSM) plan according to the provisions of 40 CFR 63.6(e)(3). A copy of the SSM Plan must be maintained on site.
7. In accordance with 40 CFR 63, Subpart AAAAA, Section 63.1960 and Operating Permit No. 4V08045, the Permittee is subject to the requirements of 40 CFR 63.1 through 63.15 inclusive, Subpart A General Provisions (as indicated in Table 1 of 40 CFR 63, Subpart AAAAA). Compliance with all applicable provisions therein is required.
8. In accordance with Approval No. 4P11003, sound impacts shall not exceed 10 dB(A) above background and shall not cause a puretone condition as defined in MassDEP's DAQC Policy No. 90-001 (**State-only Requirement**).
9. In accordance with Approval No. 4P11003, if any nuisance condition(s) should be generated by the operation of this facility, then the facility shall take immediate appropriate steps shall be taken to abate the nuisance condition(s); including shutdown if necessary (**State-only Requirement**).
10. In accordance with Approval No. 4P11003, the facility equipment and landfill shall be constructed and designed as per the specifications contained in Approval No. 4P11003 and Operating Permit 4V08045 Section 5.0 Special Terms and Conditions.
11. In accordance with Approval No. 4P11003 and Approval SE-12-017, BFI shall operate and maintain the H₂S Pretreatment System (PCD-3) as approved, which includes but is **not limited to** the June 27, 2012 approved SOMP entitled "Operations Manual Republic Services Fall River H₂S Scrubber System" and criteria/parameters specified in Approval No. 4P11003 Attachment No. 1 "Equipment and Design Schedule" (OP No. 4V08045 Section 5.0 Table 8.A.).
12. In accordance with Approval No. 4P11003, the H₂S Pretreatment System may be removed or retired in place provided LFG H₂S ppm_v levels taken at the inlet to the H₂S Pretreatment System for 12-consecutive months are 200 ppm_v or less.
13. In accordance with Conditional Approval No. 4P11003 dated January 10, 2012: Plan Approval No. 4P11003 dated January 10, 2012 supersedes the May 3, 2011 Plan Approval (4P11003), the May 8, 2009 Plan Approval (4P09007), the November 12, 2008 Plan Approval (4P08054), the June 20, 2008 Plan Approval (4P06034) and the January 2, 2002 Plan Approval (4I01021), all of which were issued pursuant to Section 7.02, as contained in 310 CMR 7.00 Air Pollution Control Regulations. The underlying applications (4P11003, 4P09007, 4P08054 and 4P06034) that contain information regarding the Facility remain valid.
14. In accordance with Approval No. 4P11003 and Approval No. 4P94191, BFI shall comply with the provisions/conditions contained therein, which include, but are not limited to: "Special Conditions", "General Conditions" etc.

Table 8 Key:

OP	Operating Permit
Permit	Operating Permit
EU	Emission Unit
LFG	Landfill Gas
GRS FRF	Gas Recovery Systems, LLC Fall River Facility
BFI	Browning-Ferris Industries Incorporated
MassDEP	Massachusetts Department of Environmental Protection
Department	Massachusetts Department of Environmental Protection
SERO	MassDEP, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347
Southeast Region	MassDEP, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347
CMR	Code of Massachusetts Regulations
BWP	Bureau of Waste Prevention
DAQC	Division of Air Quality Control
USEPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
NSPS	New Source Performance Standards, 40 CFR Part 60
NESHAP	National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63
MSW	Municipal Solid Waste
Area II	Phase I/II AII landfill area
Area III	Phase I/II AIII landfill area
Phase I	Phase I landfill area
Phase II	Phase II landfill area
Phase III	Phase III landfill area
Phase I/II SSVE	Phase I/II South Side Vertical Expansion
Phase I/II AII	Phase I/II North Side Area II Expansion
Phase I/II AIII	Phase I/II Area III Expansion
EU-1	EU-1A + EU-1B + EU-1C + EU-1D + EU-1E
EU-1A	Phase I and Phase II landfill areas
EU-1B	Phase III landfill area
EU-1C	Phase I/II South Side Vertical Expansion or Phase I/II SSVE landfill area
EU-1D	Phase I/II North Side Area II Expansion or Phase I/II AII landfill area
EU-1E	Phase I/II Area III Expansion or Phase I/II AIII landfill area
EU-2	GRS FRF owned & operated LFG treatment system: de-watered, filtered & compressed LFG
EU-3	Spray Booth DeVilbiss Model TTB-64-3
EU-4	Solvent Metal Degreaser (Aqueous Cleaner): Safety-Kleen, Model AQ-1
PCD	Pollution Control Device
PCD-1	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 84.12 MMBtu/hr
PCD-2	BFI Enclosed Combustor/Flare - Callidus Technologies, Inc. - Max. Heat Input: 71.0 MMBtu/hr
PCD-3	BFI LFG H ₂ S Pretreatment System
PCD-4	BFI Spray Booth PM Filters
NMOC	Non-methane organic compounds
VOC	Volatile organic compounds, as defined in 310 CMR 7.00
HOC	Halogenated organic compound, as defined in 310 CMR 7.00
HAP	Hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
Total HAPs	Total aggregate of hazardous air pollutants, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)
Single Max HAP	Single maximum hazardous air pollutant, as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b)

Table 8 Key (Cont'd):

H ₂ S	Hydrogen Sulfide
NaOH	Sodium Hydroxide
NaOCl	Sodium Hypochlorite
H ₂ O	Water
NaSO ₄	Sodium Sulfate
NaCl	Sodium Chloride
ORP	Oxidation/Reduction Potential
pH	The logarithm of the reciprocal of hydrogen ion concentration in gram atoms per liter, used to express the acidity or alkalinity of a solution on a scale of 0 to 14
CPA	Comprehensive Plan Application
SSM	Start-up, Shutdown, Malfunction
SOMP	Standard Operating and Maintenance Procedure
AP-42	U.S. EPA Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition
MMBtu/hr	Million British thermal units per hour
Max.	Maximum
>	Greater than
≤	Less than or equal to
≥	Greater than or equal to
±	Plus or minus
°F	Degree Fahrenheit
%	Percent
ppmv	Parts per million volume
scf	Standard cubic foot
scfm	Standard cubic feet per minute
LEL	Lower Explosive Limit
dB(A)	A-weighted decibels
Cont'd	Continued
No.	Number
&	And
n _{coll-EU-1A}	Collection efficiency, Phase I & II
n _{coll-EU-1B}	Collection efficiency, Phase III
n _{coll-EU-1C}	Collection efficiency, Phase I/II SSVE
n _{coll-EU-1D}	Collection efficiency, Phase I/II AIIE
n _{coll-EU-1E}	Collection efficiency, Phase I/II AIIE
n _{ent}	Control efficiency, combustors, PCD-1 and PCD-2

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 Permittee did not request intra-facility emissions trading in its Operating Permit application.

B. INTER-FACILITY EMISSION TRADING

The Permittee 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.

GENERAL CONDITIONS FOR OPERATING PERMIT

9. FEES

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

10. COMPLIANCE CERTIFICATION

All documents submitted to 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 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 Operating 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 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 Operating Permit. The report shall be postmarked or delivered by January 30 and July 30 to 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 Operating 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 were 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 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 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), 7.70, 7.71, 7.72, 7.74, 7.75 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 five (5) years after the 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 MassDEP's receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by MassDEP on the renewal application.

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

20. PROPERTY RIGHTS

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

21. INSPECTION AND ENTRY

- A. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of MassDEP and EPA to perform the following:
- B. 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;
- C. have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- D. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- E. 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 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:

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 facility, 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.

- A. an emergency occurred and that the Permittee can identify the cause(s) of the emergency;
- B. the permitted facility was at the time being properly operated;
- C. during the period of the emergency the Permittee took all reasonable steps as expeditiously as possible to minimize levels of emissions that exceeded the emissions standards, or other requirements in this Permit; and
- D. the Permittee submitted notice of the emergency to 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 MassDEP's Regional Bureau of Air and Waste the following deviations from permit requirements, by telephone, by 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 Air and Waste Air Operating Permit Reporting Kit, which is available to the Permittee via 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 Air and Waste 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 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.

APPEAL CONDITIONS FOR OPERATING PERMIT

This Permit is an action of 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 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.