

Statement of Basis

Tier I Operating Permit No. T1-2010.0155

Project ID 61655

Fort Hall Mine Road Landfill

Pocatello, Idaho

Facility ID 005-00062

Final

August 22, 2016

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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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1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Idaho Department of Environmental Quality
dscf	dry standard cubic feet
EPA	United States Environmental Protection Agency
FHMRL	Fort Hall Mine Road Landfill
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
hp	horsepower
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
iwg	inches of water gauge
lb/hr	pounds per hour
LFG	landfill gas
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
Mg	megagrams
Mg/yr	megagrams per year
MMBtu	million British thermal units
MMscf	million standard cubic feet
MRRR	Monitoring, Recordkeeping and Reporting Requirements
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
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTE	potential to emit
PW	process weight rate
RICE	reciprocating internal combustion engines
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAP	toxic air pollutant
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar-month period
T1	Tier I operating permit
T2	Tier II operating permit
ULSD	ultra low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compound

2. INTRODUCTION AND APPLICABILITY

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e. statement of basis) that sets forth the legal and factual basis for the draft Tier I operating permit terms and conditions including reference to the applicable statutory provisions or the draft denial. This document provides the basis for the draft Tier I operating permit for the Fort Hall Mine Road Landfill.

3. FACILITY INFORMATION

3.1 Facility Description

Bannock County operates the Fort Hall Mine Road Landfill, a municipal solid waste landfill. The landfill currently consists of two cells with a total capacity of 2,464,257 short tons (2,240,000 Mg). The original cell (Closed Cell, with a calculated capacity of 1,505,097 Mg, 1943 - 1993), was succeeded by the current cell, Cell A (with a calculated capacity of 1,160,000 mg, 1994 - 2013 (estimated)). A third cell, Cell 4, is planned to come on line in 2016, and will increase the landfill design capacity to 8,061,025 tons (7,310,000 Mg) at that time.

In 2010, Bannock County proposed to install a landfill gas (LFG) collection system at its Fort Hall Mine Road Landfill. Collected LFG was to be piped to an open flare and to a lean-burn Caterpillar model 3516 IC engine powering an electrical generator that is connected to the commercial power grid. The project to install the flare was completed in 2012. The project to install the IC engine was completed in 2014.

3.2 Facility Permitting History

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).

January 7, 2016	P-2009.0146, Permit to modify the current Permit to Construct to specify the Caterpillar model 3520C IC engine, as was installed at the facility, in the permit, Permit status (A)
February 27, 2014	T1-2010.0155, Administrative Amendment to correct typographical errors in the Tier I operating permit issued January 17, 2014, Permit status (A, but will become S upon issuance of this permit)
January 17, 2014	T1-2010.0155, Administrative Amendment to correct typographical errors in the initial Tier I operating permit, Permit status (S)
July 18, 2013	T1-2010.0155, Initial Tier I permit, Permit status (S)
April 6, 2010	P-2009.0146, Initial permitting action to install and operate a landfill gas collection system, a flare, and a Caterpillar model 3516 IC engine powering an electrical generator, Permit status (S)

4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

4.1 Application Scope

The scope of the permit revision is to include the requirements of P-2009.0146, project 61559, which was issued in accordance with the requirements of IDAPA 58.01.01.209.05.c. Therefore, this project is an Administrative Amendment of the existing Tier I permit. No other changes were requested.

4.2 Application Chronology

July 24, 2015	The Permittee requested that with the final issuance of Permit to Construct P-2009.01462, project 61559, that a Administrative Amendment of the Tier I permit be performed. This permit was issued January 7, 2016.
June 2, 2016	A draft permit was sent to the facility for review.
August 8, 2016	A second draft permit was sent to the facility for review.
August 22, 2016	The permit was finalized and sent to the facility.

5. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its permit application. Also listed in this section are the insignificant activities based on size or production rate.

5.1 Process No. 1 - PROCESS DESCRIPTION

Table 5.1 lists the emissions units and control devices associated with the Landfill – Applicable Requirements with NMOC Emission Rate Less Than 50 Mg/yr.

Table 5.1 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
	<u>Landfill:</u> Closed Cell, Cell A, and Cell 4	No control equipment required until NMOC emissions \geq 50 Mg/yr	N/A

The landfill currently consists of two cells with a total capacity of 2,464,257 short tons (2,240,000 Mg). The original cell (Closed Cell, with a calculated capacity of 1,505,097 Mg, 1943 – 1993), was succeeded by the current cell, Cell A (with a calculated capacity of 1,160,000 mg, 1994 – 2013 (estimated)). A third cell, Cell 4, is planned to come on line in 2016, and will increase the landfill design capacity to 8,061,025 tons (7,310,000 Mg) at that time. The gas generated by the landfill is collected in a landfill gas (LFG) collection system and routed to an IC engine and a flare.

5.2 Process No. 2 - PROCESS DESCRIPTION

Table 5.2 lists the emissions units and control devices associated with the Landfill – Applicable Requirements when NMOC Emission Rate is Greater Than or Equal to 50 Mg/yr.

Table 5.2 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
	<u>Landfill:</u> Closed Cell, Cell A, and Cell 4	Landfill Gas (LFG) Collection System w/ the gas routed to an IC Engine and/or a Flare	N/A (all LFG is routed to the IC engine and flare)

The landfill currently consists of two cells with a total capacity of 2,464,257 short tons (2,240,000 Mg). The original cell (Closed Cell, with a calculated capacity of 1,505,097 Mg, 1943 – 1993), was succeeded by the current cell, Cell A (with a calculated capacity of 1,160,000 mg, 1994 – 2013 (estimated)). A third cell, Cell 4, is planned to come on line in 2016, and will increase the landfill design capacity to 8,061,025 tons (7,310,000 Mg) at that time. The gas generated by the landfill is collected in a landfill gas (LFG) collection system and routed to an IC engine and a flare.

5.3 Process No. 3 - PROCESS DESCRIPTION

Table 5.3 lists the emissions units and control devices associated with the flare.

Table 5.3 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
	Flare: Maximum Rating: 15.92 MMBtu/hr Fuel: Landfill gas	N/A	Flare, F1

Collected LFG will be piped to a lean-burn IC engine powering an electrical generator that is connected to the commercial power grid. When the IC engine is down for maintenance or when there is excess LFG, the gas is routed to the flare.

5.4 Process No. 4 - PROCESS DESCRIPTION

Table 5.4 lists the emissions units and control devices associated with the IC engine.

Table 5.4 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)	Emission Point ID No.
	IC Engine: Manufacturer: Caterpillar Model: 3520C Manufacture Date: 2013 Maximum Power Rating: 2,242 bhp Fuel: Landfill gas	N/A	IC Engine exhaust, E1

Collected LFG will be piped to a lean-burn IC engine powering an electrical generator that is connected to the commercial power grid. When the IC engine is down for maintenance or when there is excess LFG, the gas is routed to the flare.

5.5 Emissions Inventory

Table 5.5 summarizes the emissions inventory for this Title V facility (taken from the most recent permitting project, P-2009.0146, Project 61559, issued January 7, 2016). 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.

Table 5.5 EMISSIONS INVENTORY - POTENTIAL TO EMIT (T/yr)

Source Description	PM ₁₀	SO ₂	NO _x	CO	VOC
	T/yr	T/yr	T/yr	T/yr	T/yr
Flare	0.95	0.6	2.52	2.95	0.82
IC Engine	0.74		45.43	45.03	15.12
Total Emissions	1.69	0.60	47.95	47.98	15.94

6. REGULATORY REVIEW

6.1 Administrative Amendment

This permit is for an Administrative Amendment in accordance with IDAPA 58.01.01.381 to include the requirements of P-2009.0146, Project 61559, which was issued in accordance with the requirements of IDAPA 58.01.01.209.05.c. Therefore, this project is an Administrative Amendment of the existing Tier I permit. The amendment date was added to the front page. No other changes have been made to the permit.

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

This facility is a landfill subject to the requirements of NSPS WWW. Therefore, this facility is required to obtain a Title V, as specified in IDAPA 58.01.01.859.04.

6.3 PSD Classification (40 CFR 52.21)

40 CFR 52.21

Prevention of Significant Deterioration of Air Quality

The facility is not classified as an existing major stationary source, because the estimated emissions of PM₁₀/PM_{2.5}, SO₂, NO_x, and CO do not have the potential to exceed major stationary source thresholds and the facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a). The facility is not a major source for CO₂e because it is an existing source that has not exceeded the GHG major source threshold of 100,000 tpy, nor has it made a change that would increase GHG emissions by 75,000 tpy.

6.4 NSPS Applicability (40 CFR 60)

Because the facility is a landfill with a spark ignited IC engine the following NSPS requirement applies to this facility:

- 40 CFR 60, Subpart Cc - Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills
- 40 CFR 60, Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills
- 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

See the Statement of Basis for PTC permit No. P-2009.0146, issued April 6, 2010 and the Statement of Basis for Tier I permit No. T1-2010.0155, project 61262, issued January 17, 2014 for the Subparts Cc, WWW, and JJJJ requirements for the facility.

6.5 NESHAP Applicability (40 CFR 61)

The project is not subject to any NESHAP requirements in 40 CFR 61.

6.6 MACT Applicability (40 CFR 63)

Because the facility has a municipal solid waste landfill the following NESHAP (MACT) requirements apply to this facility:

- 40 CFR 63, Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

See the Statement of Basis for PTC permit No. P-2009.0146, issued April 6, 2010 and the Statement of Basis for Tier I permit No. T1-2010.0155, project 61262, issued January 17, 2014 for the Subpart AAAA requirements for the facility.

6.7 CAM Applicability (40 CFR 64)

CAM requirements are not applicable to this facility.

6.8 Acid Rain Permit (40 CFR 72-75)

The Fort Hall Mine Road Landfill facility is not an affected source subject to the Acid Rain Permit program in 40 CFR 72-75.

7. PUBLIC COMMENT

Public notice is not required for this Administrative Amendment in accordance with IDAPA 58.01.01 381.01.e.

8. EPA REVIEW OF PROPOSED PERMIT

EPA review is not required for this Administrative Amendment in accordance with IDAPA 58.01.01.381.02.c. A copy of the revised permit is being submitted to EPA Region 10.

Appendix A - Facility Comments for Draft Permit

The following comments were received from the facility on June 15, 2016 (via a phone conversation with Stephen Freiburger):

Facility Comment: Permit, Table 3.1 – MRR references are listed incorrectly.

DEQ Response: The requested change will be made to the Permit.

Facility Comment: Throughout the Permit – CFR reference numbers were removed from the permit conditions.

DEQ Response: The CFR reference numbers will be placed back in the Permit.

Facility Comment: Permit – Split the flare and the IC engine into separate sections like they were in the previous Tier I permit.

DEQ Response: The requested changes will be made to the Permit (Note: The permit to Construct that was incorporated into this permit listed the flare and the IC engine in one section of the permit.

The following comments were received from the facility on August 12, 2016:

Facility Comment: General comments on the permit – We are in receipt of the most recent draft of the revised Tier 1 Permit for the referenced project and find that this draft alters our existing permit well beyond the scope agreed to between Bannock County and IDEQ in our previous meetings on this matter. It is our understanding, in accordance with section 10.4 of the existing permit, that DEQ’s revisions to the exiting permit “...shall affect only those parts of the permit for which cause to reopen exists.” Which, in this case, was the make and model of the installed engine, and associated revision of the emission standard and emissions limits.

In reviewing the current draft of the Tier 1 Permit, we find that there have been changes made throughout the document that alter the reader’s ability to understand compliance requirements of the permit, such as removal of the definitions, text revisions of the under- and over-50 mg NMOC section requirements summaries, typographical errors and incomplete references to T1 and PTC permit section and CFR citations.

Therefore, we respectfully request that rather than continuing to modify your Tier 1 template to match up with our existing permit, you start with the existing permit and make the modifications identified in the attached marked up copy of the existing T1 at your earliest convenience.

DEQ Response: There were four definitions omitted inadvertently. The definitions for LFG, Mg, Mg/yr, and TAP were added to the definitions list.

DEQ Response: The text revisions to the under- and over-50 mg NMOC section requirements summaries will incorporate both the PTC and the previous Tier I permit as requested.

DEQ Response: All typographical errors and incomplete references to T1 and PTC permit section and CFR citations will be corrected as requested.

DEQ Response: Tier I permit modifications start with the most current Tier I permit template so the current Tier I permit for the facility will not be used as requested. All marked up documents will be incorporated in the the revised Tier I permit as requested.