Statement of Basis

Tier I Operating Permit No. T1-2010.0155
Project ID 60626

Bannock County Solid Waste Department, Fort Hall Mine Road Landfill
Pocatello, Idaho

Facility ID 005-00062

Facility Review

DRAFT XX, 2013
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Permit Writer

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

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APPENDIX A - EMISSIONS INVENTORY

1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
FHMRL	Fort Hall Mine Road Landfill
GHG	greenhouse gases
HAP	hazardous air pollutants
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
MACT	Maximum Achievable Control Technology
Mg	megagrams
Mg/yr	megagrams per year
mg/dscm	milligrams per dry standard cubic meter
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O_2	oxygen
PC	permit condition
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
RICE	reciprocating internal combustion engines
Rules	*Rules for the Control of Air Pollution in Idaho*
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/yr	tons per consecutive 12 calendar month period
T1	Tier I operating permit
TAP	toxic air pollutants
VOC	volatile organic compound

2. FACILITY DESCRIPTION AND REGULATORY APPLICABILITY

Facility Description

The Fort Hall Mine Road Landfill (FHMRL or Landfill) is located at 1500 North Fort Hall Mine Road, Pocatello, Idaho. It is owned and operated by the Bannock County Solid Waste Department (County).

The FHMRL contains three distinct cells: The initial Cell which was opened in 1943, closed in 1993, and has a design capacity of 1,505,097 Mg; Cell A which was opened in 1994, is estimated to close in 2019, and has a design capacity of 1,160,000 Mg; and lastly, Cell 4 which is estimated to open in 2017 and close around 2031. The Landfill's estimated design capacity is 7,310,000 Mg which includes all cells.

As a Municipal Solid Waste Landfill, FHMRL accepts only household quantities of hazardous materials. The Landfill administers asbestos disposal in its C and D cells and performs Freon capture and recycling for household appliances received in accordance with 40 CFR 82 Subpart F.

Decomposition or organic matter within the landfill generates landfill gas. Once the mass of the landfill gas (as NMOC) reaches a certain threshold, a capture, control and treatment system is required to be installed to treat the gas before it's released to the atmosphere.

Regulatory Applicability

The FHMRL is currently classified as a minor facility because it does not meet the definition of "Major Facility" according to IDAPA 58.01.01.008.10 (T1 operating permit requirements), or as a "Major Source" as defined by 40 CFR 52.21 (Prevention of Significant Deterioration). To be specific, FHMRL does not emit or have the potential to emit any criteria air pollutant in amounts greater than or equal to 100 tons-per-year (T/yr); it does not emit or have the potential to emit 10 T/yr of any single HAP or 25 T/yr of any combination of HAPs; and it does not emit or have the potential to emit Greenhouse Gas (GHG) emissions in amounts greater than or equal to 100,000 T/yr CO_2 equivalent or 100 T/yr GHG on a mass basis. The landfill generates methane and other greenhouse gases in excess of 25,000 metric tons per year of CO_2e, and thus, it is subject to the GHG Mandatory Reporting Rule in accordance with 40 CFR 98, Subpart HH.

FHMRL is required to apply for and obtain a Tier I operating permit pursuant to 40 CFR 60, Subpart WWW (*Standards of Performance for Municipal Solid Waste Landfills*)(NSPS) and IDAPA 58.01.01.859-860 because its design capacity has exceeded the regulatory threshold of 2.5 million megagrams by mass (MMg).

FHMRL is also required by the NSPS to install a capture, collection and treatment system for NMOC emissions, but not until the Landfill's NMOC mass emission rate equals or exceeds 50 Mg/yr which is not expected to occur until sometime around 2024. The Landfill's current NMOC emission rate is around 7.5 Mg/yr. Once the NMOC threshold is reached, the requirements of 40 CFR 63, Subpart AAAA (*National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills*) will also apply.

FHMRL has chosen to voluntarily install the capture, collection and treatment system. The voluntary installation of this capture, collection and treatment system does not subject FHMRL to the full scope of regulations under 40 CFR 60 subpart WWW or make it a "controlled" landfill. While FHMRL has the option of complying with the 40 CFR 60 subpart WWW requirements pertaining to regulated collection and control systems, FHMRL has not made the election. Until the regulatory requirement to install the capture, collection and treatment system is triggered, the only regulatory requirements are to monitor the NMOC emissions and submit a totalized NMOC report to DEQ either annually or once every five years.

On April 6, 2010, FHMRL was issued PTC No. P-2009.0126 which establishes the underlying applicable state and federal rules and regulations for the Tier I permit. The permitted sources are the landfill, an open flare, and an internal combustion (IC) engine. The latter will be used as a waste-to-energy project sometime in the future.

Statement of Basis Format

As part of its review of the Tier I application, DEQ must also prepare a Statement of Basis (SOB) which sets forth the legal and factual basis for the terms and conditions of the T1 permit, including references to the applicable statutory provisions.

FHMRLs Tier I operating permit is organized into the following sections. This SOB generally follows the format of the permit.

Section 1 – Acronym, Units, and Chemical Nomenclature

Section 1 lists the acronyms, units, and chemical nomenclature used within this document.

Section 2 - Tier I Operating Permit Scope

The scope describes this permitting action.

Section 3 - Facility-Wide Conditions

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements (MRRR) sufficient to assure compliance with each permit condition follows the permit condition.

Sections 4 through 7 – (4) Landfill Applicable Requirement When NMOC Emissions < 50 Mg/yr, (5) Landfill Applicable Requirements When NMOC Emissions > 50 Mg/yr, (6) Flare, and (7) IC Engine

The emissions unit-specific sections of the permit contain the applicable requirements that specially apply to each regulated emissions unit (i.e. flare and IC engine). Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the facility-wide conditions. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each applicable requirement immediately follows the applicable requirement.

Sections 8 and 9 - Non-applicable Requirements (Permit Shield) and Insignificant Activities

This section lists those requirements that the applicant has requested be determined to be non-applicable, and DEQ proposes to grant a permit shield in accordance with IDAPA 58.01.01.325.

If requested by the applicant, this section also lists emissions units and activities determined to be insignificant activities based on size or production as allowed by IDAPA 58.01.01.317.01.b.

Section 10 - General Provisions

The final section of the permit contains standard terms and conditions that apply to all Tier I facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I sources. These conditions have been reviewed by EPA and contain all terms required by IDAPA 58.01.01 *et al.* as well as requirements from other air quality laws and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and the rule or permit, the rule or permit shall govern.

3. FACILITY INFORMATION

3.1 Facility Permitting History

Tier I Operating Permit History - Previous 5-year permit term 2007 to 2012

This Tier I operating permit is the initial Tier I operating permit for this facility. Permit status is noted as active and in effect (A) or superseded (S).

DATE	T1-2010.0155 Project 60626, Initial permit for the landfill, flare and future installation of an engine with a generator, Permit status (A) upon issuance.

Underlying Permit History - Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

April 6, 2010	FHMRL was issued PTC No. P-2009.0126 which establishes the underlying applicable state and federal rules and regulations for the Tier I permit. The permitted sources are the landfill, an open flare, and an internal combustion (IC) engine. The latter will be used as a waste-to-energy project sometime in the future. Permit status (A).

4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

Application Scope

This permit is the initial Tier I operating permit for this facility.

The FHMRL is required to obtain a Tier 1 operating permit because it is subject to IDAPA 58.01.01.859-860 and 40 CFR 60, Subpart WWW. FHMRL is not a major facility as described in Section 2.

Application Chronology

November 9, 2010	DEQ received an initial Tier I operating permit application.
January 7, 2011	DEQ determined the application complete.
April 7, 2011	DEQ provided the first draft of the permit to the facility for its review
April 22, 2011	FHMRL provided suggested changes to the first draft.
June 8, 2011	DEQ and FHMRL held a meeting at DEQ to discuss the first draft permit.
August 15, 2011	FHMRL provided additional written comments on the first draft.
September 29, 2011	DEQ and FHMRL held a second meeting to discuss FHMRL's written comments on the first draft permit. FHMRL had several questions regarding among other things, the timing of applicablity of several permit conditions in the draft permit.
January 6, 2012	DEQ sent FHMRL by email a second draft of the permit responding to FHMRL's comments on the permit and additional clarification in the statement of basis regarding when certain permit conditions relating to the engine and landfill would apply.
February 22, 2012	DEQ received FHMRL's comment on the second draft of the permit and statement of basis
March 19, 2012	DEQ sent FHMRL by email a third draft of the permit and statement of basis.
March 20, 2012	DEQ and FHMRL held a meeting to discuss the third draft of the permit and statement of basis.
April 16, 2012	DEQ received comments from FHMRL on the third draft of the permit and statement of basis via email.
October 18, 2012	DEQ provided a fourth draft permit and statement of basis to FHMRL for review and comment.
December 18, 2012	DEQ received from FHMRL comments on the 4th draft permit and statement of basis.
January 16, 2013	DEQ sent FHMRL a fifth draft of the Tier I operating permit.
January 17, 2013	DEQ and FHMRL held a meeting at DEQ to discuss the 5th draft permit.

January 28, 2013	DEQ received from FHMRL a note summary of the topics discussed in the January 17, 2013 meeting.
January 31, 2013	DEQ received from FHMRL the dates for the semi and annual compliance reports.
February 12, 2013	DEQ sent FHMRL the sixth draft permit and statement of basis.
February 28, 2013	DEQ received from FHMRL comments on the sixth draft permit and statement of basis.

5. INSIGNIFICANT ACTIVITIES, NON-APPLICABLE REQUIREMENTS, AND EMISSIONS INVENTORY

5.1 Insignificant Emissions Units Based on Size or Production Rate

No emissions unit or activity subject to an applicable requirement may qualify as an insignificant emissions unit or activity. As required by IDAPA 58.01.01.317.01.b, insignificant emissions units (IEU's) based on size or production rate must be listed in the permit application. Table 5.1 lists the IEU's identified in the permit application. Also summarized is the regulatory authority or justification for each IEU.

Table 5.1 INSIGNIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION

Emissions Unit / Activity	Regulatory Authority / Justification
Propane tank	58.01.01.317.01(b)(i)30

All the emission units at the facility have an applicable requirement except the propane tank, thus the propane tank and its operation are considered an insignificant emission unit activity.

5.3 Non-applicable Requirements for Which a Permit Shield is Requested

The facility has requested a permit shield for the following regulations because they are not applicable requirements under Title V of the Clean Air Act. DEQ has determined that the following requirements are not applicable and that all of the criteria set forth in IDAPA 58.01.01.325.01(b) for the Permit Shield, with respect to these requirements, have been met.

- NEPA, CERCLA, SARA, EPCRA, FIFRA, TSCA, CWA, NPDES and RCRA Subtitle C are not applicable requirements under Title V of the CAA

DEQ grants a permit shield for the requested regulations.

- CAM does not apply because no source has post-control emissions greater than or equal to 100 T/yr
- 40 CFR 68.130 – Chemical Accident Prevention Provisions. FHMRL has certified that the Landfill does not contain quantities of Regulated Toxic and Flammable substances in quantities such that the requirements of 40 CFR 68.130 apply.
- The other State and Federal air quality requirements identified as being non-applicable in Section 8 of the Permit. These Section 8 requirements and the reasons for non-applicability set forth in Section 8 are hereby incorporated by reference for purposes of complying with IDAPA 58.01.01.325.01(b).

5.3 Requirements for Which a Permit Shield Will Not Be Granted

DEQ cannot grant a permit shield for future applicable requirements. These requirements include, but are not limited to, the applicable requirements under 40 CFR 60, Subpart WWW for the capture, collection and treatment system for NMOC emissions, 40 CFR 60, Subpart JJJJ for the IC engine, or 40 CFR 63, Subpart AAAA (NESHAP for MSWL).

However, DEQ recognizes that the landfill currently is not a “controlled landfill” pursuant to 40 CFR 60.751 and that the landfill will not become a controlled landfill until its NMOC emissions rate is equal to or greater than 50 megagrams per year. Therefore, the requirements of 40 CFR parts 60 and 63 that apply only to controlled landfills, as set forth in permit section 5, are not applicable to the landfill until its NMOC emissions rate is equal to or greater than 50 megagrams per year.

5.4 Emissions Inventory

Table 5.2 summarizes the emissions inventory for this minor facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hour of operation or on the type or amount of material combusted, stored or processed shall be treated as part of its design if the limitation or the effect it would have on emission is state or federally enforceable.

Listed below Table 5.2 are the references for the emission factors used to estimate the emissions. The documentation provided by the applicant for the emissions inventory and emission factors are the same supplied by FHMRL and used to determine the facility's PTC.

Table 5.2 EMISSIONS INVENTORY - POTENTIAL TO EMIT (T/yr)

Source Description	PM_{10} T/yr	NO_x T/yr	SO_2 T/yr	CO T/yr	VOC T/yr	Lead T/yr	HAP[b] T/yr	GHG CO_2e[c] T/yr
Flare	0.95	2.50	(a)	2.95	0.82	0		
Caterpillar 3516 or equivalent engine	0.74	45.43	(a)	24.23	2.27	0		
Total Emissions	**1.69**	**47.93**	**0.6**	**27.18**	**3.09**	**0**	**0.0**	**>25 <100,000**

(a) All sulfur in all forms in the landfill gas that is collected to be furned in the engine or flare.

(b) HAP emission are displayed in Appendix A.

(c) GHG CO_2e emissions were submitted by FHMRL.

6. Landfill Emissions and LFG Production

Emissions are generated by the landfill, collected by the collection system, and controlled by the flare and the engine. Emissions from the landfill were estimated using LandGEM, which is an Excel-based program developed by the Environmental Protection Agency to estimate emissions from municipal solid waste landfills. The amount of waste put into the landfill, by year, is input into the program, along with other parameters, such as the methane generation rate. The program provides default values to use for the other parameters if measured values are not available. In this case, the default parameters were used for most parameters. Actual amounts of waste that were put into the landfill were inputs for past years, and estimated amounts of waste were inputs to the program for estimating emissions for future years. The methane generation rate k factor for arid land was used (0.02 $year^{-1}$). The methane generation capacity for arid land was used (100 m^3/Mg). The default methane content of 50% was used.

For the closed cell, the NMOC concentration was set at 147 ppmv as hexane, based on the most recent set of sampling probe measurements at that cell.

For the current cell (Cell A), the NMOC concentration was set at 516 ppmv as hexane, using the most recent set of sampling probe measurements at that cell.

For analysis for NSPS applicability, the calculations were done using a conservative NMOC concentration of 4,000 ppmv of hexane, which is the regulatory default.

For the future New Cell 4 (2017 to beyond 2031), capacity was not calculated, but a 20-year waste acceptance was assumed. The NMOC concentration was set at 600 ppmv as hexane, which is the inventory default where co-disposal of hazardous waste has either not occurred or is unknown.

The planned landfill gas collection system is currently designed to draw LFG from the currently-used Cell A and the planned future Cell 4.

LandGEM calculates the amount of total landfill gas, methane, NMOC, and CO_2 produced. This gas is collected and burned in the flare and the engine. For an estimate of highest emissions from the flare and the engine, it was estimated that all of the gas produced in present Cell A and future Cell 4 is collected and burned. Also, estimated gas production from the landfill increases until 2031, and then decreases after that. The amount of gas produced in 2031 was used to estimate the combustion emissions to ensure that the highest estimated emissions are assessed for permitting purposes.

6.1 IC Engine Emissions

The combustible gas produced by the landfill, mainly methane, was converted from m^3/yr (from LandGEM) to average scf/hr, assuming that the gas volume is at standard conditions.

The fuel consumption for the engine from the manufacturer is 8144 BTU/bhp-h at 75% capacity (for highest emission estimates for NO_x and CO).

The pollutants are PM_{10}, NO_x, SO_2, CO, and VOC. AP-42 has factors for NO_2, CO, and PM. The engine manufacturer has factors for NO_x, CO, total hydrocarbons, and non-methane hydrocarbons. For NO_x, CO, and VOC, the manufacturer's values were used to calculate the emission rate at 75% bhp.

For PM_{10}, the AP-42 factor of 232 kg/million dscm was used, 5th edition, (Sept. 2008) Draft Table 2.4-4, with a rating of D. This factor is for PM, not PM_{10}. It was assumed that PM and PM_{10} would be the same. The final version of AP-42 from 1998 had a PM emission factor of 770 kg/million dscm with a rating of E. Using the higher emission factor would result in a higher estimated emission, but would still be less than the modeling threshold established for this permit action.

For SO_2, the calculations in AP-42 were used, with no correction for air infiltration, using the maximum amount of methane generated and a collection efficiency of 75% which is the default collection efficiency. This is an estimate of the total SO_2 emissions from combusting all the sulfur that is collected. The concentrations of LFG constituents that contain sulfur are from AP-42, Draft Section 2.4, Table 2.4-1.

6.2 Flare Emissions

For NO_2, CO, and PM_{10}, the emissions were calculated using AP-42 emissions factors and the average hourly methane generation rate from the LandGEM data. The application uses a draft version of the AP-42 Section 2.4 (from September 2008). An earlier version is available (Final November 1998) and has higher emission factors for those pollutants, as shown in the following table.

Table 6.1 The Difference Between Draft and Final Emission Factors

Pollutant	Draft (2008) kg/10^6 dscm	Final (1998) kg/10^6 dscm
NO_2	631	650
CO	737	12,000
PM_{10}	238	270

The SO_2 emissions were calculated using the method given in AP-42 as discussed in the engine emissions section of this statement of basis.

For VOC, the PTC application uses the assumption that 99.7% of the NMOC is VOC based on the draft (2008) AP-42 section, and 95% control efficiency for combustion by the flare. The (1998) final version of AP-42 uses a lower percentage for VOC, so the assumption used in the application is conservative. The criteria emission inventory is the same emissions inventory submitted by FHMRL for the PTC permit issued on April 6, 2010.

6.3 Toxic Air Pollutant Emissions

For toxic air pollutant emissions, the AP-42 equations were used to estimate emissions. It was assumed, for conservativeness, that all methane (used in the equation) generated by the landfill (in the current cell A and the new cell 4) were burned in the flare and the engine. The emission factors for the TAPs are from Draft (2008) AP-42 Section 2.4.

The TAPs emission inventory is the same emission inventory submitted by FHMRL for the PTC permit issued on April 6, 2010, and is in the PTC statement of basis. The emission inventory is also in Appendix A of this statement of basis.

7. APPLICABLE REQUIREMENTS LIMITS AND MRRR

This section contains the applicable requirements for this minor facility. Where applicable, monitoring, recordkeeping and reporting requirements (MRRR) follow the applicable requirement and state how compliance with the applicable requirement is to be demonstrated.

This section is divided into several subsections. The first subsection lists the requirements that apply facility wide. The next subsection lists the emissions units- and emissions activities-specific applicable requirements. The final subsection contains the general provisions that apply to all major facilities subject to Idaho DEQ's Tier I operating permit requirements.

This section contains the following subsections:

- Facility-Wide Conditions;
- Landfill with flare applicable requirements with NMOC emission rate below 50 megagrams per year.
- Landfill with flare applicable requirements with NMOC emission rate equal to or greater than 50 megagrams per year
- Flare
- Caterpillar 3516 or Equivalent Engine after installation
- Tier I Operating Permit General Provisions.

MRRR

Immediately following each applicable requirement (permit condition) is the periodic monitoring regime upon which compliance with the underlying applicable requirement is demonstrated. A periodic monitoring regime consists of monitoring, recordkeeping and reporting requirements (MRRR) for each applicable requirement. If an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. This is known as gap filling. In addition to the specific MRRR described under each permit condition, generally applicable facility-wide conditions and general provisions may also be required, such as monitoring, recordkeeping, performance testing, reporting, and certification requirements.

The discussion of each permit condition includes the legal and factual basis for the permit condition. If a permit condition was changed due to facility draft or public comments, a description of why and how the condition was changed is provided.

State Enforceability

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

Federal Enforceability

Unless identified as "State-only," all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, permit conditions and MRRR have been paraphrased. Refer to the permit for the complete requirements.

7.1 Facility-Wide Conditions

These permit conditions apply to the permittee's facility whether the NMOC emission rate is below, equal to, or above the 50 megagrams (Mg) per year. The permit conditions regarding fuel burning equipment and the two perrmit conditions regarding sulfur were removed from the facility-wide conditions at the request of the permittee. The permittee stated the facility does not have any fuel burning equipment as defined in IDAPA 58.01.01.006.45. The permittee stated they do not buy any fuels containing sulfer for any stationary source. Based on the applicant's representations, DEQ agreed to remove these general conditions as not applicable to the FHMRL and to list the fuel burning equipment regulations, IDAPA 58.01.01. 675, as "not applicable" in the permit shield in Section 8 of the Permit.

Permit Condition 3.1 – 3.4 - Fugitive Dust

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/07]

MRRR (Permit Conditions 3.1 through 3.4)

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint;
- Conduct facility-wide inspections of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/2000]

Permit Conditions 3.5 -3.6 - Odors

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (state-only), 5/1/94]

MRRR (Permit Conditions 3.5-3.6)

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;
- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (state-only), 5/1/94]

Permit Condition 3.7 - 3.9- Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

MRRR (Permit Condition 3.7 through 3.9)

- Conduct facility-wide inspections of all emissions units subject to the visible emissions standards (or rely on continuous opacity monitoring);
- If visible emissions are observed, take appropriate corrective action and/or perform a Method 9 opacity test;
- Maintain records of the results of each visible emissions inspection.

[PTC P-2009-.0146, Permit Condition No. 6, 4/6/2010; IDAPA 58.01.01.322.06, 07, 5/1/94]

Permit Conditions 3.10 through 3.14 - Excess Emissions

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between the excess emissions facility wide conditions and the regulations of IDAPA 58.01.01.130-136.

[PTC P-2009.0146, Permit Condition No. 39, 4/6/2010; IDAPA 58.01.01.130-136, 4/5/00]

MRRR (Permit Conditions 3.10 through 3.14)

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in IDAPA 58.01.01.131 through 136.

- Take appropriate action to correct, reduce, and minimize emissions from excess emissions events;
- Prohibit excess emissions during any DEQ Atmospheric Stagnation Advisory or Wood Stove Curtailment Advisory;
- Notify DEQ of each excess emissions event as soon as possible, including information regarding upset, breakdown, or safety events.
- Submit a report for each excess emissions event to DEQ;
- Maintain records of each excess emissions event.

The advisory is based on that applicable to the Pocatello area.

Permit Condition 3.15 - Open Burning

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-616.

[IDAPA 58.01.01.600-616, 5/08/09]

MRRR (Permit Condition 3.15)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.16 - Asbestos

The permittee shall comply with all applicable emission standards pursuant to 40 CFR 61, Subpart M when conducting any renovation or demolition [asbestos disposal] activities at the facility.

[40 CFR 61, Subpart M]

MRRR (Permit Condition 3.16)

Monitoring, recording, and reporting of asbestos disposal is specified in 40 CFR 61, Subpart M and is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.17 - Recycling and Emissions Reductions

The permittee shall comply with applicable standards for recycling and emissions reduction of refrigerants and their substitutes pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

MRRR (Permit Condition 3.17)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.18 NSPS General Provisions

FHMRL is subject to NSPS 40 CFR 60, Subpart WWW and is therefore required to comply with applicable General Provisions 40 CFR 60, Subpart A.

NSPS 40 CFR 60, SUBPART A – SUMMARY OF GENERAL PROVISIONS

Section	Section Title	Summary of Section
60.2	Definitions	60.751 Definitions. As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in subpart A of this part.
60.4	Addresses	All requests, reports, applications, submittals, and other communications associated with 40 CFR 60, Subparts A and WWW shall be submitted to: Pocatello Regional Office Department of Environmental Quality 444 Hospital Way # 300 Pocatello, Idaho 83204
60.11 (d), (f), and (g)	Compliance with Standards and Maintenance Requirements	1. At all times, including periods of startup, shutdown, and malfunction, the owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. 2. For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.
60.11(b), (c), and (e)	Compliance with Standards and Maintenance Requirements (Opacity)	1. Compliance with opacity standards shall be determined by Method 9 in Appendix A of 40 CFR 60. The permittee may elect to use COM measurements in lieu of Method 9, provided notification is made at least 30 days before the performance test. 2. The opacity standards shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided. **[PTC P-2009-.0146, Permit Condition No. 39, 4/6/2010]**
60.12	Circumvention	No permittee shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.
60.14	Modification	1. A physical or operational change which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification, and upon modification an existing facility shall become an affected facility in accordance with the requirements and exemptions in 40 CFR 60.14. 2. Within 180 days of the completion of any physical or operational change, compliance with all applicable standards must be achieved.
60.15	Reconstruction	An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate in accordance with the requirements of 40 CFR 60.15.

[40 CFR 60, Subpart A]

MRRR (Permit Condition 3.18)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.19 – NESHAP General Provisions

FHMRL is currently not subject to 40 CFR 63, Subpart AAAA because its estimated uncontrolled NMOC emissions are less than 50 Mg/yr. When FHMRL's estimated uncontrolled NMOC emissions equal or exceed 50 Mg/yr, FHMRL will then be subject and shall comply with all requirements of 40 CFR 63, Subpart AAAA as applicable.

The permittee shall comply with the requirements of 40 CFR 63, Subpart AAAA – General Provisions as applicable.

NESHAP 40 CFR 63, SUBPART AAAA – SUMMARY OF GENERAL PROVISIONS

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP	Affected sources are already subject to this part
63.1(b)	Applicability determination for stationary sources	
63.1(c)	Title V permitting	
63.2	Definitions	
63.4		Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A.
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	
63.6(e)	Operation and maintenance requirements, startup, shutdown and malfunction plan provisions	Affected sources are already subject to the provisions of (1)(i) and (ii); (3)(i), (iii),(iv),(v),(vi),(vii)(viii)and (ix).
63.6(f)	Compliance with non-opacity emission standards	Affected sources are already subject to the provisions of paragraphs (f)(I) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A.
63.10(b)(2)(i}(b)(2)(v)	General recordkeeping requirements	
63.10(d)(5)	If actions taken during a startup, shutdown, and malfunction plan are consistent with the procedures in the startup, shutdown, and malfunction plan, this information shall be included in a semi-annual startup, shutdown, and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event	
63.12(a)	These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified	
63.15	Availability of information and confidentiality	

[40 CFR 63, Subpart AAAA]

MRRR (Permit Condition 3.19)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.20 - Monitoring and Recordkeeping

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[PTC P-2009.0146, Permit Condition No. 38, 4/06/2010; IDAPA 58.01.01.322.06, 07, 5/1/94]

MRRR (Permit Condition 3.20)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Conditions 3.21 through 3.24 - Performance Testing

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

[PTC P-2009.0146, Permit Condition Nos. 35, 36, 37, 4/6/2010; IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

MRRR (Permit Conditions 3.21 and 3.24)

The permittee shall submit compliance test report(s) to DEQ following testing.

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

Permit Condition 3.25 - Reports and Certifications

This permit condition establishes generally applicable MRRR for submittal of reports, certifications, and notifications to DEQ and/or EPA as specified.

[PTC P-2009.0146, Permit Condition No. 29, 4/6/2010; IDAPA 58.01.01.322.08, 11, 5/1/94]

MRRR(Permit Condition 3.25)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.26 - Incorporation of Federal Requirements by Reference

Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein.

[PTC P-2009.0146, Permit Condition No. 29, 4/6/2010; IDAPA 58.01.01.107, 4/7/11]

MRRR (Permit Condition 3.26)

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.27 - Municipal Solid Waste Landfills Mandatory Greenhouse Gas Reporting Requirement - 40 CFR 98 subpart HH

In accordance with 40 CFR 98.342, owners and operators of municipal solid waste landfills that accepted waste on or after January 1, 1980 and that meet the requirements of 40 CFR 98.2(a)(1) must report methane gas generation and emissions from landfills, methane destruction resulting from landfill gas collection and combustion systems, and emissions of carbon dioxide, methane, and nitrous oxide from stationary combustion units following the requirements of 40 CFR 98 subpart C (40 CFR 98.340-342).

Any notifications or reporting required by 40 CFR 98 subpart HH shall be submitted to the following address:

EPA Region 10

Director, Office of Air Quality

1200 Sixth Avenue

(OAQ-107)

via the e-GGRT website(last visited at https://ghgreporting.epa.gov/ghg/login.do)

[40 CFR 98 subpart HH]

MRRR(Permit Condition 3.27)

In each annual report, the permittee shall follow the applicable requirements of 40 CFR 98 Subpart A – General Provisions and Part 98 Mandatory Greenhouse Gas Reporting Subpart HH Municipal Solid Waste Landfills.

Permit Condition 3.28 – Operations and Maintenance Manual

In accordance with the PTC issued to FHMRL on April 6, 2010, within 60 days of commencing construction, the permittee shall have developed and submitted to DEQ an Operation and Maintenance (O&M) manual for the flare, engine and dewatering system .

MRRR (Permit Condition 3.28)

The permittee shall submit the O&M manual and update the manual when needed.

Emissions Unit-Specific Emissions Limits and MRRR

7.2 Landfill Applicable Requirements with NMOC Emission Rate Less Than 50 Mg/yr

FHMRL is voluntarily installing a collection and control system and has obtained a permit to construct for the system and the related open flare and internal combustion engine with a generator. The installation of this voluntary collection and control system does not subject FHMRL to the full scope of regulations under 40 CFR 60 subpart WWW or make it a "controlled" landfill. While FHMRL has the option to comply with 40 CFR 60 subpart WWW requirements pertaining to regulated collection and control systems, FHMRL has not made that election. FHMRL will install its system voluntarily and will be subject only to the 40 CFR 60 subpart WWW requirements pertaining to landfills with an NMOC emissions rate below 50 megagrams per year.

Until the regulatory requirements to install the capture, collection and treatment system is triggered, the only applicable regulatory requirements are to monitor the NMOC emissions and submit a totalized NMOC report to DEQ either annually or once every five years as set out in Permit Section 4. Table 4.2 summarizes the applicable requirements for the landfill when the NMOC emissions rate is less than 50 megagrams per year. Section 5 describes the applicable requirements for the landfill when the NMOC emissions rate is equal to or greater than 50 megagrams per year.

Permit Condition 4.3

In accordance with 40 CFR 60.752(b), when the landfill design capacity becomes equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the permittee shall either comply with 40 CFR 60.752(b)(2) or calculate an NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.754.

[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010;40 CFR 60.752(b)]

MRRR - (Permit Condition 4.3)

40 CFR 60.752(b) requires that once the landfill reaches a design capacity greater than 2.5 million megagrams, which occurred in 2011, and the NMOC emission rate is less than 50 megagrams, an annual NMOC emission rate is to be calculated.

Permit Condition 4.4

In accordance with 40 CFR 60.752(b)(1)(i), the permittee shall submit an annual emission report to DEQ, except as provided for in 40 CFR 60.757(b)(1)(ii).

[PTC P-2009.0146, Permit Condition No. 17, 4/6/2010; 40 CFR 60.752(b)(1)(i)]

MRRR – (Permit Condition 4.4)

In addition to the annual emission report of the NMOC emission rate, there is a provision for estimating the emissions every year but reporting only once every five years if the NMOC emissions are projected to be less than 50 megagrams. There is also a provision for the facility to install collection and control equipment in accordance with 40 CFR 60.752(b)(2) if that option is chosen. According to the permit application, FHMRL will install and operate the collection and control system voluntarily and thus the landfill is not subject to 40 CFR 60.752.(b)(2) and is not a controlled landfill.

Permit Condition 4.5

In accordance with 40 CFR 60.752(b)(1)(ii), the NMOC emission rate shall be recalculated annually using the procedures specified in 40 CFR 60.754(a)(1) or (3) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010; 40 CFR 60.752(b)(1)(ii)]

MRRR - (Permit Condition 4.5)

The permit application indicating the voluntary installation of a collection and control system does not make the landfill a controlled landfill. Thus until the landfill meets the requirement of having a NMOC emission rate that equal or exceeds 50 megagrams per year, FHMRL is not subject to the requirements of 40 CFR 60.752(b)(2). FHMRL will be required to recalculate the NMOC emission rate annually.

Permit Condition 4.6

In accordance with 40 CFR 60.754(a)(1)(i), the permittee shall calculate the NMOC emission rate using the equation for the actual year to year solid waste acceptance.

40 CFR 60.754 (a)(1)ii not applicable, solid waste quantity is known.

[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010; 40 CFR 60.754(a)(1)(i)]

MRRR - (Permit Condition 4.6)

This permit condition requires the facility to use the equation located in 40 CFR 60.754(a)(1)(i) to determine compliance with calculating the NMOC emission rate when the actual year to year solid waste acceptance is know, which is indicated within FHMRL Tier I operating permit application. FHMRL stated in meeting FHMRL does indeed know the acceptance rate and would be using this equation until procedure Tier 2 is used to determine the NMOC emission rate. A statement from the permit application page 62 of 172, "Bannock County's year to year waste acceptance rate at Ft. Hall Mine Road Landfill is known, therefore equation (a)(1)(i) has been, (and will be) used."

Permit Condition 4.7

In accordance with 40 CFR 60.754(a)(3), after installation of the collection system the permittee shall determine the NMOC concentration by the Tier 2 procedures

[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010; 40 CFR 60.754(a)(3)]

MRRR - (Permit Condition 4.7)

FHMRL has stated that after the collection system is installed, FHMRL will use the tier 2 method of determining NMOC concentration.

From the application,

Bannock County has made measurements at the Ft. Hall Mine Road Landfill on site-specific NMOC concentration for the purposes of scoping prospective performance of the LFG collection system, and chooses to comply with Tier 2 procedures, to calculate NMOC production.

Permit Condition 4.8

In accordance with 40 CFR 60.754(a)(2), the permittee shall compare the calculated NMOC emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 megagrams per year, then the permittee shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1).

(ii)If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site specific NMOC concentration and recalculate the NMOC emission rate using the procedure provided in 40 CFR 60.754(a)(3).

[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010; 40 CFR 60.754(a)(2), (2)(i) and (2)(ii)]

MRRR - (Permit Condition 4.8)

This permit condition states the comparison of each calculation of NMOC emission rate to the 50 megagrams per year threshold but if this calculation produces a result of 50 or more FHMRL has an option of developing a site specific NMOC concentration to recalculate the NMOC emission rate.

Permit Condition 4.9

In accordance with 40 CFR 60.754(a)(4), the site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of this part. The permittee shall estimate the NMOC mass emission rate using equations in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with §60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the permittee shall submit a periodic emission rate report as provided in §60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in §60.757(b)(1) using the equations in paragraph (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in paragraph (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations

[[PTC P-2009.0146, Permit Condition No. 13, 4/6/2010; 40 CFR 60.754(a)(4), (4)(i) and (4)(ii)]

MRRR – (Permit Condition 4.9)

This permit condition details the method to be used by FHMRL if and when a site specific methane generation rate were to be used instead of default values.

Permit Condition 4.10

Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of 40 CFR 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 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.

[[PTC P-2009.0146, Permit Condition No. 23, 4/6/2010; 40 CFR 60.758(a)]

40 CFR 60.758(b) is not an applicable requirement until the permittee becomes a controlled landfill.

40 CFR 60.758(c) is not an applicable requirement until the permittee becomes a controlled landfill.

MRRR – (Permit Condition 4.10)

Permit condition 4.10 details the length of time and specific data that must be kept to comply with the 40 CFR 758(a) regulation.

Permit Condition 4.11

In accordance with 40 CFR 60.758(d)

Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall 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.

(1)Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2)Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

[[PTC P-2009.0146, Permit Condition No. 23, 4/6/2010; 40 CFR 60.758(d)]

40 CFR 60.758(e) is not an applicable requirement until the permittee becomes a controlled landfill.

40 CFR 60.758(f) is not an applicable requirement, the permittee has already declared the landfill design capacity.

MRRR – (Permit Condition 4.11)

This permit condition requires for the life of the collection system up-to-date data regarding the plot map of each exisiting and planned collector in the system, and provide unique identification location lable for each collector. FHMRL has stated it would voluntary comply with 40 CFR 60.758(d). When FHMRL reaches the 50 megagrams per year threshold for NMOC emission rate and the landfill be comes a controlled landfill and must meet the requirements of becoming a controlled landfill this requirement will provide a federally enforceable documentation to assist is fulfilling the regulations of 40 CFR 752(b)(2).

Permit Condition 4.12

40 CFR 60.757(a) is not an applicable requirement, the permittee has already declared the landfill's design capacity.

In accordance with 40 CFR 60.757(b), each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the DEQ initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of this permit condition. DEQ may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1)The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a) or (b), as applicable.

(i)The initial NMOC emission rate report may be combined with the initial design capacity report required in this permit and shall be submitted no later than indicated in paragraphs (1)(i)(A) and (B) of this permit condition. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in 40 CFR 60.757 (b)(1)(ii) and (b)(3).

(A)June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or

(B)Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commenced construction, modification, or reconstruction on or after March 12, 1996.

(ii) If the estimated NMOC emission rate as reported in the annual report to the DEQ is less than 50 Mg/yr in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the DEQ. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the DEQ. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2)The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3)Each owner or operator subject to the requirements of Subpart WWW is exempted from the requirements of paragraphs (1) and (2) of this permit condition, after the installation of a collection and control system in compliance with 40 CFR 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 and 60.755.

[[PTC P-2009.0146, Permit Condition No. 17, 4/6/2010; 40 CFR 60.757(b)]

40 CFR 60.757(c) is not applicable, the permittee has already submitted the collection and control system design for the voluntary installation.

40 CFR 60.757(d) is not applicable, the permittee is not a controlled landfill.

40 CFR 60.757(e) is not applicable, the permittee is not a controlled landfill.

40 CFR 60.757(f) is not applicable, the permittee is not seeking to comply with 40 CFR 60.752(b)(2).

MRRR – (Permit Condition 4.12)

This permit condition states the various reporting requirements and the option of a 5 year period reporting. FHMRL has indicated in the application the initial design capacity was submitted February 3, 1997, the amended design capacity submitted of 3.703MMg was submitted April 26, 2010, and the NMOC emission rate of 7.31 Mg/yr for 2009 was filed April 21, 2010. FHMRL has chosen to submit annual NMOC emission rate reports in compliance with 40 CFR 757(b)(1), and (b)(2).

Permit Condition 4.13

In accordance with IDAPA 58.01.01.860.07, all owners or operators of landfills subject to Section 860 that have nonmethane organic compound emission rates less than fifty (50) Mg/yr on or after November 19, 1999 shall install collection and control systems within thirty (30) months after the date the first annual nonmethane organic compound emission rate equals or exceeds fifty (50) Mg/yr as specified in 40 CFR Section 60.36c(b).

[[PTC P-2009.0146, Permit Condition No. 8, 4/6/2010]

MRRR – (Permit Condition 4.13)

This permit condition requires the installation of a collection and control system upon reaching the threshold of 50 Mg/year. FHMRL has indicated in the application FHMRL will comply with the procedures of 40 CFR 60.752(b)(2) when the landfill equals or exceed the threshold of NMOC emission rate of 50 Mg/yr.

7.3 Landfill Applicable Requirements when NMOC Emissions Rate is greater than or equal to 50 Mg/yr

Permit Condition 5.2

In accordance with 40 CFR 63.1960, if the permittee is required by 40 CFR 60, Subpart WWW to install a collection and control system, the permittee must develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site.

40 CFR 63.1960 How is compliance determined?

Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, the permittee has failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, the permittee must develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

[PTC P-2009.0146, Permit Condition No. 24, 4/6/2010; 40 CFR 63.1960]

MRRR - (Permit Condition 5.2)

This permit condition requires once 40 CFR 60.752 (b)(2) the installation of a collection and control system becomes applicable to FHMRL. FHMRL shall develop a start up, shut down and malfunction plan. Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. This permit condition is applicable to FHMRL after the NMOC emission rate equals or exceeds 50 Mg/year.

FHMRL currently meets the exemption requirements of 40 CFR 63.1935(a)(3) where NMOC ermissions are less than 50 Mg/yr; however this Permit Condition applies whenever FHMRL's NMOC emission rate equals or exceeds the NSPS 50 Mg/yr regulatory threshold.

Permit Condition 5.3

In accordance with 40 CFR 63.1980(b), the permittee must also keep records and reports as specified in the general provisions of 40 CFR Part 60 and Table 1 of 40 CFR 63 subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

[PTC P-2009.0146, Permit Condition No.25, 4/06/2010; 40 CFR 63.1890(b)]

MRRR – (Permit Condition 5.3)

This permit condition is triggered when FHMRL's NMOC emission rate equals or exceeds 50 Mg per year. This permit condition states what applicable records are to be kept and what reports are to be made regarding the SSM plans.

Permit Condition 5.4

In accordance with CFR 60.752(b)(2), the permittee of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either comply with 40 CFR

60.752(b)(2) or calculate an NMOC emission rate for the landfill using the procedures specified in §60.754. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b)(1)(ii) of this subpart. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

In accordance with 40 CFR 60.752(b)(2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i)Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:

(A)The collection and control system as described in the plan shall meet the design requirements of 40 CFR 60.752(b)(2)(ii).

(B)The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator.

(C)The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.

(D)The Administrator shall review the information submitted under 40 CFR 60.752 (b)(2)(i) (A),(B) and (C) and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

(ii)Install a collection and control system that captures the gas generated within the landfill as required by 40 CFR 60.752 (b)(2)(ii)(A) or (B) and (b)(2)(iii) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2).

(A)An active collection system shall:

(1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i)5 years or more if active; or

(ii)2 years or more if closed or at final grade.

(3)Collect gas at a sufficient extraction rate;

(4)Be designed to minimize off-site migration of subsurface gas.

(B) A passive collection system shall:

(1) Comply with the provisions specified in 40 CFR 60.752(b)(2)(ii)(A)(1), (2), and (2)(ii)(A)(4).

(2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under §258.40.

(iii) Route all the collected gas to a control system that complies with the requirements in either 40 CFR 60.752(b)(2)(iii) (A), (B) or (C).

(A)An open flare designed and operated in accordance with §60.18 except as noted in §60.754(e);

(B)A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in §60.754(d).

40 CFR 60.752(b)(2)(iii)(B)(1) requirements do not apply , landfill does not use a boiler or process heater as a control device.

(2)The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756;

(C)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 40 CFR 60.752(b)(2)(iii) (A) or (B).

(iv)Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756.

(v)The collection and control system may be capped or removed provided that all the conditions of 40 CFR 60.752 (b)(2)(v) (A), (B), and (C) are met:

(A)The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d);

(B)The collection and control system shall have been in operation a minimum of 15 years; and

(C)Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

[PTC P-2009.0146, Permit Condition Nos. 9, 19, 4/6/2010; 40 CFR 60.752(b)]

40 CFR 60.752(b)(2)(c) Not applicable, the permittee has already stated design capacity.

In accordance with 40 CFR 60.752(d);

When a MSW landfill subject to this subpart is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under part 70 or 71 of this chapter for the landfill if the landfill is not otherwise subject to the requirements of either part 70 or 71 and if either of the following conditions are met:

(1)The landfill was never subject to the requirement for a control system under 40 CFR 60.752 (b)(2); or

(2)The owner or operator meets the conditions for control system removal specified in 40 CFR 60.752 (b)(2)(v).

[PTC P-2009.0146, Permit Condition Nos. 9, 20, 4/06/2010; 40 CFR 60.752(d)]

MRRR - (Permit Condition 5.4)

This permit condition is subject to FHMRL equal or exceding the threshold NMOC emission rate of 50 Mg per year. Compliance determination requires the installation of a collection and control system and a specific performance capability of the control system.

FHMRL stated in the application FHMRL will demonstrate compliance with the design and operating requirements of 40 CFR 60.752(b)(2)(ii) as well as 753, 755, 756 when the NMOC emission rate meets the threshold of 50 Mg per year.

Permit Condition 5.5

In accordance with 40 CFR 60.753(a), each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:

(a) In accordance with 40 CFR 60.753(a), operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1)5 years or more if active; or

(2)2 years or more if closed or at final grade;

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.753(a)]

(b) In accordance with 40 CFR 573(b), operate the collection system with negative pressure at each wellhead except under the following conditions:

(1)A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2)Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3)A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.753(b)]

(c)In accordance with 40 CFR 60.753(c), operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1)The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

(2)Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(i)The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii)A data recorder is not required;

(iii)Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv)A calibration error check is not required;

(v)The allowable sample bias, zero drift, and calibration drift are ±10 percent.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.753(c)]

(d) In accordance with 40 CFR 60.753(d), operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual

observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010, 40 CFR 60.753(d)]

(e) In accordance with 40 CFR 60.753(e), operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010, 40 CFR 60.753(e)]

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010, 40 CFR 60.753(f)]

(g) In accordance with 40 CFR 60.753(g), if monitoring demonstrates that the operational requirements in 40 CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements 40 CFR 60.753.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.753(g)]

MRRR - (Permit Condition 5.5)

The permit conditions of 40CFR 60.753 become applicable in accordance with 40 CFR 60.757(b) when the landfill reaches the NMOC emission rate threshold of 50 Mg per year. FHMRL stated in the application that FHMRL will comply with 40CFR 60.753(b) through (g) after the NMOC emission rate meets the threshold of 50 Mg per year.

Permit Condition 5.6

40 CFR 60.754(a)(1) and (a)(2) were discussed in Section 4 of this permit.

In accordance with 40 CFR 60.754(a)(3) Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of appendix A of this part. Method 18 of appendix A of this part may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If using Method 18, the owner or operator must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP–42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC} as hexane by multiplying by the ratio of its carbon atoms divided by six. If more than the required number of samples are taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC

concentration from Method 25 or 25C of appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

(i)The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in 40 CFR 60.754 (a)(1)(i) or (a)(1)(ii) and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in 40 CFR 60.754(a)(1).

(ii)If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with §60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in 40 CFR 60.754(a)(4).

(iii)If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in §60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.754(a)(3)]

MRRR – (Permit Condition 5.6)

FHMRL stated in the application it had made measurement at the landfill of site specific NMOC concentration for the puposes of scoping prospective preformance of the LFG collection system, and chooses to comply with Tier 2 procedures to calculate the NMOC production for the purpose of determining when NMOC production exceeds 50 Mg per year. This permit condition states "for active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these system, a minimum of thre samples must be collected from the header pipe."

Permit Condition 5.7

In accordance with 40 CFR 60.754(a)(4) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of this part. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in 40 CFR 60.754 (a)(1)(i) or (a)(1)(ii) and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in in 40 CFR 60.754 (a)(3) instead of the default values provided in in 40 CFR 60.754 (a)(1). The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with §60.752(b)(2).

(ii)If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in §60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in §60.757(b)(1) using the equations in 40 CFR 60.754 (a)(1) and using the site-specific methane generation rate constant and NMOC concentration obtained in 40 CFR 60.754 (a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.754(a)(4)]

MRRR – (Permit Condition 5.7)

Permit condition 5.6 provides FHMRL the method of determining a site specific methane generation rate constant k to assist in determining the NMOC concentration. This permit condition states the procedure to follow with the NMOC emission rate is less than or above the 50 Mg per year threshold. While this permit condition is located in the above 50 Mg per year threshold section of this permit, the permit condition contains a procedure to follow if after a sites specific methane generation rate is determined and used in calculation of the NMOC with the result indicating an NMOC emission rate below the 50 Mg per year threshold.

Permit Condition 5.8

In accordance with 40 CFR 60.754(a)(5), the owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in 40 CFR 60.754 (a)(3) and (a)(4) if the method has been approved by the Administrator.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.754(a)(5)]

MRRR – (Permit Condition 5.8)

This permit condition allows FHMRL to use other methods to determine the NMOC concentration or site specific k value after approval by the Administrator. During the review of draft permits, FHMRL has indicated the desire to use a different value for L_o in equations stated in permit conditions of this permit. This provides the method FHMRL can use to address the facility's concerns.

Permit Condition 5.9

In accordance with 40 CFR 60.754(b), after the installation of a collection and control system in compliance with §60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in §60.752(b)(2)(v), using the following equation:

$M_{NMOC} = 1.89 \times 10{-}3 Q_{LFG}\ C_{NMOC}$

where,

M_{NMOC}= mass emission rate of NMOC, megagrams per year

Q_{LFG}= flow rate of landfill gas, cubic meters per minute

C_{NMOC}= NMOC concentration, parts per million by volume as hexane

(1)The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of this part.

(2)The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of this part. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C of appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3)The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.754(b)]

40 CFR 60.754(c) Not applicable, facility is not subject to PSD

MRRR – (Permit Condition 5.9)

This permit condition provide the pathway to be followed to determine compliance with the removal of an active collection and control system. FHMRL does not anticipate reaching the threshold NMOC emission rate of 50 Mg per year until 2024. FHMRL stated in the application the facility chooses to use Method 25C to determine NMOC concentration.

Permit Condition 5.10

In accordance with 40 CFR 60.754(d), For the performance test required in §60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 of appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by §60.752(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The following equation shall be used to calculate efficiency:

Control Efficiency = (NMOCin− NMOCout)/(NMOCin)

where,

NMOCin= mass of NMOC entering control device

NMOCout= mass of NMOC exiting control device

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.754(d)]

MRRR – (Permit Condition 5.10)

This permit condition sets the efficiency reduction requirements of the control system when the NMOC emission rate of FHMRL has equal or exceeds the 50 Mg per year threshold. FHMRL stated in the application the facility "will initiate such performance test after that threshold is exceeded, estimated in about 2024. This effort will be coordinated with any monitoring required by 40 CFR 98 (Greenhouse Gas reporting)."

Permit Condition 5.11

In accordance with 40 CFR 60.754(e), for the performance test required in §60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under §60.18(f)(4).

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.754(e)]

MRRR- (Permit Condition 5.11)

This permit condition for determining the net heating value of the combusted landfill gas is required after FHMRL's NMOC emission rate is equal to or exceeds the 50 Mg per year threshold. FHMRL stated in the application "Bannock County will initiate such performance tests after the threshold is exceeded in about 2024. This effort will be coordinated with any monitoring required by 40 CFR 98 (Greenhouse Gas reporting)."

Permit Condition 5.12

In accordance with 40 CFR 755,

(a)except as provided in §60.752(b)(2)(i)(B), the specified methods in 40 CFR 60.755(a)(1) through (a)(6) shall be used to determine whether the gas collection system is in compliance with §60.752(b)(2)(ii).

(1)For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with §60.752(b)(2)(ii)(A)(1), one of the following equations shall be used.

The k and Lo kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in §60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i)For sites with unknown year-to-year solid waste acceptance rate:

$Q_m = 2L_oR\,(e^{-kc} - e^{-kt})$

where,

Q_m= maximum expected gas generation flow rate, cubic meters per year

L_o= methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, $year^{-1}$

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill c = 0 and e^{-kc}= 1)

(ii) or sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2\,k\,L_o\,M_i\left(e^{-kt_i}\right)$$

where,

Q_M=maximum expected gas generation flow rate, cubic meters per year

k=methane generation rate constant, $year^{-1}$

L_o=methane generation potential, cubic meters per megagram solid waste

M_i=mass of solid waste in the ith section, megagrams

t_i=age of the ith section, years

(iii)If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 40 CFR 60.755(a)(1) (i) and (ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 40 CFR 60.755(a)(1) (i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2)For the purposes of determining sufficient density of gas collectors for compliance with §60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3)For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge

pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(4) Owners or operators are not required to expand the system as required in 40 CFR 60.755 (a)(3) during the first 180 days after gas collection system startup.

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(6) An owner or operator seeking to demonstrate compliance with §60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in §60.759 shall provide information satisfactory to the Administrator as specified in §60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.755(a)]

In accordance with 40 CFR 60.755(b), for purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.755(b)]

In accordance with 40 CFR 60.755(c), The following procedures shall be used for compliance with the surface methane operational standard as provided in §60.753(d).

(1) After installation of the collection system, the owner or operator shall 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 a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in in 40 CFR 60.755 (d).

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40 CFR 60.755 (c)(4) (i) through (v) shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of §60.753(d).

(i)The location of each monitored exceedance shall be marked and the location recorded.

(ii)Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.

(iii)If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in 40 CFR 60.755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR 60.755 (c)(4)(v) has been taken.

(iv)Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR 60.755 (c)(4) (ii) or (iii) shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in 40 CFR 60.755 (c)(4) (iii) or (v) shall be taken.

(v)For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5)The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.755(c)]

In accordance with 40 CFR 60.755(d), each owner or operator seeking to comply with the provisions in paragraph (c) of this section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1)The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of this part, except that “methane” shall replace all references to VOC.

(2)The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3)To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of this part shall be used.

(4)The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.755(d)]

In accordance with 40 CFR 60.755(e), the provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40.CFR 60.755(e)]

MRRR – (Permit Condition 5.12)

This permit condition (a through e of 40 CFR 60.755) applies to FHMRL when the NMOC emission rate equals or exceeds the 50 Mg per year threshold. FHMRL stated in the application the facility will comply with the procedures listed in 40 CFR 60.755 after the threshold is exceeded.

Permit Condition 5.13

In accordance with 40 CFR 60.756, except as provided in §60.752(b)(2)(i)(B),

(a)Each owner or operator seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1)Measure the gauge pressure in the gas collection header on a monthly basis as provided in §60.755(a)(3); and

(2)Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5); and

(3)Monitor temperature of the landfill gas on a monthly basis as provided in §60.755(a)(5).

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.756(a)]

(b) Not applicable, facility does not have an enclosed combustor.

(c)Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1)A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

(2)A device that records flow to or bypass of the flare. The owner or operator shall either:

(i)Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(ii)Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.756(c)]

(d)Each owner or operator seeking to demonstrate compliance with §60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.756(d)]

(e)Each owner or operator seeking to install a collection system that does not meet the specifications in §60.759 or seeking to monitor alternative parameters to those required by §60.753 through §60.756 shall provide information satisfactory to the Administrator as provided in §60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.756(e)]

(f)Each owner or operator seeking to demonstrate compliance with §60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in §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.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.756(f)]

MRRR – (Permit Condition 5.13)

This permit condition applies to FHMRL after the NMOC emission rate equals or exceeds 50 Mg per year. FHMRL's application states Bannock County will comply with procedures listed in 40 CFR 60.756 (a) through (f) after the threshold is exceeded.

Permit Condition 5.14

In accordance with 40 CFR 60. 757, except as provided in §60.752(b)(2)(i)(B),

(a) Each owner or operator subject to the requirements of this subpart shall submit an initial design capacity report to the Administrator.

(1) Not applicable, facility had fulfilled the requirement of the initial design capacity.

(2) Not applicable, facility had fulfilled the initial design capacity report.

(3) 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 to or 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).

[PTC P-2009.0146, Permit Condition Nos. 9, 16, 4/06/2010; 40 CFR 60.757(a)(3)]

(b) Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate 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.

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and shall be submitted no later than indicated in 40 CFR 60.757 (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for 40 CFR 60.757 (b)(1)(ii) and (b)(3).

(A) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or

(B) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2)The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3)Each owner or operator subject to the requirements of this subpart is exempted from the requirements of 40 CFR 60.757 (b)(1) and (2), after the installation of a collection and control system in compliance with §60.752(b)(2), during such time as the collection and control system is in operation and in compliance with §§60.753 and 60.755.

[PTC P-2009.0146, Permit Condition Nos. 9, 17, 4/06/2010; 40 CFR 60.757(b)]

(c)Each owner or operator subject to the provisions of §60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report required under 40 CFR 60.757(b) in which the emission rate equals or exceeds 50 megagrams per year, except as follows:

(1)If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2)If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in §60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of §60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

[PTC P-2009.0146, Permit Condition Nos. 9, 18, 4/06/2010; 40 CFR 60.757(c)]

(d)Each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. 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).

[PTC P-2009.0146, Permit Condition Nos. 9, 19, 4/06/2010; 40 CFR 60.756(d)]

(e)Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1)The equipment removal report shall contain all of the following items:

(i)A copy of the closure report submitted in accordance with 40 CFR 60.757(d);

(ii)A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii)Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2)The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met.

[PTC P-2009.0146, Permit Condition Nos. 9, 20, 4/06/2010; 40 CFR 60.756(e)]

(f)Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in 40 CFR 60.757 (f)(1) through (f)(6). The initial annual report shall be

submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c).

(1)Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d).

(2)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.

(3)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.

(4)All periods when the collection system was not operating in excess of 5 days.

(5)The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6)The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of §60.755.

PTC P-2009.0146, Permit Condition Nos. 9, 214/06/2010; 40 CFR 60.757(f)]

(g)Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8:

(1)A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2)The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3)The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4)The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and

(5)The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6)The provisions for the control of off-site migration.

[PTC P-2009.0146, Permit Condition Nos. 9, 224/06/2010; 40 CFR 60.757(g)]

MRRR –(Permit Condition 5.14)

Certain portions of 40 CFR 60.757 apply before and after FHMRL's NMOC emission rate equals or exceeds the 50 Mg per year threshold as set forth in sections 4 and 5 of this permit. For clarification (a) FHMRL submitted an initial design capacity report on February 3, 1997. FHMRL has a current design capacity of 7.31 MMg. An amended designed capacity report reflecting that total was filed with DEQ on April 26, 2010. (b) FHMRL calculated a NMOC ermission rate of 7.310 Mg per year for 2009. An annual NMOC emissions report reflecting that total was filed with DEQ on April 21,2010. FHMRL chooses to submit an annual NMOC emission rate reports in compliance with 40 CFR 757(b)(1) and (b)(2). (b)(3) applies to landfills at which NMOC emission rate equals or exceeds 50 Mg per year and FHMRL will comply with the procedures of 40 CFR 60.757(b)(3) after the theshold is met.

(c)FHMRL has made measurements at FHMRL of site specific NMOC concentration for the purposes of scoping prospective performance of the LFG collection system, chooses to comply with Tier 2 procedures to calculate NMOC production for the purposes of determining when NMOC emission rate equals or exceeds the 50 Mg per year threshold.

(d)FHMRL will submit the closure report required when the landfill closes.

(e)FHMRL will submit the equipment removal report required when landfill gas extraction concludes.

(f) and (g) FHMRL will comply with the procedure listed in 40 CFR 60.757 (f) and (g) when the NMOC emission rate threshold of 50 Mg per year is reached.

Permit Condition 5.15

In accordance with 40 CFR 758(a), except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which 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.

[PTC P-2009.0146, Permit Condition Nos. 9, 23, 4/06/2010; 40 CFR 60.758(a)]

In accordance with 40 CFR 758 (b), except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in 40 CFR 60.758(b)(1) through (b)(4) 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 the control device vendor specifications shall be maintained until removal.

(1)Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii):

(i)The maximum expected gas generation flow rate as calculated in §60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii)The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.759(a)(1).

(2) Not applicable, facility does not have an enclosed combustion device.

(3) Not applicable, facility does not have a boiler or process heater.

(4)Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

[PTC P-2009.0146, Permit Condition Nos. 9, 23, 4/06/2010; 40 CFR 60.758(b)]

In accordance with 40 CFR 758 (c), except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall 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.

(1)Not applicable, facility does not have an enclosed combustion device

(2)Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.756.

(3)Not applicable, facility does not have a boiler or process heater.

(4)Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[PTC P-2009.0146, Permit Condition Nos. 9, 23, 4/06/2010; 40 CFR 60.758(c)]

In accordance with 40 CFR 758(d), except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall 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.

(1)Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2)Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

[PTC P-2009.0146, Permit Condition Nos. 9, 23, 4/06/2010; 40 CFR 60.758(d)]

In accordance with 40 CFR 758(e), except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[PTC P-2009.0146, Permit Condition Nos. 9, 23, 4/06/2010; 40 CFR 60.758(e)]

MRRR – (Permit Condition 5.15)

This permit condition has parts that FHMRL is required to follow before and after FHMRL's NMOC emission rate equals or exceeds the 50 Mg per year threshold. FHMRL will comply with procedures listed in (b) through (f) after that threshold is achieved. Prior to the time the threshold is achieved FHMRL has stated the facility will comply with 40 CFR 60 758.(c)(2) and (c)(4).

Permit Condition 5.16

In accordance with 40 CFR 60.759,

(a)Each owner or operator seeking to comply with §60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in §60.752(b)(2)(i)(C) and (D):

(1)The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow

characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

(2) The sufficient density of gas collection devices determined in 40 CFR 60.759(a)(1) shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in 40 CFR 60.759(a)(1) shall control all gas producing areas, except as provided 40 CFR 60.759(a)(3)(i) and (a)(3)(ii).

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under §60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$Q_i = 2\ k\ L_o M_i (e^{-kti})\ (C_{NMOC})\ (3.6 \times 10^{-9})$

where,

Q_i= NMOC emission rate from the ith section, megagrams per year/

k = methane generation rate constant, $year^{-1}$

L_o= methane generation potential, cubic meters per megagram solid waste

M_i= mass of the degradable solid waste in the ith section, megagram

t_i= age of the solid waste in the ith section, years

C_{NMOC}= concentration of nonmethane organic compounds, parts per million by volume

3.6×10^{-9}= conversion factor

(iii) The values for k and C_{NMOC} determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o and C_{NMOC} provided in §60.754(a)(1) or the alternative values from §60.754(a)(5) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided 40 CFR 60.759 (a)(3)(i).

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.759(a)]

In accordance with 40 CFR 60.759 (b), each owner or operator seeking to comply with §60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient

to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.759(b)]

In accordance with 40 CFR 60.759(c), each owner or operator seeking to comply with §60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with §60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in 40 CFR 60.759 (c)(2) shall be used.

(2) For new collection systems, the maximum flow rate shall be in accordance with §60.755(a)(1).

[PTC P-2009.0146, Permit Condition No. 9, 4/06/2010; 40 CFR 60.759(c)]

MRRR – (Permit Condition 5.16)

This permit condition is triggered when FHMRL's NMOC emission rate equals or exceeds 50 Mg per year. These conditions describe the design and methods required to demonstrate compliance with a collection and control system. FHMRL has stated during the permitting process the collection and control system to be installed will meet these standards. FHMRL states in the application FHMRL will comply with procedure listed in parts (a) through (c) after the threshold met.

Permit Condition 5.17

Notification and Reporting Addresses

Any notifications or reporting required by 40 CFR 60, Subparts JJJJ, WWW, and 40 CFR 63, Subpart AAAA shall be submitted to both of the following addresses:

EPA Region 10

Director, Office of Air Quality

1200 Sixth Avenue

(OAQ–107)

Seattle, WA 98101

And,

All information:	Performance test related information only:
Air Quality Permit Compliance	Air Quality Source Test Review

Department of Environmental Quality	Department of Environmental Quality
Pocatello Regional Office	State Office
444 Hospital Way No. 300	1410 N. Hilton St.
Pocatello, ID 83201	Boise, ID 83706
(208) 236-6160	(208) 373-0502

[PTC P-2009.0146, Permit Condition No. 29, 4/6/2010; 40 CFR 60, Subparts JJJJ, WWW, and 40 CFR 63, Subpart AAAA]

7.4 Flare

Permit Condition 6.3

When the landfill is operating at a NMOC emission rate equal to or exceeding the 50 megagram per year limit as determined by40 CFR 60.754, an open flare shall be designed and operated in accordance with 40 CFR 60.18 except as noted in 40 CFR 60.754(e).

[40 CFR 60.752(b)(2)(iii)(A)]

MRRR - (Permit Condition 6.3)

This permit condition is to make FHMRL aware after the facility begins operating an active collection system the visible emissions of the flare will be subject to 40 CFR 60.18.

Landfill Applicable Requirements with NMOC Emission Rate Greater Than or Equal to 50 Mg/yr

Permit Condition 6.4

In accordance with 40 CFR 60.756(c) each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install calibrate , maintain, and operate according to the manufacturer's specifications the following equipment

(1) A heat sensing device, such as an ultrviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicte the continuous presence of a flame.

(2) A device that records flow to or bypass of the flare. The owner or operator shall either:

(i) Install, calibrate, and maintain a gas flow rate, measuring device that shall record the flow to the control device at least every 15 minutes; or

(ii) Secure the bypass valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and that the gas flow is not deverted through by the bypass line.

[40.CFR 60.756(c)]

MRRR - (Permit Condition 6.4)

This permit condition establishes the installation calibration, maintance, and operating conditions of the flare monitoring equipment.

Permit Condition 6.5

In accordance with 40 CFR 60.758(c), except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of 40 CFR Subpart WWW shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 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.

(1) Not applicable, this regulation is for enclosed combustors, this facility has an open flare not an enclosed combustor.

(2) Each owner or operator subject to the provisions of Subpart WWW shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.

(3) Not applicable, this regulation is for a boiler or process heater, this facility does not have either a boiler or a process heater

(3) Each owner or operator seeking to comply with the provisions of Subpart WWW by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[40.CFR 60.758(c)]

MRRR - (Permit Condition 6.5)

This permit condition establishes the type of records and the duration of these records regarding operation of conditions that FHMRL shall maintain when FHMRL becomes a controlled landfill.

7.5 Engine

Permit Condition 7.3
In accordance with 40 CFR 60.4233(e), the permittee must comply with the emission standards in Table 7.3 for their stationary SI ICE.

Table 7.3 to Subpart JJJJ of Part 60—NO_X, CO, and VOC Emission Standards for Stationary SI Landfill/Digester Gas Engines

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[b]	NO_X	CO	VOC[b]
Landfill/Digester Gas Lean Burn	500≥HP<1,350	1/1/2008 7/1/2010	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.
[b]For purposes of Subpart JJJJ, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included

[PTC P-2009.0146, Permit Condition No. 5, 4/6/2010; 40.CFR 60.4233(e)]

MRRR - (Permit Condition 7.3)

The emissions requirements for the engine are incorporated from 40 CFR 60.4233(e).
This permit condition was based on the future engine described in the PTC application. If a different engine is installed, then another permitting action may be required.

Permit Condition 7.4

Emissions from the engine stack, or any other stack, vent, or functionally equivalent opening associated with the engine, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[PTC P-2009.0146, Permit Condition No. 6, 4/6/2010]

MRRR - (Permit Condition 7.4)

The opacity standard from IDAPA 58.01.01.625 was incorporated as a permit condition. No monitoring was required because the engine is not expected to have visible emissions which exceed the standard. The facility-wide condition within Section 3.7 to 3.9 of the permit still applies.

Permit Condition 7.5

In accordance with 40 CFR 60.4243(b), the permittee must demonstrate compliance according to one of the methods specified in (a) or (b) as follows:

(a)Purchasing an engine certified according to procedures specified in Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in (i) or (ii):

(i)If owner or operator operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, owner or operator must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if permittee is an owner or operator.

(ii)If owner or operator do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, owner or operator engine will be considered a non-certified engine, and owner or operator must demonstrate compliance as follows:

If permittee is an owner or operator of a stationary SI internal combustion engine greater than 500 HP, permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, permittee must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b)Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in the engine emission limits section of this permit and according to the requirements specified in the engine testing requirements section of this permit, as applicable, and must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, permittee must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[PTC P-2009.0146, Permit Condition No. 10, 4/06/2010; 40 CFR 60.4243(b)]

MRRR - (Permit Condition 7.5)

The applicable requirements from 40 CFR 60.4243 were incorporated as a permit condition, leaving open the options for having a certified or a non-certified engine.

Permit Condition 7.6

In accordance with 40 CFR 60.4243(g), it is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

[PTC P-2009.0146, Permit Condition No. 11, 4/06/2010; 40 CFR 60.4243(g)]

MRRR - (Permit Condition 7.6)

FHMRL has expressed some concern about this permit condition while reviewing a draft permit. However, this is a PTC condition and is stated in this permit.

Permit Condition 7.7

In accordance with 40 CFR 60.4244, owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this permit condition.

(a)Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 4 to this permit.

Table 4 Requirements for Performance Tests

For each	Complying with the requirement to	You must	Using	llowing requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO_X in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b]of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for NO_X concentration.
		v. Measure NO_X at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17)..	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.

		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3Bb of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for CO concentration.
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17)..	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b]of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for VOC concentration.
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.
		v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A,[cd] Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.

[a] ASTM D6522–00 is incorporated by reference; see 40 CFR 60.17. Also, the permittee may petition the Administrator for approval to use alternative methods for portable analyzer.
[b] The permittee may use ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, for measuring the O_2content of the exhaust gas as an alternative to EPA Method 3B.
[c] The permittee may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (http://www.epa.gov/ttn/emc/prelim/otm11.pdf).

[d] The permittee may use ASTM D6420–99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

(b) The owner or operator may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If the permittee's stationary SI internal combustion engine is non-operational, the owner or operator does not need to startup the engine solely to conduct a performance test; however, the owner or operator must conduct the performance test immediately upon startup of the engine.

(c) The owner or operator must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this permit condition:

$ER = (C_d \times 1.912 \times 10^{-3} \times Q \times T)/HP\text{-}hr$ (Eq. 1)

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d= Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this permit condition:

$ER = (C_d \times 1.164 \times 10^{-3} \times Q \times T)/HP\text{-}hr$ (Eq. 2)

Where:

ER = Emission rate of CO in g/HP-hr.

C_d= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this permit condition:

$ER = (C_d \times 1.833 \times 10^{-3} \times Q \times T)/HP\text{-}hr$ (Eq. 3)

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then owner or operator has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this permit condition. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this permit condition.

$RF_i = C_{Mi}/C_{Ai}$ (Eq. 4)

Where:

RF_i= Response factor of compound i when measured with EPA Method 25A.

C_{Mi}= Measured concentration of compound i in ppmv as carbon.

C_{Ai}= True concentration of compound i in ppmv as carbon.

$C_{icorr} = RF_i \times C_{imeas}$ (Eq. 5)

Where:

C_{icorr} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

RF_i= Response factor of compound i when measured with EPA Method 25A.

C_{imeas} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$C_{Peq} = 0.6098 \times C_{icorr}$ (Eq. 6)

Where:

C_{Peq}= Concentration of compound i in mg of propane equivalent per DSCM.

C_{icorr} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

[PTC P-2009.0146, Permit Condition No. 12, 4/06/2010; 40 CFR 60.4244]

MRRR - (Permit Condition 7.7)

The testing requirements of Subpart JJJJ were incorporated into the permit in case the engine is not certified in accordance with the regulation. If the provisions of 40 CFR 60.4243 for certification are met, then testing is not required. Demonstration of compliance with this permit condition will depend on what type of engine is installed. The permit condition was determined by the type of engine the facility submitted in the PTC application to be installed. This permit condition will be triggered when the facility installs and has the ability to operate the engine. Presently the engine is not installed. The NMOC emission rate is not relevant because the determining factor is the type of engine.

Permit Condition 7.8

In accordance with 40 CFR 60.4245(a), owners and operators of all stationary SI ICE must keep records of the information in paragraphs (1) through (4) of this permit condition.

(1) All notifications submitted to comply with Subpart JJJJ and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[PTC P-2009.0146, Permit Condition No. 26, 4/06/2010; 40 CFR 60.4245((a)]

MRRR - (Permit Condition 7.8)
The requirements of 40 CFR 60.4245(a) were incorporated for recordkeeping and reporting.

The permit conditions involving the stationary engine are source driven regulations and not determined by the NMOC emissions rate. These stationary engine permit conditions were developed for the type of engine submitted to be installed with the application for the permit to construct. The facility may or may not eventually install this or another engine that may or may not be applicable the permit conditions. But until the facility installs the applicable engine (engine in the PTC application) these permit conditions do not apply. If the facility chooses to install a different engine not applicable to these conditions, the facility should proceed with the proper permitting action.

Permit Condition 7.9

In accordance with 40 CFR 60.4245(c), owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231 must submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the information in paragraphs (1) through (5) of this permit condition.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

[PTC P-2009.0146, Permit Condition No. 27, 4/06/2010; 40 CFR 60.4245(c)]

MRRR - (Permit Condition 7.9)

The requirements of 40 CFR 60.4245(c) were incorporated for recordkeeping and reporting.
The permit conditions involving the stationary engine are source driven regulations and are not determined by the NMOC emissions rate. These stationary engine permit conditions were developed for the type of engine submitted with the application for the permit to construct. The facility may or may install this engine or another engine that may or may not be applicable to the permit conditions. Until the facility installs an engine, the permit condition does not apply. If the facility chooses to install a different engine not applicable to these conditions, the facility should proceed with the proper permitting action.

Permit Condition 7.10

In accordance with 40 CFR 60.4245(d), owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in the performance testing requirement section of this PTC within 60 days after the test has been completed.

[PTC P-2009.0146, Permit Condition No. 28, 4/06/2010; 40 CFR 60.4245(d)]

MRRR - (Permit Condition 7.10)

The requirements of 40 CFR 60.4245(d) were incorporated for recordkeeping and reporting.

The permit conditions involving the stationary engine are source driven regulations and not determined by the NMOC emissions rate. These stationary engine permit conditions were developed for the type of engine submitted to be installed with the application for the permit to construct. The facility may or may not install this engine. Thus the installed engine may or may not be applicable to these permit conditions. Until the facility installs the applicable engine, these permit conditions do not apply. If the facility chooses to install a different engine not applicable to these conditions, the facility should proceed with the proper permitting action

Permit Condition 7.11

Any notifications or reporting required by 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart AAAA shall be submitted to both of the following addresses:

EPA Region 10
Director, Office of Air Quality
1200 Sixth Avenue
(OAQ–107)
Seattle, WA 98101

And,

All information:	Performance test related information only:
Air Quality Permit Compliance	Air Quality Source Test Review
Department of Environmental Quality	Department of Environmental Quality
Pocatello Regional Office	State Office
444 Hospital Way No. 300	1410 N. Hilton St.
Pocatello, ID 83201	Boise, ID 83706
(208) 236-6160	(208) 373-0502

[PTC P-2009.0146, Permit Condition No. 29, 4/06/2010; 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart AAAA]

MRRR - (Permit Condition 7.11)

This specifies the addresses to send information.

7.6 General Provisions

Unless expressly stated, there are no MRRR for the general provisions.

General Compliance, Duty to Comply

The permittee must comply with the terms and conditions of the permit.

[PTC P-2009.0146, Permit Condition No. 30, 4/06/2010; IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]

General Compliance, Need to Halt or Reduce Activity Not a Defense

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]

General Compliance, Duty to Supplement or Correct Application

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

Reopening, Additional Requirements, Material Mistakes, Etc.

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/94; IDAPA 58.01.01.386, 3/19/99; 40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

Reopening, Permitting Actions

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If the permittee files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

Property Rights

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

[IDAPA 58.01.01.322.15.e, 5/1/94; 40 CFR 70.6(a)(6)(iv)]

Information Requests

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code §39-108; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.f, 4/5/00; 40 CFR 70.6(a)(6)(v)]

Information Requests, Confidential Business Information

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code §9-342A and applicable implementing regulations including IDAPA 58.01.01.128.

[IDAPA 58.01.01.322.15.g, 5/1/94; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

Severability

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[PTC P-2009.0146, Permit Condition No. 44, 4/06/2010; IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

Changes Requiring Permit Revision or Notice

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/08; IDAPA 58.01.01.322.15.i, 3/19/99; IDAPA 58.01.01.380-386, 7/1/02; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA

58.01.01. 383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/02; IDAPA 58.01.01.209.05, 4/11/06; 40 CFR 70.4(b)(14) and (15)]

Federal and State Enforceability

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/94; IDAPA 58.01.01.322.15.k, 3/23/98; Idaho Code §39-108; 40 CFR 70.6(b)(1), (2)]

Inspection and Entry

Upon presentation of credentials, the facility shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[PTC P-2009.0146, Permit Condition No. 33, 4/06/2010; Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

New Applicable Requirements

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

Fees

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/03; 40 CFR 70.6(a)(7)]

Certification

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[PTC P-2009.0146, Permit Condition No. 40, 4/06/2010; IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

Renewal

The permittee shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/00; 40 CFR 70.5(a)(1)(iii)]

If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and

conditions of this permit including any permit shield that may have been granted pursuant to IDAPA 58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.

[IDAPA 58.01.01.322.15.p, 5/1/94; 40 CFR 70.7(b)]

Permit Shield

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
  - DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.
- The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).
- Nothing in this permit shall alter or affect the following:
  - Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
  - The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
  - The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code §39-108 and IDAPA 58.01.01.122.

[Idaho Code §39-108 and 112; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.m, 325.01, 5/1/94; IDAPA 58.01.01.325.02, 3/19/99; IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/99; 40 CFR 70.6(f)]

Compliance Schedule and Progress Reports

- For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
- For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.
- For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.
- For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.9, 5/1/94; IDAPA 58.01.01.314.10, 4/5/00; 40 CFR 70.6(c)(3) and (4)]

Periodic Compliance Certification

The permittee shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as specified.

- Compliance certifications for all emissions units shall be submitted annually unless otherwise specified;

- All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[PTC P-2009.0146, Permit Condition No. 40, 4/06/2010; IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 70.6(c)(5)(iii) as amended, 62 Fed. Reg. 54900, 54946 (10/22/97); 40 CFR 70.6(c)(5)(iv)]

False Statements

The permittee may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[PTC P-2009.0146, Permit Condition No. 41, 4/06/2010; IDAPA 58.01.01.125, 3/23/98]

No Tampering

The permittee may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[PTC P-2009.0146, Permit Condition No. 42, 4/06/2010; IDAPA 58.01.01.126, 3/23/98]

Semiannual Monitoring Reports.

In addition to all applicable reporting requirements identified in this permit, the permittee shall submit reports of any required monitoring at least every six months as specified.

[PTC P-2009.0146, Permit Condition No. 21, 4/06/2010; IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.322.08.c, 4/5/00; 40 CFR 70.6(a)(3)(iii)]

Reporting Deviations and Excess Emissions

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.08.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition
- Emission control device does not meet a required operating condition
- Observations or collected data that demonstrate noncompliance with an emissions standard
- Failure to comply with a permit term that requires a report

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/11/06; 40 CFR 70.6(a)(3)(iii)]

Permit Revision Not Required, Emissions Trading

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/00; 40 CFR 70.6(a)(8)]

Emergency

In accordance with IDAPA 58.01.01.332, an “emergency” as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/00; 40 CFR 70.6(g)]

PTC General Compliance

The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC P-2009.0146, Permit Condition No.31, 4/6/2010; IDAPA 58.01.01.211, 5/1/94]

Nothing in this permit is intended to relieve, or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[PTC P-2009.0146, Permit Condition No.32, 4/6/2010; IDAPA 58.01.01.212.01, 5/1/94]

8. REGULATORY REVIEW

8.1 Attainment Designation (40 CFR 81.313)

The facility is located in Bannock which is designated as attainment or unclassifiable for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_x, and Ozone. Reference 40 CFR 81.313.

8.2 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

The facility is not classified as a major facility as defined in IDAPA 58.01.01.008.10. The facility is a natural minor facility, because without limits on the potential to emit, the emissions of regulated air pollutants are below major source thresholds. The facility is a Tier I source. IDAPA 58.01.01.860.04 requires large municipal landfills to obtain Tier I permits. Therefore, the requirements of 40 CFR 60 Subpart WWW and IDAPA 58.01.01.300–399 are applicable to this permitting action.

IDAPA 58.01.01.301..... Tier I Operating Permit
IDAPA 58.01.01.118. Tier I Source. Any of the following: (5-1-94)

a. Any source located at any major facility as defined in Section 008;

b. Any source, including an area source, subject to a standard, limitation, or other requirement under 42 U.S.C. Section 7411 or 40 CFR Part 60, and required by EPA to obtain a Part 70 permit;

c. Any source, including an area source, subject to a standard or other requirement under 42 U.S.C. Section 7412, 40 CFR Part 61 or 40 CFR Part 63, and required by EPA to obtain a Part 70 permit, except that a source is not required to obtain a permit solely because it is subject to requirements under 42 U.S.C. Section 7412(r);

d. Any Phase II source; and

e. Any source in a source category designated by the Department.

8.3 PSD Classification (40 CFR 52.21)

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

8.4 NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart Cc	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills

This section applies and is mainly instructions to the state for writing rules for MSW landfills.

40 CFR 60, Subpart WWW Standards of Performance for Municipal Solid Waste Landfills
§ 60.750 Applicability, designation of affected facility, and delegation of authority.

(a) The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. Physical or operational changes made to an existing MSW landfill solely to comply with subpart Cc of this part are not considered construction, reconstruction, or modification for the purposes of this section.

This landfill is currently in use. Therefore, the provisions of this subpart apply.

§ 60.752 Standards for air emissions from municipal solid waste landfills.

(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the Administrator as provided in §60.757(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this subpart except as provided for in paragraphs (a)(1) and (a)(2) of this section.

The current design capacity of the landfill is 7.31 million megagrams, which is more than 2.5 million megagrams. The initial design capacity report required in this section has already been submitted, so it is not written as a permit condition in this permit.

(1) The owner or operator shall submit to the Administrator an amended design capacity report, as provided for in §60.757(a)(3).

(2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §60.752(b) through §60.759 of this subpart on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with the provision of paragraph (b) of this section.

(b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in §60.754. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b)(1)(ii) of this subpart. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

The facility projects that the design capacity will increase to 7.31 million megagrams when the New Cell 4 portion comes on line, which is projected to be in 2014. At that point, Paragraph 752(b) of this section applies to the facility. This paragraph requires that a collection and control system be installed if the NMOC emissions are equal to or greater than 50 megagrams per year, which is projected to occur in 2024, or, if less than 50 megagrams, annually calculate an NMOC emission rate and submit an annual emissions report, or can submit a report every five years under the conditions described in section 757(b)(1)(ii). There is the option of complying with the provisions of installing a collection and control system prior to the NMOC emissions being equal to or greater than 50 megagrams per year.

(1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in §60.757(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in §60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

The NMOC emissions must be recalculated annually, but can be reported only once every five years if less than 50 megagrams, in accordance with 757(b)(1)(ii).

(A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (b)(2) of this section.

The landfill is projected to reach the 50 megagrams/yr NMOC emissions level in about 2024. At the time this emissions threshold is reached, the provisions for a collection and control system must be met. The facility is currently voluntarily installing a collection and control system although it is not yet required.

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in §60.757(d).

The following section is not required until the NMOC emission rate is equal to or greater than 50 megagrams per year, unless the facility chooses to comply with it prior to that date in accordance with 40 CFR 60.752(b). FHMRL has not voluntarily chosen to comply with the same. Detailed permit conditions were not written to address this situation because the permit application did not indicate that this option would be chosen.

(2)If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:

(A)The collection and control system as described in the plan shall meet the design requirements of paragraph (b)(2)(ii) of this section.

(B)The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§60.753 through 60.758 proposed by the owner or operator.

(C)The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.

(D)The Administrator shall review the information submitted under paragraphs (b)(2)(i) (A),(B) and (C) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

(ii)Install a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2).

(A)An active collection system shall:

(1)Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(2)Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i)5 years or more if active; or
(ii)2 years or more if closed or at final grade.
(3)Collect gas at a sufficient extraction rate;
(4)Be designed to minimize off-site migration of subsurface gas.
(B)A passive collection system shall:

(1)Comply with the provisions specified in paragraphs (b)(2)(ii)(A)(1), (2),and (2)(ii)(A)(4) of this section.

(2)Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under §258.40.

(iii) Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of this section.

(A) An open flare designed and operated in accordance with §60.18 except as noted in §60.754(e);

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in §60.754(d).

(1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756;

(C) 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 paragraph (b)(2)(iii) (A) or (B) of this section.

(iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756.

(v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (b)(2)(v) (A), (B), and (C) of this section are met:

(A) The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d);

(B) The collection and control system shall have been in operation a minimum of 15 years; and

(C) Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(c) For purposes of obtaining an operating permit under title V of the Act, the owner or operator of a MSW landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under part 70 or 71 of this chapter, unless the landfill is otherwise subject to either part 70 or 71. For purposes of submitting a timely application for an operating permit under part 70 or 71, the owner or operator of a MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters, and not otherwise subject to either part 70 or 71, becomes subject to the requirements of §§70.5(a)(1)(i) or 71.5(a)(1)(i) of this chapter, regardless of when the design capacity report is actually submitted, no later than:

(1) June 10, 1996 for MSW landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996;

(2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

The permit requires the facility to apply for a Title V permit within 12 months of the landfill becoming a Tier I source, which occurs 90 days after the date that the landfill has a design capacity of equal to or greater than 2.5 million megagrams. This regulation allows 90 days after modification before the facility becomes subject to the Title V requirements. The Title V requirements allow 12 months before an application must be submitted. The permittee submitted its Title V application on November 9, 2010, that was determined to be complete on January 7, 2011.

(d) When a MSW landfill subject to this subpart is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under part 70 or 71 of this chapter for the landfill if the landfill is not otherwise subject to the requirements of either part 70 or 71 and if either of the following conditions are met:

(1) The landfill was never subject to the requirement for a control system under paragraph (b)(2) of this section; or

(2) The owner or operator meets the conditions for control system removal specified in paragraph (b)(2)(v) of this section.

This landfill is not closed.

The following section applies when a collection and control system is used in order to demonstrate compliance with 40 CFR 60.752(b)(2). It appears from the application that this option is not being chosen, and it is not required until the NMOC emissions equal or exceed 50 megagrams per year. FHMRL is voluntary installing a collection and control system, but has not elected to comply with 40 CFR 60.752(b)(2) by voluntary complying with 40 CFR 60.752(b)(2). FHMRL is not a controlled landfill. FHMRL has elected to monitor the NMOC emissions rate under 40 CFR 60.754. Therefore, the requirements set forth below are not applicable until the NMOC emissions equal or exceed 50 megagrams per year. The provisions have been incorporated into the permit because they were conditions of the issued PTC on April 6, 2010, but the requirement become applicable when the NMOC emissions rate equals 50 megagrams per year.

§ 60.753 Operational standards for collection and control systems.
Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of §60.752(b)(2)(ii) of this subpart shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart.

(2) Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

§ 60.754 Test methods and procedures.

This section details the requirements for testing and must be complied with for the applicable testing.

§ 60.755 Compliance provisions.

This section details compliance requirements for a gas collection system when used to show compliance with §60.752(b)(2)(ii).

§ 60.756 Monitoring of operations.

This section specifies details about facilities seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system. At this time, the facility has not proposed showing compliance under this option. The facility will show compliance under this option after NMOC emissions rate equals or exceeds 50 megagrams per year.

§ 60.757 Reporting requirements.

Except as provided in §60.752(b)(2)(i)(B),

(a) Each owner or operator subject to the requirements of this subpart shall submit an initial design capacity report to the Administrator.

(1) The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required by §60.7(a)(1) and shall be submitted no later than:

(i) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996 or

(ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(2) The initial design capacity report shall contain the following information:

(i) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the State, local, or tribal agency responsible for regulating the landfill.

(ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the State, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The State, Tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

This was done on April 21, 2010, so it is not in the permit as a requirement.

(3) 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 to or 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).

This action was completed on April 21, 2010.

(b) Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate 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.

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and shall be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in paragraphs (b)(1)(ii) and (b)(3) of this section.

(A) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or

(B) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of paragraphs (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with §60.752(b)(2), during such time as the collection and control system is in operation and in compliance with §§60.753 and 60.755.

This section has been incorporated into the permit.

(c) Each owner or operator subject to the provisions of §60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report required under paragraph (b) of this section in which the emission rate equals or exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in §60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of §60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

This section and the requirements of 40 CFR 60.753(b) will be applicable when the NMOC emission rate reaches 50 megagrams per year.

(d) Each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. 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).

This requirement was referenced in the permit.

(e) Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (d) of this section;

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met.

This requirement was referenced in the permit.

(f) Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d).

(2) 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.

(3) 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.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of §60.755.

This section only applies if the permittee chooses the option or is required to comply with the provisions of 752(b)(2). The requirement is referenced in the permit, but not copied in full.

(g) Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

This section may apply to the facility in the future, so it was referenced in the permit.

§ 60.758 Recordkeeping requirements.

(a) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which 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) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of this section 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 the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in §60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in §60.759(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts:

(i) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in §60.752(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

This section was included as a permit condition. Sections (b)(1) through (4) were referenced.

(c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall 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.

(2) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.756.

(4) Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

This section (c) was referenced in the permit as a permit condition.

(d) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall 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.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under §60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in §60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in §60.759(a)(3)(ii).

(e) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

The operational standards in 40 CFR 60.753 apply to collection systems that are required to be installed in accordance with 40 CFR 60.752(b)(ii).

(f) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of "design capacity", shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

This was performed on April 21, 2010.

§ 60.759 Specifications for active collection systems.

This section details construction requirements of the collection system for sources seeking to comply by 752(b).

40 CFR 60, Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(Break in Section)

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

The Cat 3516 engine that is contemplated for the Bannock County waste-to-energy project is a landfill gas lean-burn engine rated at 1148 bhp, for which construction will commence after June 12, 2006. The requirements of this subpart therefore apply to the Bannock County project.

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

40 CFR 1039.140 Definition of maximum engine power:

§ 1039.140 What is my engine's maximum engine power?

(a) An engine configuration's maximum engine power is the maximum brake power point on the nominal power curve for the engine configuration, as defined in this section. Round the power value to the nearest whole kilowatt.

(b) The nominal power curve of an engine configuration is the relationship between maximum available engine brake power and engine speed for an engine, using the mapping procedures of 40 CFR part 1065, based on the manufacturer's design and production specifications for the engine. This information may also be expressed by a torque curve that relates maximum available engine torque with engine speed.

(c) The nominal power curve must be within the range of the actual power curves of production engines considering normal production variability. If after production begins it is determined that your nominal power curve does not represent production engines, we may require you to amend your application for certification under §1039.225.

(d) Throughout this part, references to a specific power value or a range of power values for an engine are based on maximum engine power. For example, the group of engines with maximum engine power above 560 kW may be referred to as engines above 560 kW.

The landfill's engine will be a lean-burn spark ignition internal combustion engine manufactured after January 1, 2008 with an engine power of 1148 bhp and 815 kW at 100% load. The engine is subject to the provisions of this subpart in accordance with 40 CFR 60.4230(a)(4)(ii).

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

40 CFR 1068.201(i) is as follows:

(i) If you want to take an action with respect to an exempted or excluded engine/equipment that is prohibited by the exemption or exclusion, such as selling it, you need to certify the engine/equipment. We will issue a certificate of conformity if you send us an application for certification showing that you meet all the applicable requirements from the standard-setting part and pay the appropriate fee. Alternatively, we may allow you to include in an existing certified engine family those engines/equipment you modify (or otherwise demonstrate) to be identical to engines/equipment already covered by the certificate. We would base such an approval on our review of any appropriate documentation. These engines/equipment must have emission control information labels that accurately describe their status.

Because the engine is not yet purchased, it is unknown whether the engine will be certified. Therefore, permit conditions are written to be in accordance with the rule.

The next section of the rule, *Emission Standards for Manufacturers*, does not apply because the facility is not manufacturing the engine. Any sections of the rule that apply to manufacturers were not included in this analysis.

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

The engine will have maximum engine power greater than 25 HP, so this part does not apply.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

The engine will not use gasoline.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

The Cat 3516 engine that is contemplated for the Bannock County waste-to-energy project is a landfill gas lean-burn engine rated at 1148 bhp, for which construction will commence after June 12, 2006 . It will not burn gasoline nor will it burn LPG. The requirements of 40 CFR 60.4233 (a) through (c) do not apply to the Bannock County project.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

The maximum engine power is greater than 100 HP.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

The engine will have a maximum power of greater than 100 HP. It is not known if the engine will be manufactured prior to January 1, 2011 or if it will be certified. The manufacturer's specification sheet was included in the application and shows that the CO emission rate is less than the limits specified in Table 1. Table 1 is as follows:

Table 1 to Subpart JJJJ of Part 60—NO_X, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
Non-Emergency SI Natural Gas[b] and Non-Emergency	*100≤HP<500*	*7/1/2008*	*2.0*	*4.0*	*1.0*	*160*	*540*	*86*

SI Lean Burn LPG[b]		*1/1/2011*	*1.0*	*2.0*	*0.7*	*82*	*270*	*60*
Non-Emergency SI Lean Burn Natural Gas and LPG	*500≥HP<1,350*	*1/1/2008* *7/1/2010*	*2.0* *1.0*	*4.0* *2.0*	*1.0* *0.7*	*160* *82*	*540* *270*	*86* *60*
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500=≥HP<1,350)	*HP≥500* *HP≥500*	*7/1/2007* *7/1/2010*	*2.0* *1.0*	*4.0* *2.0*	*1.0* *0.7*	*160* *82*	*540* *270*	*86* *60*
Landfill/Digester Gas (except lean burn 500≥HP<1,350)	*HP<500*	*7/1/2008* *1/1/2011*	*3.0* *2.0*	*5.0* *5.0*	*1.0* *1.0*	*220* *150*	*610* *610*	*80* *80*
	HP≥500	*7/1/2007* *7/1/2010*	*3.0* *2.0*	*5.0* *5.0*	*1.0* *1.0*	*220* *150*	*610* *610*	*80* *80*
Landfill/Digester Gas Lean Burn	*500≥HP<1,350*	*1/1/2008* *7/1/2010*	*3.0* *2.0*	*5.0* *5.0*	*1.0* *1.0*	*220* *150*	*610* *610*	*80* *80*
Emergency	*25>HP<130*	*1/1/2009*	*[c]10* *2.0*	*387* *4.0*	*N/A* *1.0*	*N/A* *160*	*N/A* *540*	*N/A* *86*
	HP≥130							

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.
[b]Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2A do not have to comply with the CO emission standards of Table 1 of this subpart.
[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X+HC.
[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

The engine will not be modified or reconstructed.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

The facility has not indicated that a petition will be made.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

40 CFR 1048 applies to nonroad engines. Nonroad engine is defined as follows:

Nonroad engine has the meaning given in 40 CFR 1068.30. In general this means all internal-combustion engines except motor vehicle engines, stationary engines, engines used solely for competition, or engines used in aircraft. This part does not apply to all nonroad engines (see §1048.5).

The engine used by the landfill is a stationary engine, so is not subject to this section.

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

This applies. A separate permit condition is not required because the emission limit in the permit does not have a time limit.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

The engine will not use gasoline.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

These deadlines are past. Therefore, these rules are not applicable to the engine in this permit.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

The engine is not an emergency stationary SI ICE.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

The engine is not less than or equal to 25 HP.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

The permit requires the meter to be installed if the engine is built on or after July 1, 2010.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

The engine is not an emergency engine.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

The engine is not an emergency engine.

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

The engine is not required to comply with the emission standards specified in §60.4233(a) through (c) because of size and type of fuel used.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

The engine must comply with the emission standards specified in §60.4233(e).

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

These sections were incorporated into the permit as a permit condition, not including (a)(2)(i), (a)(2)(ii), and (b)(2)(i) which do not apply to this engine because of the HP rating of the engine.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

The engine is not required to comply with the emission standards specified in §60.4233(f).

(d) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

The engine is not an emergency unit so this section does not apply.

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

The engine does not operate on natural gas.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

The engine is greater than 500 HP.

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

It is not known if this engine has catalysts, so this requirement was incorporated as a permit condition in case this control equipment is present.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

These dates are past, so the engine will not be subject to this requirement.

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

[As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load]

For each	***Complying with the requirement to***	***You must***	***Using***	***According to the following requirements***
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	*a. limit the concentration of NO_X in the stationary SI internal combustion engine exhaust.*	*i. Select the sampling port location and the number of traverse points;*	*(1) Method 1 or 1A of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].*	*(a) If using a control device, the sampling site must be located at the outlet of the control device.*
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	*(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].*	*(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration*
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	*(3) Method 2 or 19 of 40 CFR part 60.*	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	*(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).*	*(c) Measurements to determine moisture must be made at the same time as the measurement for NO_X concentration.*
		v. Measure NO_X at the exhaust of the stationary internal combustion engine.	*(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).*	*(d) Results of this test consist of the average of the three 1-hour or longer runs.*
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	*i. Select the sampling port location and the number of traverse points;*	*(1) Method 1 or 1A of 40 CFR part 60, appendix A.*	*(a) If using a control device, the sampling site must be located at the outlet of the control device.*
		ii. Determine the	*(2) Method 3, 3A, or 3Bb of 40 CFR*	*(b) Measurements to*

		O_2concentration of the stationary internal combustion engine exhaust at the sampling port location;	*part 60, appendix A or ASTM Method D6522–00(2005)[a].*	*determine O_2concentration must be made at the same time as the measurements for CO concentration.*
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	*(3) Method 2 or 19 of 40 CFR part 60.*	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	*(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).*	*(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.*
		v. Measure CO at the exhaust of the stationary internal combustion engine.	*(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).*	*(d) Results of this test consist of the average of the three 1-hour or longer runs*
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust.	*i. Select the sampling port location and the number of traverse points;*	*(1) Method 1 or 1A of 40 CFR part 60, appendix A.*	*(a) If using a control device, the sampling site must be located at the outlet of the control device.*
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location;	*(2) Method 3, 3A, or 3B[b]of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a]*	*(b) Measurements to determine O_2concentration must be made at the same time as the measurements for VOC concentration.*
		iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	*(3) Method 2 or 19 of 40 CFR part 60.*	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	*(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).*	*(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.*
		v. Measure VOC at the exhaust of the stationary internal combustion engine.	*(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A,[cd]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).*	*(d) Results of this test consist of the average of the three 1-hour or longer runs.*

[a]ASTM D6522–00 is incorporated by reference; see 40 CFR 60.17. Also, the permittee may petition the Administrator for approval to use alternative methods for portable analyzer.
[b]The permittee may use ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, for measuring the O_2content of the exhaust gas as an alternative to EPA Method 3B.
[c]The permittee may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (http://www.epa.gov/ttn/emc/prelim/otm11.pdf).

[d]*The permittee may use ASTM D6420–99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.*

This requirement applies if performance testing is required based on the choices made in previous sections of this regulation. A certified engine does not require testing if the specified maintenance and recordkeeping are followed, as detailed in previous sections of this statement of basis.

(b) The owner or operator may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If the owner or operator's stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, owner or operator must conduct the performance test immediately upon startup of the engine.

(c) The owner or operator must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NOXmass per unit output emission limitation, convert the concentration of NOXin the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:
ER = Emission rate of NO_X in g/HP-hr.
Cd= Measured NO_X concentration in parts per million by volume (ppmv).
1.912×10−3 = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.
Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:
ER = Emission rate of CO in g/HP-hr.
Cd= Measured CO concentration in ppmv.
1.164×10−3 = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.
Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:
ER = Emission rate of VOC in g/HP-hr.
Cd= VOC concentration measured as propane in ppmv.
1.833×10−3 = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.
Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.
T = Time of test run, in hours.
HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:
RFi= Response factor of compound i when measured with EPA Method 25A.
CMi= Measured concentration of compound i in ppmv as carbon.
CAi= True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:
Cicorr= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.
Cimeas= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:
CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators
§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
(2) Maintenance conducted on the engine.
(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

These conditions apply and are incorporated into the permit. 40 CFR 60.4243(a)(2) does not apply directly because of size and type of fuel used, but this section is referenced in the next section, 40 CFR 60.4243(b). Therefore, to avoid errors in interpretation, the permit condition quotes the regulation exactly.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

This section (b) only applies to emergency ICE, not to this facility.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.
(1) Name and address of the owner or operator;
(2) The address of the affected source;
(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
(4) Emission control equipment; and
(5) Fuel used.
(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.
This requirement (c) applies to non-certified engines. Because it is not known if the engine will be certified, this was incorporated as a permit condition.
General Provisions
§ 60.4246 What parts of the General Provisions apply to me?
Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to FHMRL.
This table lists General Provisions 40 CFR 60.1 through 60.19, excluding 60.13.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and is subject to the requirements of 40 CFR 63, Subpart AAAA National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills once the NMOC emission rate of FHMRL equals or is greater than 50 Mg/yr. Refer to the Title V Classification section for additional information.

40 CFR 63, Subpart AAAA ..... National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

40 CFR 63.1935

(a) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs (a)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that 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 as calculated according to §60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.

This landfill is not a major source. It will have a design capacity of more than 2.5 million Mg. In the future, it is anticipated that the uncontrolled NMOC calculated emissions will equal or exceed 50 megagrams per year. At that time, this section will be applicable.

40 CFR 63.1940

(a) An affected source of this subpart is a MSW landfill, as defined in §63.1990, that meets the criteria in §63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

(b) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in 40 CFR 63.2 of subpart A.

(c) An affected source of this subpart is existing if it is not new.

FHMRL currently is not an affected source and is not expected to become an affected source until its NMOC emissions rate is equal to or greater than 50 megagrams per year.

40 CFR 63.1945

(a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003 or at the time you begin operating, whichever is last.

(b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.

(c) If your landfill is a new affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(d) If your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later.

(e) If your landfill is a new affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements of §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(f) If your landfill is an existing affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later.

This will be a new affected source, so it must comply with this subpart at the time it begins operating as an affected source.

40 CFR 63.1947 and 1952 address bioreactors, which the facility did not request in the permit application.

40 CFR.63.1950

FHMRL is no longer required to comply with the requirements of this subpart when FHMRL are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to FHMRL's landfill.

63.1955

(a) You must fulfill one of the requirements in paragraph (a)(1) or (2) of this section, whichever is applicable:

(1) Comply with the requirements of 40 CFR part 60, subpart WWW.

(2) Comply with the requirements of the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc.

(b) If you are required by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in §§63.1960 through 63.1985 and with the general provisions of this part specified in table 1 of this subpart.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in §63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average.

(d) If you own or operate a bioreactor that is located at a MSW landfill that is not permanently closed and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m3 , then you must meet the requirements of paragraph (a) and the additional requirements in paragraphs (d)(1) and (2) of this section.

(1) You must comply with the general provisions specified in Table 1 of this subpart and §§63.1960 through 63.1985 starting on the date you are required to install the gas collection and control system.

(2) You must extend the collection and control system into each new cell or area of the bioreactor prior to initiating liquids addition in that area, instead of the schedule in 40 CFR 60.752(b)(2)(ii)(A)(2).

This section requires the facility to comply with subpart WWW, which is already in the permit. In addition, if the facility is required to comply with subpart WWW 40 CFR 60.752(b)(2) to install a collection and control system, then additional sections of this rule applies.

§ 63.1960 How is compliance determined?

Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

A permit condition was written to require an SSM plan to be written when a collection and control system is required by NSPS Subpart WWW to be installed.

40 CFR 63.6(e)(3) is as follows:

(3)Startup, shutdown, and malfunction plan. (i) The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The startup, shutdown, and malfunction plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to—

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii)[Reserved]

(iii)When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in §63.10(d)(5).

(iv)If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with §63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (e)(3)(viii) of this section, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator. The Administrator may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(1)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of this section;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in §63.2.

(viii)The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by §63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix)The title V permit for an affected source must require that the owner or operator develop a startup, shutdown, and malfunction plan which conforms to the provisions of this part, but may do so by citing to the relevant subpart or subparagraphs of paragraph (e) of this section. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter and the elements of the startup, shutdown, and malfunction plan shall not be considered an applicable requirement as defined in §70.2 and §71.2 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

40 CFR 63.1965 What is a deviation?

A deviation is defined in §63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(a)A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.

(b)A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

(c)A deviation occurs when a SSM plan is not developed or maintained on site.

This information should be in the SSM plan.

§ 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?

Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) of this section are not to be included in any average computed under this subpart:

(a)Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(b) Startups.

(c)Shutdowns.

(d) Malfunctions.

Notifications, Records, and Reports

§ 63.1980 What records and reports must I keep and submit?

(a) Keep records and reports as specified in 40 CFR part 60, subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.

This was added to the 40 CFR 60.757(f) permit condition.

(b) You must also keep records and reports as specified in the general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

Subsections 1985 and 1990 are enforcement agency and definitions.

Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA

Part 63 Citation	***Description***	***Explanation***
63.1(a)	*Applicability: general applicability of NESHAP in this part*	*Affected sources are already subject to the provisions of paragraphs (a)(10)–(12) through the same provisions under 40 CFR, part 60 subpart A.*
63.1(b)	*Applicability determination for stationary sources*	
63.1(e)	*Title V permitting*	
63.2	*Definitions*	
63.4	*Prohibited activities and circumvention*	*Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A.*
63.5(b)	*Requirements for existing, newly constructed, and reconstructed sources*	
63.6(e)	*Operation and maintenance requirements, startup, shutdown and malfunction plan provisions*	
63.6(f)	*Compliance with nonopacity emission standards*	*Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A.*
63.10(b)(2)(i)–(b)(2)(v)	*General recordkeeping requirements*	

63.10(d)(5)	*If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event*	
63.12(a)	*These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified*	
63.15	*Availability of information and confidentiality*	

This table was referenced in the permit conditions, but not copied in.

MANDATORY GREENHOUSE GAS REPORTING Applicability (40 CFR 98)

This facility is subject to 40 CFR 98 Subpart HH – Municipal Solid Waste Landfills

§ 98.340(a) This source category applies to municipal solid waste (MSW) land fills that accepted waste on or after January 1, 1980.

§ 98.340(c)This source category consists of the following sources at municipal solid waste (MSW) landfills. Landfills, landfill gas collection systems, and landfill gas destruction devices (including flares).

§ 98.341 Reporting threshold

You must report GHG emissions under this subpart if your facility contains a MSW landfill and the facility meets the requirements of §98.2(a)(1).

§98.2(a)(1) A facility that contains any source category that is listed in Table A-3 of this subpart in any calender year starting with 2010. For this facility, the annual GHG report must cover stationary fuel combustion sources (subpart C of this part), miscellaneous use of carbonates (subpart U of this part), and all applicable source categories listed in Table A-3 and Table A-4 of this subpart

Table A–3 to Subpart A—Source Category List for §98.2(a)(1)

Source Categories[a] Applicable in 2010 and Future Years
Electricity generation units that report CO_2 mass emissions year round through 40 CFR part 75 (subpart D).
Adipic acid production (subpart E).
Aluminum production (subpart F).
Ammonia manufacturing (subpart G).
Cement production (subpart H).
HCFC–22 production (subpart O).
HFC–23 destruction processes that are not collocated with a HCFC–22 production facility and that destroy more than 2.14 metric tons of HFC–23 per year (subpart O).
Lime manufacturing (subpart S).
Nitric acid production (subpart V).
Petrochemical production (subpart X).

Petroleum refineries (subpart Y).
Phosphoric acid production (subpart Z).
Silicon carbide production (subpart BB).
Soda ash production (subpart CC).
Titanium dioxide production (subpart EE).
Municipal solid waste landfills that generate CH_4 in amounts equivalent to 25,000 metric tons CO_2e or more per year, as determined according to subpart HH of this part.
Manure management systems with combined CH_4 and N_2O emissions in amounts equivalent to 25,000 metric tons CO_2e or more per year, as determined according to subpart JJ of this part.
Additional Source Categories[a] Applicable in 2011 and Future Years
Electrical transmission and distribution equipment use at facilities where the total nameplate capacity of SF_6 and PFC containing equipment exceeds 17,820 pounds, as determined under §98.301 (subpart DD).
Underground coal mines liberating 36,500,000 actual cubic feet of CH_4 or more per year (subpart FF).
Geologic sequestration of carbon dioxide (subpart RR).
Electrical transmission and distribution equipment manufacture or refurbishment (subpart SS).
Injection of carbon dioxide (subpart UU).

[a]Source categories are defined in each applicable subpart.

§ 98.342 – GHGs to report

(a) You must report CH_4 generations and CH_4 emissions from landfills

(b) You must report CH_4 destruction from landfill gas collection and combustion systems.

(c) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the emissions of CO2, CH4, and N2O from each stationary combustion unit following the requirements of subpart C.

Acid Rain Permit (40 CFR 72-75)

The facility is not subject to any Acid Rain Permit requirements in 40 CFR 72-75.

9. PUBLIC COMMENT

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from **DATE to DATE**. During this time, comments **WERE / WERE NOT** submitted in response to DEQ's proposed action. ***{If comments were received, include the following text.}*** A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package for this permitting action.

IF A PUBLIC HEARING IS PROVIDED:

In addition to the public comment period, DEQ also provided a public hearing for persons interested to appear and submit written or oral comments. The public hearing was provided on **DATE in CITY**. DEQ's response to the comments submitted during the public hearing is also included in the response to public comments document.

10. EPA REVIEW OF PROPOSED PERMIT

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on **DATE** via e-mail. On **DATE**, EPA Region 10 responded to DEQ via e-mail indicating **EPA RESPONSE**.

Appendix A - Emissions Inventory

Sulfur-Containing-Compounds									
	CAS	Published Mol Wt	Abundance in LFG, (ppmv)	Calculated Mol Wt	Sulfur Mol Wt.in Molecule		Element	Atomic Wt.	
Methanethiol (Methyl mercaptan)	74931	48.11	1.37E+00	47.095	32.06	1	S	32.06	
Hydrogen sulfide	7783064	34.08	3.20E+01	34.076	32.06	1	C	12.011	
Ethyl mercaptan (Ethanethiol)	75081	62.14	1.98E-01	62.13	32.06	1	H	1.008	
Ethyl methyl sulfide	624895	76.16	3.67E-02	76.157	32.06	1	O	15.9994	
Diethyl sulfide	352932	90.19	8.62E-02	90.184	32.06	1			
Dimethyl disulfide	624920	94.2	1.37E-01	94.19	64.12	2	Temp C		25
Dimethyl sulfide	75183	62.14	5.66E+00	62.13	32.06	1	Collection Efficiency %		75
Carbonyl sulfide (Carbon oxysulfide) c COS	463581	60.08	1.22E-01	60.0704	32.06	1			
Carbon disulfide c CS2	75150	76.14	1.47E-01	76.131	64.12	2			

Reduced Sulfur Compounds	CAS	Sulfur in Molecule Mol Wt	Abundance in LFG, (ppmv)	[AP-42 Chap 2.4 p7 Equation 3] Qrscp	[AP-42 Chap 2.4 p7 Equation 4] UMrscp		
Methanethiol (Methyl mercaptan)	74931	32.06	1.37E+00	9.9378	1.30E+01	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Hydrogen sulfide	7783064	32.06	3.20E+01	232.1249	3.04E+02	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Ethyl mercaptan (Ethanethiol)	75081	32.06	1.98E-01	1.4363	1.88E+00	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Ethyl methyl sulfide	624895	32.06	3.67E-02	0.2662	3.49E-01	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Diethyl sulfide	352932	32.06	8.62E-02	0.6253	8.20E-01	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Dimethyl disulfide	624920	64.12	1.37E-01	0.9938	2.61E+00	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Dimethyl sulfide	75183	32.06	5.66E+00	41.0571	5.38E+01	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Carbonyl sulfide (Carbon oxysulfide) c COS	463581	32.06	1.22E-01	0.8850	1.16E+00	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Carbon disulfide c CS2	75150	64.12	1.47E-01	1.0663	2.80E+00	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
Q rsc terms in FRONT of Equation =	7.2539			**UM rsc =**	3.81E+02	kg/yr	Uncontrolled Mass Emissions of RSCs as Sulfur
UM rsc p terms in FRONT of Equation =	4.09E-02						
					[AP-42 Chap 2.4 p10 Equation 7]		
				CM SO2 =	571.262	kg/yr	**Controlled Mass Emissions of Sulfur Dioxide**
					0.144	lbs/hr	
					0.01810246	**g/sec**	

IDAPA 58.01.01.585 AIR TOXICS ANALYSIS

Chemical Name f	CAS Number	Mol Weight	[C p] Default Concentration (ppmv)	Qp (m3 / yr)	UMp (Kg / yr)	UMp (lb / hr)	EL (lb / hr)	1= Need to Model 0= No Modeling	UMp after Control (lb / hr)	1= Need to Model 0= No Modeling	
					25						
				3626952	1						0.35862%
NMOC (as hexane) a		86.18	8.38E+02						(Flare or IC engine at 95.00%		
VOC b		NA	8.35E+02								
1,1,1-Trichloroethane c	71556	133.4	2.43E-01	1.763E+00	9.617E+00	2.419E-03	unk	0	1.21E-04	0	
1,1,2,2-Tetrachloroethane c	79345	167.85	5.35E-01								
1,1,2,3,4,4-Hexachloro-1,3-butadiene (Hexachlorobutadiene) c	87683	260.76	3.49E-03								
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	76131	187.37	6.72E-02								
1,1,2-Trichloroethane c	79005	133.4	1.58E-01								
1,1-Dichloroethane c	75343	98.96	2.08E+00	1.509E+01	6.107E+01	1.536E-02	2.700E+01	0	7.68E-04	0	0.00284%
1,1-Dichloroethene (1,1-Dichloroethylene) c	75354	96.94	1.60E-01								
1,2,3-Trimethylbenzene	526738	120.19	3.59E-01								
1,2,4-Trichlorobenzene c	120821	181.45	5.51E-03	3.997E-02	2.966E-01	7.460E-05	2.470E+00	0	3.73E-06	0	0.00015%
1,2,4-Trimethylbenzene	95636	120.19	1.37E+00	9.938E+00	4.885E+01	1.229E-02	8.200E+00	0	6.14E-04	0	0.00749%
1,2-Dibromoethane (Ethylene dibromide) c	106934	187.86	4.80E-03								
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	76142	170.92	1.06E-01								
1,2-Dichloroethane (Ethylene dichloride) c	107062	98.96	1.59E-01								
1,2-Dichloroethene	540590	96.94	1.14E+01	8.269E+01	3.279E+02	8.245E-02	5.270E+01	0	4.12E-03	0	0.00782%
1,2-Dichloropropane c	78875	112.99	5.20E-02	3.772E-01	1.743E+00	4.384E-04	2.313E+01	0	2.19E-05	0	0.00009%
1,2-Diethylbenzene	135013	134.22	1.99E-02								
1,3,5-Trimethylbenzene	108678	120.19	6.23E-01	4.519E+00	2.221E+01	5.587E-03	8.200E+00	0	2.79E-04	0	0.00341%
1,3-Butadiene (Vinyl ethylene) c	106990	54.09	1.66E-01								
1,3-Diethylbenzene	141935	134.22	6.55E-02								
1,4-Diethylbenzene	105055	134.22	2.62E-01								
1,4-Dioxane (1,4-Diethylene dioxide) c	123911	88.11	8.29E-03								
1-Butene / 2-Methylbutene	106989/513359	56.11 / 70.13	1.22E+00								
1-Butene / 2-Methylpropene	106989/115117	56.11	1.10E+00								
1-Ethyl-4-methylbenzene (4-Ethyl toluene)	622968	120.19	9.89E-01								
1-Ethyl-4-methylbenzene (4-Ethyl toluene) + 1,3,5-Trimethylbenzene	622968/108678	120.19	5.79E+00								
1-Heptene	592767	98.19	6.25E-01								
1-Hexene / 2-Methyl-1-pentene	592416/763291	84.16	8.88E-02								
1-Methylcyclohexene	591491	96.17	2.27E-02								
1-Methylcyclopentene	693890	82.14	2.52E-02								
1-Pentene	109671	70.13	2.20E-01								
1-Propanethiol (n-Propyl mercaptan)	107039	76.16	1.25E-01								
2,2,3-Trimethylbutane	464062	100.2	9.19E-03								
2,2,4-Trimethylpentane c	540841	114.23	6.14E-01	4.454E+00	2.081E+01	5.233E-03	2.330E+01	0	2.62E-04	0	0.00112%
2,2,5-Trimethylhexane	3522949	128.26	1.56E-01								
2,2-Dimethylbutane	75832	86.18	1.56E-01								
2,2-Dimethylpentane	590352	100.2	6.08E-02								
2,2-Dimethylpropane	463821	72.15	2.74E-02								
2,3,4-Trimethylpentane	565753	114.23	3.12E-01								
2,3-Dimethylbutane	79298	86.18	1.67E-01								
2,3-Dimethylpentane	565593	100.2	3.10E-01								
2,4-Dimethylhexane	589435	114.23	2.22E-01								
2,4-Dimethylpentane	108087	100.2	1.00E-01								
2,5-Dimethylhexane	592132	114.23	1.66E-01								
2,5-Dimethylthiophene	638028	112.19	6.44E-02								
2-Butanone (Methyl ethyl ketone) c	78933	72.11	4.01E+00	2.909E+01	8.579E+01	2.157E-02	3.930E+01	0	1.08E-03	0	0.00274%
2-Ethyl-1-butene	760214	84.16	1.77E-02								
2-Ethylthiophene	872559	112.19	6.29E-02								
2-Ethyltoluene	611143	120.19	3.23E-01								
2-Hexanone (Methyl butyl ketone)	591786	100.16	6.13E-01	4.447E+00	1.822E+01	4.581E-03	1.330E+00	0	2.29E-04	0	0.01722%
2-Methyl-1-butene	563462	70.13	1.79E-01								
2-Methyl-1-propanethiol (Isobutyl mercaptan)	513440	90.19	1.70E-01								
2-Methyl-2-butene	513359	70.13	3.03E-01								
2-Methyl-2-propanethiol (tert-Butylmercaptan)	75661(109795?)	90.19	3.25E-01	2.358E+00	8.696E+00	2.187E-03	1.200E-01	0	1.09E-04	0	0.09112%
2-Methylbutane	78784	72.15	2.26E+00								
2-Methylheptane	592278	114.23	7.16E-01								
2-Methylhexane	591764	100.2	8.16E-01								
2-Methylpentane	107835	86.18	6.88E-01								
2-Propanol (Isopropyl alcohol)	67630	60.1	1.80E+00	1.306E+01	3.209E+01	8.071E-03	6.530E+01	0	4.04E-04	0	0.00062%
3,6-Dimethyloctane	15869940	142.28	7.85E-01								
3-Ethyltoluene	620144	120.19	7.80E-01								
3-Methyl-1-pentene	760203	84.16	6.99E-03								
3-Methylheptane	589811	114.23	7.63E-01								
3-Methylhexane	589344	100.2	1.13E+00								
3-Methylpentane	96140	86.18	7.40E-01								
3-Methylthiophene	616444	98.17	9.25E-02								
4-Methyl-1-pentene	691372	84.16	2.33E-02								
4-Methyl-2-pentanone (MIBK) c	108101	100.16	8.83E-01	6.405E+00	2.624E+01	6.599E-03	unk	0	3.30E-04	0	
4-Methylheptane	589537	114.23	2.49E-01								
Acetaldehyde c	75070	44.05	7.74E-02								
Acetone	67641	58.08	6.70E+00	4.860E+01	1.154E+02	2.903E-02	1.190E+02	0	1.45E-03	0	0.00122%
Acetonitrile c	75058	41.05	5.56E-01	4.033E+00	6.771E+00	1.703E-03	4.470E+00	0	8.51E-05	0	0.00190%
Acrylonitrile c,d	107131	53.06	BDL								
Benzene c	71432	78.11	2.40E+00								
Benzyl chloride c	100447	126.58	1.81E-02	1.313E-01	6.797E-01	1.709E-04	unk	0	8.55E-06	0	
Bromodichloromethane	75274	163.83	8.78E-03								
Bromomethane (Methyl bromide) c	74839	94.94	2.10E-02	1.523E-01	5.915E-01	1.488E-04	1.270E+00	0	7.44E-06	0	0.00059%
Butane	106978	58.12	6.22E+00								
Carbon disulfide c	75150	76.14	1.47E-01	1.066E+00	3.321E+00	8.351E-04	2.000E+00	0	4.18E-05	0	0.00209%
Carbon monoxide	630080	28.01	2.44E-01								
Carbon tetrachloride c	56235	153.82	7.98E-03								
Carbon tetrafluoride (Freon 14)	75730	88	1.51E-01								
Carbonyl sulfide (Carbon oxysulfide) c	463581	60.08	1.22E-01	8.850E-01	2.175E+00	5.469E-04	2.700E-02	0	2.73E-05	0	0.10127%
Chlorobenzene	108907	112.56	4.84E-01	3.511E+00	1.616E+01	4.065E-03	2.330E+01	0	2.03E-04	0	0.00087%
Chlorodifluoromethane (Freon 22) c	75456	86.47	7.96E-01	5.774E+00	2.042E+01	5.136E-03	unk	0	2.57E-04	0	
Chloroethane (Ethyl chloride) c	75003	64.51	3.95E+00	2.865E+01	7.560E+01	1.901E-02	1.760E+02	0	9.51E-04	0	0.00054%
Chloromethane (Methyl chloride) c	74873	50.49	2.44E-01								

cis-1,2-Dichloroethene	156592	96.94	1.24E+00								
cis-1,2-Dimethylcyclohexane	2207014	112.21	8.10E-02								
cis-1,3-Dichloropropene	10061015	110.97	3.03E-03								
cis-1,3-Dimethylcyclohexane	638040	112.21	5.01E-01								
cis-1,4-Dimethylcyclohexane / trans-1,3-Dimethylcyclohexane	624293/2207036	112.21	2.48E-01								
cis-2-Butene	590181	56.11	1.05E-01								
cis-2-Heptene	6443921	98.19	2.45E-02								
cis-2-Hexene	7688213	84.16	1.72E-02								
cis-2-Octene	7642048	112.21	2.20E-01								
cis-2-Pentene	627203	70.13	4.79E-02								
cis-3-Methyl-2-pentene	922623	84.16	1.79E-02								
Cyclohexane	110827	84.16	1.01E+00	7.326E+00	2.522E+01	6.342E-03	7.000E+01	0	3.17E-04	0	0.00045%
Cyclohexene	110838	82.14	1.84E-02	1.335E-01	4.484E-01	1.128E-04	6.770E+01	0	5.64E-06	0	0.00001%
Cyclopentane	287923	70.13	2.21E-02	1.603E-01	4.598E-01	1.156E-04	1.147E+02	0	5.78E-06	0	0.00001%
Cyclopentene	142290	68.12	1.21E-02								
Decane	124185	142.28	3.80E+00								
Dibromochloromethane	124481	208.28	1.51E-02								
Dibromomethane (Methylene dibromide)	74953	173.84	8.35E-04								
Dichlorobenzene c,e	106467	147	9.40E-01	6.819E+00	4.099E+01	1.031E-02	3.000E+01	0	5.15E-04	0	0.00172%
Dichlorodifluoromethane (Freon 12)	75718	120.91	1.18E+00								
Dichloromethane (Methylene chloride) c	75092	84.93	6.15E+00								
Diethyl sulfide	352932	90.19	8.62E-02								
Dimethyl disulfide	624920	94.2	1.37E-01								
Dimethyl sulfide	75183	62.14	5.66E+00								
Dodecane (n-Dodecane)	112403	170.33	2.21E-01								
Ethane	74840	30.07	9.05E+00								
Ethanol	64175	46.07	2.30E-01								
Ethyl acetate	141786	88.11	1.88E+00	1.364E+01	4.914E+01	1.236E-02	9.330E+01	0	6.18E-04	0	0.00066%
Ethyl mercaptan (Ethanediol)	75081	62.14	1.98E-01	1.436E+00	3.650E+00	9.180E-04	6.700E-02	0	4.59E-05	0	0.06851%
Ethyl methyl sulfide	624895	76.16	3.67E-02								
Ethylbenzene c	100414	106.17	4.86E+00	3.525E+01	1.531E+02	3.850E-02	2.900E+01	0	1.92E-03	0	0.00664%
Formaldehyde c	50000	30.03	1.17E-02								
Heptane	142825	100.2	1.34E+00	9.720E+00	3.983E+01	1.002E-02	1.090E+02	0	5.01E-04	0	0.00046%
Hexane c	110543	86.18	3.10E+00	2.249E+01	7.926E+01	1.993E-02	1.200E+01	0	9.97E-04	0	0.00831%
Hydrogen sulfide	7783064	34.08	3.20E+01	2.321E+02	3.235E+02	8.137E-02	9.330E-01	0	4.07E-03	0	0.43606%
Indane (2,3-Dihydroindene)	496117	34.08	6.66E-02								
Isobutane (2-Methylpropane)	75285	58.12	8.16E+00								
Isobutylbenzene	538932	134.22	4.07E-02								
Isoprene (2-Methyl-1,3-butadiene)	78795	68.12	1.65E-02								
Isopropyl mercaptan	75332	76.16	1.75E-01								
Isopropylbenzene (Cumene) c	98828	120.19	4.30E-01	3.119E+00	1.533E+01	3.856E-03	1.630E+01	0	1.93E-04	0	0.00118%
Mercury (total) c	7439976	200.59	1.22E-04	8.850E-04	7.260E-03	1.826E-06	3.000E-03	0	9.13E-08	0	0.00304%
Mercury (elemental) c	7439976	200.59	7.70E-05	5.586E-04	4.582E-03	1.152E-06	3.000E-03	0	1.15E-06	0	0.03841%
Mercury (monomethyl) c	51176126	216.63	3.84E-07	2.785E-06	2.468E-05	6.207E-09	3.000E-03	0	6.21E-09	0	0.00021%
Mercury (dimethyl) c	627441	258.71	2.53E-06	1.835E-05	1.942E-04	4.884E-08	3.000E-03	0	4.88E-08	0	0.00163%
Methanethiol (Methyl mercaptan)	74931	48.11	1.37E+00	9.938E+00	1.955E+01	4.918E-03	3.300E-02	0	4.92E-03	0	14.90209%
Methylcyclopentane	96377	84.16	6.50E-01								
Naphthalene c	91203	128.17	1.07E-01	7.762E-01	4.069E+00	1.023E-03	3.330E+00	0	5.12E-05	0	0.00154%
n-Butylbenzene	104518	134.22	6.80E-02								
Nonane	111842	128.26	2.37E+00	1.719E+01	9.018E+01	2.268E-02	7.000E+01	0	1.13E-03	0	0.00162%
n-Propylbenzene (Propylbenzene)	103651	120.19	4.13E-01								
Octane	111659	114.23	1.08E+00	7.834E+00	3.660E+01	9.205E-03	9.330E+01	0	4.60E-04	0	0.00049%
p-Cymene (1-Methyl-4-Isopropylbenzene)	99876	134.22	3.58E+00								
Pentane	109660	72.15	4.46E+00	3.235E+01	9.547E+01	2.401E-02	1.180E+02	0	1.20E-03	0	0.00102%
Propane	74986	44.1	1.55E+01								
Propene	115071	42.08	3.32E+00								
Propyne	74997	40.06	3.80E-02								
sec-Butylbenzene	135988	134.22	6.75E-02								
Styrene (Vinylbenzene) c	100425	104.15	4.11E-01	2.981E+00	1.270E+01	3.194E-03	6.670E+00	0	1.60E-04	0	0.00239%
Tetrachloroethylene (Perchloroethylene) c	127184	165.83	2.03E+00								
Tetrahydrofuran (Diethylene oxide)	109999	72.11	9.69E-01	7.029E+00	2.073E+01	5.213E-03	3.930E+01	0	2.61E-04	0	0.00066%
Thiophene	110021	84.14	3.49E-01								
Toluene (Methyl benzene) c	108883	92.14	2.95E+01	2.140E+02	8.064E+02	2.028E-01	2.500E+01	0	1.01E-02	0	0.04056%
trans-1,2-Dichloroethene	156605	96.94	2.87E-02								
trans-1,2-Dimethylcyclohexane	6876239	112.21	4.04E-01								
trans-1,3-Dichloropropene	10061026	110.97	9.43E-03								
trans-1,4-Dimethylcyclohexane	2207047	112.21	2.05E-01								
trans-2-Butene	624646	56.11	1.04E-01								
trans-2-Heptene	14686136	98.19	2.50E-03								
trans-2-Hexene	4050457	84.16	2.06E-02								
trans-2-Octene	13389429	112.21	2.41E-01								
trans-2-Pentene	646048	70.13	3.47E-02								
trans-3-Methyl-2-pentene	616126	84.16	1.55E-02								
Tribromomethane (Bromoform) c	75252	252.73	1.24E-02	8.995E-02	9.297E-01	2.338E-04	3.330E-01	0	1.17E-05	0	0.00351%
Trichloroethylene (Trichloroethene) c	79016	131.39	8.28E-01	6.006E+00	3.228E+01	8.117E-03	1.793E+01	0	4.06E-04	0	0.00226%
Trichlorofluoromethane (Freon 11)	91315616	137.37	2.48E-01								
Trichloromethane (Chloroform) c	8013545	119.38	7.08E-02								
Undecane	1120214	156.31	1.67E+00								
Vinyl acetate c	85306269	86.09	2.48E-01	1.799E+00	6.334E+00	1.593E-03	unk	0	7.96E-05	0	
Vinyl chloride (Chloroethene) c	75014	62.5	1.42E+00								
Xylenes (o-, m-, p-, mixtures)	8026093	106.17	9.23E+00	6.695E+01	2.907E+02	7.312E-02	2.900E+01	0	3.66E-03	0	0.01261%
				TOTAL TAPs	**3.052E+03**	**or**	**3.052**				

trans-2-Butene	624646	56.11	1.04E-01								
trans-2-Heptene	14686136	98.19	2.50E-03								
trans-2-Hexene	4050457	84.16	2.06E-02								
trans-2-Octene	13389429	112.21	2.41E-01								
trans-2-Pentene	646048	70.13	3.47E-02								
trans-3-Methyl-2-pentene	616126	84.16	1.55E-02								
Tribromomethane (Bromoform) c	75252	252.73	1.24E-02	8.995E-02	9.297E-01	2.338E-04	3.330E-01	**0**	1.17E-05	**0**	0.00351%
Trichloroethylene (Trichloroethene) c	79016	131.39	8.28E-01	6.006E+00	3.228E+01	8.117E-03	1.793E+01	**0**	4.06E-04	**0**	0.00226%
Trichlorofluoromethane (Freon 11)	91315616	137.37	2.48E-01								
Trichloromethane (Chloroform) c	8013545	119.38	7.08E-02								
Undecane	1120214	156.31	1.67E+00								
Vinyl acetate c	85306269	86.09	2.48E-01	1.799E+00	6.334E+00	1.593E-03	unk	**0**	7.96E-05	**0**	
Vinyl chloride (Chloroethene) c	75014	62.5	1.42E+00								
Xylenes (o-, m-, p-, mixtures)	8026093	106.17	9.23E+00	6.695E+01	2.907E+02	7.312E-02	2.900E+01	**0**	3.66E-03	**0**	0.01261%
				TOTAL TAPs	**3.052E+03**	**or**	**3.052**				
					(Kg/yr)		**Mg/yr**				
Footnotes:						**UNCONTROLLED**			**CONTROLLED**		
a For NSPS/Emission Guideline compliance purposes, the default concentration for NMOC as specified in the final rule must be used.						3.052	TAPs		0.153	TAPs	
b Calculated as 99.7% of NMOC, based on speciated emission test data.						0.483	plus CTAPs		0.024	plus CTAPs	
c Hazardous Air Pollutant listed in Title III of the 1990 Clean Air Act Amendments.						**3.535**	**Total TAPs Mg/yr**		**0.177**	**Total TAPs Mg/yr**	
d All tests below detection limit. Method detection limits are available for three tests, and are as follows: MDL = 2.00E-04, 4.00E-03, and 2.00E-02 ppm											
e Many source tests did not indicate whether this compound was the ortho-, meta-, or para- isomer. The para isomer is a Title III listed HAP.											
f Chemicals in Columns A, B, C, D are known landfill emissions (AP-42 5th Ed DRAFT Section 2.4 Municipal Solid Waste Landfills Table 2.4-1)											
g Identification and selection of TAPs and associated ELs is based on listing in IDAPA 58.01.01.585											
Chemicals in green are listed TAPs IDAPA 58.01.01.585											
Chemicals in blue are listed CTAPs IDAPA 58.01.01.586											
Chemicals with bright green missing from TAPs IDAPA 58.01.01.585 – added per Title III of the 1990 Clean Air Act Amendments											
Chemicals in magenta are NAAQS Criteria Pollutants											
AP-42 Section 2.4, Eqn 3:											
Qp (m3/yr) =	equals (F8 (M3/yr) times Cp(ppmv)) / (0.5 times 1E6)										
and											
AP-42 Section 2.4, Eqn 4 :											
UMp (kg/yr) =	equals (MWp (molec wt of p in g /gmol) over 8.205E-5 (m3-atm/gmol -K) times 1000 (g/kg) times 273+T (temp LFG, deg K)										
we assume LFG temp = 25 C											

Pollutant	Emission Rate Maximum Potential to Emit			Emission Rate Maximum for Requested Operationl Limits		
	g/sec	lb/hr	ton/year	g/sec	lb/hr	ton/year
NO2	0.07253 (1)	0.575641 (2)	2.523056 (3)	*** For Flare, Applicant requests Operational Limits Same as Max Potential to Emit **		
SO2	0.027909 (4)	0.221505	0.970863			
PM-10	0.027357 (5)	0.21712	0.951644			
CO	0.084714 (6)	0.672342	2.946898			
Pb	0 (7)	0	0			
O3	0 (8)	0	0			
VOC	0.023544 (9)	0.186861	0.81902			
1,1,2,2-Tetrachloroethane [CTAP]	4.22E-05 (10)	0.000335	0.001468			
1,1-Dichloroethane [CTAP]	9.68E-05 (11)	0.000768	0.003367			
1,3-Butadiene [CTAP]	4.22E-06 (12)	3.35E-05	0.000147			
Dichloromethane [CTAP]	0.000246 13)	0.001952	0.008557			

Notes

(1) NO2 flare emission factors from AP-42 5th Ed DRAFT Table 2.4-4. Max Yr CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6.
(2) using 453.6 g / lb
(3) using 2000 lb/ton and 365.25 days/yr
(4) SO2 flare emissions assume 100% of Reduced Sulfur Compounds in LFG are oxidized to SO2. Calculation on lower portion of Exhibit 8-2A.
Uncontrolled Reduced Sulfur Compounds are from AP-42 5th Ed DRAFT Table 2.4-1, scaled to max yr CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6.
(5) PM-10 = PM-2.5 flare emission factors from AP-42 5th Ed DRAFT Table 2.4-4(incl footnote (b)). Max Yr CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6.
(6) CO flare emission factors from AP-42 5th Ed DRAFT Table 2.4-4. Max Yr CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6.
(7) Pb is not a known LFG constituent (ref AP-42 5th Ed DRAFT Table 2.4-1).
(8) O3 is not a known LFG constituent (ref AP-42 5th Ed DRAFT Table 2.4-1).
(9) VOC = 99.7% of NMOC, per AP-42 5th Ed DRAFT Table 2.4-1 footnote (b). Max Yr collected NMOC production = 14.9 Mg/yr, based on LandGEM modeling : see EX 7-7.
uncontrolled VOC = 14.9*0.997=14.855 Mg/yr, control efficiency = 95% per AP-42 5th Ed DRAFT Table 2.4-3, controlled VOC = 0.05*14.855 = 743 Kg/yr
(10) 1,1,2,2-Tetrachloroethane is defined as CTAP in IDAPA 58.01.01.586. Uncontrolled emissions from AP-42 5th Ed DRAFT Table 2.4-1, using collected max yr
CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6. Controlled emission calculation on Exhibit 8-4.
(11) 1,1-Dichloroethane is defined as CTAP in IDAPA 58.01.01.586. Uncontrolled emissions from AP-42 5th Ed DRAFT Table 2.4-1, using collected max yr
CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6. Controlled emission calculation on Exhibit 8-4.
(12) 1,3-Butadiene is defined as CTAP in IDAPA 58.01.01.586. Uncontrolled emissions from AP-42 5th Ed DRAFT Table 2.4-1, using collected max yr
CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6. Controlled emission calculation on Exhibit 8-4.
(13) Dichloromethane is defined as CTAP in IDAPA 58.01.01.586. Uncontrolled emissions from AP-42 5th Ed DRAFT Table 2.4-1, using collected max yr
CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6. Controlled emission calculation on Exhibit 8-4.

EPA Emission Factors from AP-42 5th Ed DRAFT Table 2.4-4											
											Total LFG
Flare LFG Flow:		827.52	m3/hr	487.05	cfm	8.12	cfs	at 25C	298 K		**7254000 m3/yr**
	PV/T=C					26.59	cfs	at 700C	973 K		**at max production yr**
		76.18	ft/sec, after expansion				Flare is sized to max LFG flow, after expansion = 1500 CFM				
		23.22	**m/sec, after expansion**								
Flare (50100410 and 50300601)			Kg/1.0E6 dscm CH4		g/m3	at	413.8	m3 CH4 / hr		**(50% of LFG as CH4)**	
	NO2		631		0.631		261	g/hr	**0.072523**	**g/sec**	
	SO2	[Controlled Emission -- See EXHIBIT 8-2A]							**0.02293**	**g/sec**	
	PM-10		238		0.238		98	g/hr	**0.027354**	**g/sec**	
	Note: Because engine-specific particulate emissons data are not available, this AP-42 factor is used in the modeling.										
	CO		737		0.737		305	g/hr	**0.084705**	**g/sec**	
	Pb	[No lead is known as a LFG constituent]							**0.00**	**g/sec**	
Flame Temperature	Straitz, J. F. "Flaring for Gaseous Control in the Petroleum Industry" 71st Annual APCA Meeting, Houston, June, 1978										
	1295	F =	701.7	C =	975	K					
	Initial LFG Temp (C)		25	or =	298	K					
	Final LFG Temp C, say		700	or =	**974**	**K**					
									Flare Chamber		
	Using USAF Skew-T, Log P diagram for "Standard Atmosphere"									radius	
		5000 ft MSL occurs at 42 F and 845 mb pressure								(ft)	
					or at				A=pi *r*r	0.333333	
	845	x		x=	**634**	**mm Hg**					
	1013.2	760							0.3491	ft2	
	Using Nomogram p 12-3 of Solution of "Perfect Gas Law", Sheehy, et al 1976										
	at 634 mm Hg, and initial gas temp of 298K, 1 mole gas occ					29	L				
	at 634 mm Hg, and final gas temp of 973K, 1 mole gas occu					95	L				
		An expansion factor of			**3.28**						
Heat Release											
LFG is	545	btu/scf	LFG flow is	487.05	cfm	or	265442.25	btu/min			
							1,114,857	**cal/sec**			

			Emission Rate						Emission Rate				
Pollutant			Maximum Potential to Emit						Maximum for Requested Operation Limits				
	g/sec		lb/hr		ton/year		g/sec		lb/hr		ton/year		
NO2	1.28053	(14)	10.16304	(2)	44.54497	(3)	1.30585	(1)	10.36401	(2)	45.42583	(3)	
SO2	0.02791	(4)	0.2215		0.97086		0.02791	(4)	0.2215		0.97086		
PM-10	0.0256	(15)	0.2032		0.89064		0.02137	(5)	0.16957		0.74325		
CO	0.81891	(16)	6.49938		28.48701		0.69645	(6)	5.52747		24.22711		
Pb	0	(7)	0		0		0	(7)	0		0		
O3	0	(8)	0		0		0	(8)	0		0		
VOC	0.08528	(17)	0.67685		2.96665		0.06529	(9)	0.5182		2.27131		
1,1,2,2-Tetrachloroethane [CTAP]	4.22E-05	(18)	0.00033		0.00147		0.00003	(10)	0.00027		0.00118		
1,1-Dichloroethane [CTAP]	9.68E-05	(19)	0.00077		0.00337		0.00008	(11)	0.00062		0.0027		
1,3-Butadiene [CTAP]	4.22E-06	(20)	0.00003		0.00015		0.000003	(12)	0.00003		0.00012		
Dichloromethane [CTAP]	0.00025	(20)	0.00195		0.00856		0.0002	(13)	0.00156		0.00685		

Notes

(1) NO2 engine emission factor is 6.0 g/bhp-hr, based on published CAT G3516LE engine performance specs (See Exhibit 8-2B).
Ops Limits use 331.5 m3/hr LFG, andassume engine at 75% Power, derated by 9% for altitude and temperature. See calculations

on Exhibit 8-2

(2) using 453.6 g / lb

(3) using 2000 lb/ton and 365.25 days/yr

(4) SO2 engine emissions assume 100% of Reduced Sulfur Compounds in LFG are oxidized to SO2. Calculation on lower portion of Exhibit 8-2A. Uncontrolled Reduced Sulfur Compounds are from AP-42 5th Ed DRAFT Table 2.4-1, scaled to max yr CH4 production = 3626952 m3/yr, based on LandGEM modeling : see EX 7-6.

(5) PM-10 = PM-2.5 engine emission factors from AP-42 5th Ed DRAFT Table 2.4-4(incl footnote (b)). Ops Limits use 331.5 m3/hr LFG, and assume engine at 75% Power, derated by 9% for altitude and temperature. See calculations on Exhibit 8-2.

(6) CO engine emission factor is 3.2 g/bhp-hr, based on published CAT G3516LE engine performance specs (See Exhibit 8-2B). Ops Limits use 331.5 m3/hr LFG, and assume engine at 75% Power, derated by 9% for altitude and temperature. See calculations on Exhibit 8-2.

(7) Pb is not a known LFG constituent (ref AP-42 5th Ed DRAFT Table 2.4-1).

(8) O3 is not a known LFG constituent (ref AP-42 5th Ed DRAFT Table 2.4-1).

(9) VOC = 99.7% [say 100%] of NMOC, per AP-42 5th Ed DRAFT Table 2.4-1 footnote (b). NMOC engine emission factor is 0.3 g/bhp-hr, based on published CAT G3516LE engine performance specs (See Exhibit 8-2B). Ops Limits use 331.5 m3/hr LFG, and assume engine at 75% Power, derated by 9% for altitude and temperature. See calculations on Exhibit 8-2. Uncontrolled VOC = 0.065293 g/sec

(10) 1,1,2,2-Tetrachloroethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4. Gas supply to engine is engine-intake-limited to 80% of collected gas from landfill during max generation year, so the 100% emission shown in Exhibit 8-4 is reduced to 80% to reflect limit of engine intake capacity.

(11) 1,1-Dichloroethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4. Gas supply to engine is engine-intake-limited to 80% of collected gas from landfill during max generation year, so the 100% emission shown in Exhibit 8-4 is reduced to 80% to reflect limit of engine intake capacity.

(12) 1,3-Butadiene is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4. Gas supply to engine is engine-intake-limited to 80%of collected gas from landfill during max generation year, so the 100% emission shown in Exhibit 8-4 is reduced to 80% to reflect limit of engine intake capacity.

(13) Dichloromethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4. Gas supply to engine is engine-intake-limited to 80% of collected gas from landfill during max generation year, so the 100% emission shown in Exhibit 8-4 is reduced to 80% to reflect limit of engine intake capacity.

(14) NO2 engine emission factor is 4.91 g/bhp-hr, based on interpolated CAT G3516LE engine performance specs (See Exhibit 8-2B) at 939 bhp and 50F. Ops Limits use 397.3 m3/hr LFG, and assume fuel-limited engine at 85% Power, derated by 4% for altitude and

temperature. See calculations on Exhibit 1-3.

NOTE: Tested and documented engine NO2 emissions at 75% power exceed those at 100% power. See Exhibit 8-2B

(15) PM-10 = PM-2.5 engine emission factors from AP-42 5th Ed DRAFT Table 2.4-4(incl footnote (b)). Ops Limits use 397.3 m3/hr LFG, and assume fuel-limited engine at 85% Power, derated by 4% for altitude and temperature. See calculations on Exhibit 1-3.

(16) CO engine emission factor is 3.14 g/bhp-hr, based on interpolated CAT G3516LE engine performance specs (See Exhibit 8-2B) at 939 bhp and 50F. Ops Limits use 397.3 m3/hr LFG, and assume fuel-limited engine at 85% Power, derated by 4% for altitude and temperature. See calculations on Exhibit 1-3.

(17) VOC = 99.7% [say 100%] of NMOC, per AP-42 5th Ed DRAFT Table 2.4-1 footnote (b). NMOC engine emission factor is 0.327 g/bhp-hr, based on interpolated CAT G3516LE engine performance specs (See Exhibit 8-2B) at 939 bhp and 50F. Ops Limits use 397.3 m3/hr LFG, and assume engine at 85% Power, derated by 4% for altitude and temperature. See calculations on Exhibit 1-3.
Uncontrolled VOC = 0.085282 g/sec

(18) 1,1,2,2-Tetrachloroethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4.

(19) 1,1-Dichloroethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4.

(20) 1,3-Butadiene is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4.

(21) Dichloromethane is defined as CTAP in IDAPA 58.01.01.586. Use AP-42 5th Ed DRAFT Table 2.4-1 to quantify uncontrolled CTAP per CH4 predicted by LandGEM modeling, see EX 7-6. For 100% emission calculation, after control, see Exhibit 8-4.

Landfill LFG Generation (at max year = 2031)					487.0	scfm					
	7,254,000	m3/yr	827.5	m3/hr	**29223**	**scf/hr**		**15,926,469**	**BTU/hr from available LFG**		
								1956	**bhp available from LFG at max year**		
	Note: This panel for comparison power rating at 75%.										
CAT G3516LE Engine Performance Specifications											
Engine Power Rating (at 75%)=			861	BHP	Derated to	784	BHP	6,380,905	BTU/hr		
	(Source : EX 8-2B: Caterpillar "Gas Generator Set Engine Performance" sheet DM5153-00)										
De-Rate Factor at		5000	ft and	80	deg F =	0.91					
	(Source : EX 8-2B: Caterpillar "Gas Generator Set Engine Performance" sheet DM5153-00, Page 2)										
LFG LHV			545	BTU/scf	11708	scf/hr	331.5	m3/hr			
Fuel Consumption			8144	BTU/bhp-hr	195	scfm					
at 75% load		g/ bhp-hr	at	784	bhp				**% of AP-42**		
						tpy					
NOx		6		**4701**	**g/hr**	45.43	**1.30585**	**g/sec**	122.03%		
CO		3.2		**2507**	**g/hr**	24.23	**0.69645**	**g/sec**	89.37%		
THC		2		**1567**	**g/hr**		**0.43528**	**g/sec**			
NMHC [NMOC]		0.3		**235**	**g/hr**	2.27	**0.06529**	**g/sec**			
Exhaust O2		4.9									
lambda		1.16					***Note: Emission rates in Gray-Shaded***				
							cells are used in the modeling				
at max year	1602	Mg CH4	corresponds to		10.33	Mg NMOC					
	2401000	M3 CH4	corresponds to		2881	M3 NMOC					
		4302.374	Kg/1.0E6 dscm					**2206.88**			
	(Source : LandGEM model "New Cell 4 0.02 100 600" for year 2031)										
For Comparison :											
at max year	818.2	Mg CH4	corresponds to		4.536	Mg NMOC					
	1226000	M3 CH4	corresponds to		1266	M3 NMOC					
		3699.837	Kg/1.0E6 dscm								
	(Source : LandGEM model "Existing Cell 4 0.02 100 516" for year 2031)										
EPA Emission Factors from AP-42 5th Ed DRAFT Table 2.4-4											
Note: This panel is for comparison with the NOx and CO emissions calculated using engine-specific data											
IC Engine (50100421)			Kg/1.0E6 dscm		g/m3	at	331.5	m3/hr			
	NO2		11620		11.62		3853	g/hr	**1.070145**	**g/sec**	
	SO2	[Controlled Emission -- See EXHIBIT 8-2A]							**0.010089**	**g/sec**	
	PM-10		232		0.232		77	g/hr	**0.021366**	**g/sec**	
	Note: Because engine-specific particulate emissons data are not available, this AP-42 factor is used in the modeling.										
	CO		8462		8.462		2806	g/hr	**0.779309**	**g/sec**	
	Pb	[No lead is known as a LFG constituent]							**0.00**	**g/sec**	

Appendix B - Facility Comments for Draft Permit

Comments Received from FHMRL on the 6th Draft Permit

Facility comment: Permit Condition 3.15 and Table 3.1:The County included cetain IDAPA open burning regulations in the Permit Shield Chart of non applicable requirements for the reasons stated in the Chart. Accordingly, the list of applicable IDAPA open burning requlations in the Permit Condition 3.15 and Table 3.1 should be updated to recognize that certain regualtions.

DEQ Response: DEQ uses templates for its Tier I permit format. The facility-wide and General Provisional are design to cover a wide range of conditions. The facility-wide conditions will stay within the template format and any permit shield conditions that are applicable will be recognized.

Facility comment: Table 3.1 Facility-Wide Conditions, Permit Condition 3.18: The "Parameter column for Permit Conditions 3.18 and 3.19 should identify that these conditions are based on NSPS and "NESHAP" provisions. Further the "limit/Standard Summary" column for these condiiton should list NESHAP subpart A as the general provision of that subpart.

DEQ response: The work NESHAP had been added to the Parameter Column. FHMRL is subject to 40 CFR 63 Subpart AAAA when FHMRL meets the applibility requirement of Subpart AAAA. Within Subpart AAAA are the General Provisions of Subpart AAAA. The General Provision of Subpart AAAA states which part(s) of Subpart A are applicable to FHMRL. Not all parts of subpart A are declared in the General Provisions of Subpart AAAA. Thus for FHMRL the Subpart AAAA is the trigger stating the requirements FHMRL has to fulfill when FHMRL becomes applicable to Subpart AAAA.

Facility comment: Table 3.1 Facility-Wide Conditions, Permit Condition 3.21: The "MRR Requirements" column for Permit Condition 3.21 should be amended by deleting references to conditions 3.23 and 3.24, which are not monitoring , recordkeeping, or reporting requirements related to Permid Condition 3.21.

DEQ response: Permit conditions 3.20, 3.22-24, and 3. 25 all support the testing requirement of 3.21for a valid and verifiable test approval. These permit condition will remain in the summary table.

Facility comment: Permit Condition 3.11 – Excess emissions at startup, shutdown, maintenance: Permit Condition 3.11, as currently written, is confusing because there is a non-parallel use of future and present tense regarding the timing of the excess emissions events, as they are stated in the opening statement and bullet 1. At the meeting between DEQ and the County, DEQ stated that it understood the County's concern regarding this ambiguous language and DEQ agreed to examine possibly clarifying this condition. However, in this 6th draft of the Permit, DEQ did not make any changes to Permit Condition 3.11 to address these concerns and did not provide any explanation for not doing so. To address the ambiguity in the condition text, the County requests DEQ amend Permit Condition 3.11 by incorporating the edits set forth herein.

DEQ response: Permit Condition 3.11 referring to Excess Emission is a stated Rule of IDAPA and has been used in Tier I facilitywide conditions for many years. DEQ does not see any definitive reason to change the formating and wording of these permit conditions. The facility was informed in the earlier meetings the statements within the facilitywide conditions would stay intact because these statements have been approve by variouis DEQ staff and to provide consistency to other facility's required to obtain a Tier I operating permit.

Facility comment: Permit Condition 3.15 and Table 3.1: The County included certain IDAPA open burning regulations in the Permit Shield Chart of non-applicable requirements for the reasons stated in the Chart. Accordingly, the list of applicable IDAPA open burning regulations set forth in Permit Condition 3.15 and Table 3.1 should be amended consistent with the Permit Shield Chart by deleting from Permit Condition 3.15 and Table 3.1 those open burning regulations identified in the Permit Shield Chart.

DEQ response: Permit 3.15 contains all open burning, IDAPA 58.01.01.600-624. The table summary will be changed from 624 to 616. The fact FHMRL has stated certain part(s) of the open burning rule in the Permit Shield section of the permit indicate those conditions applicable to the permit shield will be exempt.

Facility comment: Permit condition 3.18, Table 3.2 NSPS General Provisions: There appears to be typographical error in the "Summary of Section" column for Section 60.2, referring to "delegated NSPS," and not "designated NSPS sources."

DEQ response: The term for delegated NSPS has been eliminated.

Facility comment: Permit condition 3.18, Table 3.2 NSPS General Provisions: Additionally, there appears to be a typographical error in the DEQ address in the "Summary of Section" column for Section 60.4 that should be amended as follows: "44 Hospital Way ~~Permit Condition No.~~ #300."

DEQ response: The address has been corrected.

Facility comment: Permit Condition 3.19: Insert heading; before the NESHAP section stating NESHAP General Provisions

DEQ response: The heading has been inserted.

Facility comment: Table 3.3, Permit Condition 3.19: The heading for this condition references NESHAP subpart AAAA and not subpart A. This heading should cite both subparts.

DEQ response: As explained in the a previous comment Subpart AAAA is the tigger relating to Subpart AAAA General Provisions which state the Subpart A requirements that FHMRL is required to fulfill when FHMRL becomes applicable to Subpart AAAA.

Facility comment: Permit Condition 3.19, Table 3.3-"plan" reference: The word "plan" appears to be extraneous in line 2 and line 8 of the description box in the row for 40 CFR 63.10(d)(5). It should read: "and malfunction ~~plan~~ are consistent" and "malfunction ~~plan~~ is not consistent." Deletion of these "plan" references would be consistent with 40 CFR 63.10(d)(5).

DEQ response: This is a direct quote from Subpart AAAA of 40 CFR 63 and will remain.

Facility comment: Permit Condition 3.19, Table 3.3-subpart AAAA reference: In this latest draft of the permit, DEQ changed the reference for Table 3.3 from 40 CFR subpart "A" to subpart "AAAA." This change should be reversed, as the provisions provided for in Table 3.3 are taken from subpart A and not subpart AAAA.

DEQ response: FHMRL's permit states the possibly of FHMRL becoming applicable to 40 CFR 63 Subpart AAAA. The General Provisions of Subpart AAAA states only the applicable requirements that FHMRL would be subject to when and if FHMRL triggers the applicablity of Subpart AAAA. Thus Subpart AAAA is the trigger not Subpart A.

Facility comment: Permit Conditions 3.20 and 3.24: The County believes the PTC conditions cited as references for these conditions are incorrect. Permit Condition 3.20 should cite to PTC 38 and not 28.

DEQ response: Permit condition numbers has been corrected.

Facility comment: The County believes the PTC conditions cited as references for these conditions are incorrect. Permit Condition 3.23 should cite to PTC 37 and not 36.

DEQ response: Permit condition number has been corrected.

Facility comment: Permit Condition 3.25: As in Table 3.18, there appears to be a typographical error in the DEQ address referenced in Permit Condition 3.25 that should be amended as follows: "44 Hospital Way Permit Condition No. #300."

DEQ response: The adddress number has been corrected.

Facility comment: There appears to be typographical errors in the "Permit Conditions" column in Table 4.2. These condition entries should read as follows: 4.3, 4.4, ~~4.4 4.5~~, 4.5 4.6, 4.7"

DEQ response: The numbering of permit condition in the table summary have been corrected.

Facility comment: Permit Condition 4.6 – new text: This new statement, and the preceding statement in the condition, appears to be missing text to complete the sentences. Or, if these statements are not missing text, the assertion that 40 CFR 60.754 (a)(1)(ii) is categorically non-applicable is wrong. The regulations at 40 CFR 60.754 (a)(1)(i) and (ii) provide for alternative calculation methods depending on whether the year to year acceptance rate is known. If the acceptance rate is known, subsection (i) applies. If the acceptance rate is not known, subsection (ii) applies. We request that DEQ incorporate the following amendatory language

that would describe, consistent with these regulations, the circumstances of applicability of these permit conditions.

DEQ response: During the Tier I operating permit process FHMRL has indicate in the application and in more than one meeting FHMRL does in fact know the year to year solid waste acceptance. This permit condition is a permit condition taken directly from the PTC, thus no permit condition was needed for unknown solid waste acceptance. Thus the permit condition will remain unchanged. A statement from the application page 62 of 172, "Bannock County's year to year waste acceptance rate at Ft. Hall Mine Road Landfill is known, therefore equation (a)(1)(i) has been, (and will be) used."

Facility comment: This condition should be modified to recognize that the County has agreed to use the Tier 2 procedures and is not required to do so pursuant to 40 CFR 60.754(a)(3).

DEQ response: The permit condition reflects the Tier 2 procedure does not take affect until FHMRL's has installed the collection system. This is again permit condition of the PTC and stated in FHMRL's Tier I application. This permit condition is also explained in the Statement of Basis.

Facility comment: In this latest 6th draft of the permit, DEQ inserted the following statement: "40 CFR 60.757(c) is not applicable, the permittee has already submitted the collection and control system design for the voluntary installation." 40 CFR 60.757(c) assumes that the report was submitted after the NMOC emission rate exceeds 50 MG/yr and for the purpose of complying with 60.752(b)(2)(i). Because neither of these situations apply to the Landfill's current situation, DEQ's new statement should be deleted so as not to cause any confusion regarding the same.

DEQ response: As a result of the meeting regarding the review of draft 6, FHMRL requested the any missing regulation be addressed (such as going for a to c where is and why is b missing). The missing regulation is address in the SOB fulfilling FHMRL's request. A permit's objective is to address the rules and regulations that are applicable to the facility thus these were pulled from the permit and addressed in the Statement of Basis.

Facility comment: <u>Permit Section 5 and 6 – Recognizing omitted regulatory text:</u> The County noted at the meeting between the County and DEQ that it would be helpful for the permit reader and certifier if DEQ included ellipses in places where regulatory text was imported into the Operating Permit but where certain sections of such non-applicable regulatory text was excluded from the permit. DEQ stated it would include ellipses or bracketed labels noting that non-applicable regulatory text was omitted in the permit condition. Although in this latest draft of the permit DEQ added some statements explaining that provisions were omitted as non-applicable, DEQ did not address all of the omitted regulations in Section 5 and 6. In the attached markup, the County sets forth the provisions that should be identified as "omitted as non-applicable.

DEQ response: As a result of the meeting regarding the review of draft 6, FHMRL requested that any missing regulation be addressed (such as going for a to c where is and why is b missing). A permit's objective is to address the rules and regulations that are applicable to the facility thus the missing rule or missing regulation as address in the facility comment from the permit are addressed in the Statement of Basis.

Facility comment: <u>Permit Condition 5.5 – heading reference to "active" collection system:</u> Where the term "active" does not appear in the heading for 40 CFR 60.753 (which Condition 5.5 is based on), the permit heading should not include this extraneous reference to "active."

DEQ response: In an earlier draft (draft 4)the heading was stated as stated in 40 CFR 60.753, however FHMRL's comment was they wanted active put in the heading (see facility comment to the heading). The facility comments were received by DEQ on December 18, 2012 from Stephen Freiburger. The word active will be removed and the heading will be the same as in 40 CFR 60.753.

ALL COMMENTS REGARDING MISSING REGULATIONS THAT WERE NOT APPLICABLE ARE STATED IN PREVIOUS DEQ RESPONSES

Facility comment: As the County previously noted to DEQ, the terms "of this Section" and "of this Part" in Permit section 5 are confusing as to whether they refer to the permit "section" or the relevant Code of Federal Register "section." In the latest draft of the permit, DEQ replaced numerous references in the Section 5

conditions with the full regulatory citation. However, these confusing terms remain in Permit Condition 5.14. The County requests that DEQ change these terms as DEQ has done in other Section 5 conditions.

DEQ response: While DEQ tried to get all the statements converted to FHMRL's request a couple were missed. Those missed have been corrected to read like the rest.

Facility comment: Section 6 Summary description: In our meeting with DEQ, DEQ stated it would amend the summary description for Section 6 related to the flare to address: (1) that the only conditions on the flare before it becomes a control device for the landfill are the facility wide opacity limits provided in Condition 3.7 and the performance test requirements in Condition 6.3; and (2) that the Condition 6.3 performance test requirement is necessary for the County to calculate the molecular weight to be used in other calculations. Only after the flare becomes a control device for the landfill do Conditions 6.3-6.5 become applicable. The County has proposed changes to DEQ's summary description to clarify this.

DEQ response: The Summary Desription for the Flare had been changed as agreed in the meeting with FHMRL. Each topic of discussion has been addressed with the exception of the one time performance test. A statement addressing the performance test as a one time test has been added.

Facility comment: Permit Condition 7.3: There is a reference in Permit Condition 7.3 to "this subpart" that is confusing regarding whether it applies to the permit subpart or the referenced CFR subpart. The County requests that this term be deleted to avoid this confusion.

DEQ response: The statement "to this subpart" has been eliminated.

Facility comment: Permit Condition 7.7(a), Table 7.4 footnotes: The Table 7.4 footnotes use the pronoun "you" to refer to the Permittee. The County requests DEQ to amend these references to read "the Permittee" or equivalent.

DEQ response: The words (The permittee) has replaced the word "you".

Facility comment: Section 8 – Permit Shield: DEQ provided us with an example, used in a different facility's Title V operating permit, of a permit shield chart showing State and Federal air quality requirements determined by DEQ as not applicable to the permittee. DEQ indicated that the County was welcome to prepare a similar chart for inclusion in Section 8 of the County's permit, showing the non-applicable state and federal air quality requirements relevant to this project, and that DEQ would provide a permit shield for these non-applicable requirements identified in this chart. The County has accepted DEQ's invitation to prepare a chart of non-applicable state and federal air quality requirements relevant to this project and has included the same in Section 8 of the attached markup of the County's permit.

The permit shield introductory language of Permit Section 8 concludes that certain regulatory requirements are non-applicable. However, DEQ does not in Section 8 provide that, in concluding that these requirements are non-applicable, DEQ has determined that these requirements meet the criteria set forth in IDAPA 58.01.01.325.01(b) for a Permit Shield. Thus, the County requests that DEQ provide in the Permit Shield introductory language the following statement that the non-applicable requirements set forth in the Permit Shield meet the criteria of IDAPA 58.01.01.325.01(b) for the Permit Shield:

DEQ has determined that the following requirements are not applicable and that all of the criteria set forth in IDAPA 58.01.01.325.01(b) for the Permit Shield, with respect to these requirements, have been met.

Further, the County requests that DEQ provide a Permit Shield for the provisions identified in Permit Section 5 that are non-applicable to the landfill so long as the NMOC emissions rate is less than 50 Mg/year:

Those provisions identified in Section 5 of this Permit, so long as the NMOC emissions rate is less than 50 Mg/year.

DEQ response: To the comment of adding the statement to the introductary language, DEQ will add the statement.

DEQ response: To the comment of adding provisions identified in Permit Section 5 to the permit shield list, DEQ **will not** be adding the provisions of Permit section 5 to the permit shield list. FHMRL has explicitly requested in the oringinal PTC to have the years of development of the landfill including those years with NMOC emissions rate equal to or exceed 50 Mg/yr in FHMRL's original PTC. Now FHMRL is requesting a

permit shield for exactly what FHMRL wanted in their PTC. Thus, the permit conditions of Section 5 of the permit **do not** qualify for a permit shield.

The request for a permit shield of IDAPA 58.01.01.610-613 was not listed because this group of rules includes landfill fires and FHMRL is in the landfill business.

DEQ's templates for the Statement of Basis does not number the General Provisions requirements as seen in the Tier I permit's General Provisions. Thus the Tier I Statement of Basis templates were followed and the General Provisions as stated within the Statement of Basis were not numbered.

Statement of Basis Comments

Facility comment: The County included certain IDAPA open burning regulations in the Permit Shield Chart of non-applicable requirements for the reasons stated in the Chart. Accordingly, the list of applicable IDAPA open burning regulations set forth in Permit Condition 3.15 should be amended consistent with the Permit Shield Chart by deleting from Permit Condition 3.15 those open burning regulations identified in the Permit Shield Chart.

The County request that DEQ include in Appendix A complete copies of the Emissions Inventory. Certain columns in the version of the inventory in this 6th draft of the Statement of Basis appear to have been cut off in places.

DEQ response: The open burning rules stated in the facilitywide section of the permit were amended to cover all the open burning section of IDAPA 58.01.01.600-616. FHMRL had stated in their permit shield request a permit shield for sections 610-613 and 614-624. The sections 610 – 613 were not included in the permit shield because this group of rules included landfill site fires and FHMRL is a landfill. Thus, if FHMRL's performance over the years match their permit shield request regarding sections stated within the permit shield section, then FHMRL will be shielded from the performance requirements of those sections.

There were some parts of on emissions spreadsheet that were inadvertly not included. This emissions spreadsheet has been corrected and replace in Appendix A.