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TRANSMITTAL

TO: Cathy Mayer, Director
Kootenai County Solid Waste Department
3650 North Ramsey Road
Coeur d'Alene, Idaho 83815

DATE: July 28, 2015
PROJECT NUMBER: 553-1660-037 (02/05)
PROJECT NAME: Kootenai County Farm Landfill Tier 1 Operating Permit Renewal Application

THESE ARE:	SENT VIA:	
☐ PER YOUR REQUEST	☐ U.S. MAIL	☐ EXPRESS SECOND DAY
☐ FOR YOUR INFORMATION	☐ EMAIL	☐ COURIER
☐ FOR YOUR REVIEW AND APPROVAL	☐ FTP	☐ HAND DELIVERY/PICK UP
☒ FOR YOUR FILES	☐ GROUND SERVICE	☐ INTEROFFICE MAIL
☒ FOR YOUR ACTION	☒ EXPRESS OVERNIGHT	

WE ARE TRANSMITTING THE FOLLOWING MATERIALS:

Enclosed is a hard copy of the Kootenai County Farm Landfill Tier 1 Operating Permit Renewal Application. As required by IDEQ, please sign and date (7/9/2015) Form GI, which has been tabbed for easy reference.

Please forward via overnight mail the original to Bill Rogers so he has "wet signed original." His address is on the cover letter of the application.

COMMENTS:

Apparently, a hard copy is required by DEQs attorney.

Thanks so much!

Sincerely,

Steve Emge

cc: File

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719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104 | P 206.394.3700

July 14, 2015
Parametrix No. 553-1660-037 (02/05)

Bill Rogers
Air Quality Program Office-Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706-1255

Re: Kootenai County Farm Landfill
Renewal Application for Tier 1 Operationg Permit

Dear Bill:

The Kootenai County Solid Waste Management Department is required to renew Tier I Operating Permit No. T1 2010.0028 for the Kootenai County Farm Landfill (KCFL) in accordance with permitting requirements in IDAPA 58.01.01.369 and .859 and 40 CFR 60 Subpart WWW. Parametrix has prepared a Tier I operating permit renewal application on behalf of KCFL to satisfy the requirements cited above.

APPLICATION ORGANIZATION

1. Additional Data Document

   01_Tier 1 AOP Renewal Additional Data KCFL.docx. This is the Additional Data Document designed to provide additional data as required in IDAPA 58.01.01.314.

2. Appendix A – IDEQ Forms

   The following documents are filled out forms downloaded from IDEQ.

   a. Form CS (IDEQ Cover sheet)
   b. Form GI (IDEQ General information)
   c. Form EU0 (IDEQ General Emission Unit)
   d. Forms EI-CP
   e. Federal Regulation Applicability

3. Appendix B – Plot Plan
4. Appendix C – Emissions Calculations
5. Appendix D – Annotated Tier I Permit
6. Appendix E – Annotated Statement of Basis for Tier I Permit

Please contact me via email at abutler@parametrix.com or via telephone at 206-930-1074 if you have any questions with regard to this application.

Sincerely,

Alan T. Butler

Alan Butler, P.E.
Senior Engineer

Enclosures

KOOTENAI COUNTY FARM LANDFILL

TIER I PERMIT RENEWAL APPLICATION

ADDITIONAL INFORMATION
PER IDAPA 58.01.01.314

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TABLES

1. TIER I OPERATING PERMIT SCOPE

Purpose

Usually a source is required to apply for and obtain a Tier I operating permit because potential to emit of a pollutant exceeds a threshold value, and the source is said to be "major" for that pollutant. This is not the case for the Kootenai County Farm Landfill. The Kootenai County Farm Landfill was required to obtain a Tier I operating permit because the facility has become subject to a federal New Source Performance Standard.

The Kootenai County Solid Waste Management Department was required to obtain a Tier I operating permit for the Kootenai County Farm Landfill (KCFL) in accordance with the following requirements:

- IDAPA 58.01.01.859 - Standards of Performance for Municipal Solid Waste Landfills that Commenced Construction, Reconstruction or Modification on or after May 30,1991,and
- 40 CFR 60 Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills.

KCFL applied for a Tier I operating permit in September 2010. The Idaho Department of Environmental Quality (IDEQ) issued Tier I operating permit No. T1-2010.0028 to KCFL on January 14, 2011. The permit was modified on September 23, 2011, and is due to expire on January 14, 2016.

The consulting firm Parametrix has prepared a Tier I operating permit renewal application on behalf of KCFL in order to satisfy the requirements cited above. IDAPA 58.01.01.313.03 requires KCFL to submit a complete renewal application no later than six months prior to the expiration date of the existing Tier I operating permit.

This Tier I Permit incorporates the following Permits to Construct:

Permit to Construct (PTC) No. P-020100 issued March 24, 2003, which replaced PTC No. P-055-00044 issued April 6, 1994. Original permit was for installation of a landfill gas collection system at a "maximum design capacity of 600,000 lb/day and 109,500 ton/year acceptance rate of municipal waste" landfill. The modification was to change design capacity to 2.33 million tons of municipal waste.

PTC No. P-990122 issued on December 13, 1999 for installation of a second landfill gas flare.

Regulated Sources

Table 1-1 lists all sources of emissions regulated in this Tier I operating permit.

Table 1-1 Regulated Emissions Sources

Source Description	Document Section	Emissions Control(s)
Fugitive dust emissions created from a number of sources: paved and unpaved roads, landfill equipment/landfill operations that include dozing and grading activities for compressing municipal solid waste and applying daily cover.	3	Reasonable controls prescribed in Facility-Wide conditions.
Kootenai County Farm Landfill Existing Cell and East Expansion Cell	4	Landfill gas (LFG) collection system (75% collection efficiency), vented to two flares, permitted under PTC No's. P-990122 and P-020100.
Kootenai County Farm Landfill Existing Cell and East Expansion Cell	4	Fugitive emissions from landfill, Periodic measurements taken per 40 CFR 60 Subpart WWW.

2. KOOTENAI COUNTY FARM LANDFILL DESCRIPTION

The requirements in this section only apply to the specific emission units cited. In addition, the requirements in Section 2 also apply to the specific emission units or activities this section.

Summary

Process Description

Kootenai County Landfill (KCFL) operation presently consists of the original Landfill and the East Expansion Landfill Phases 1 and 2. The present landfill encompasses an area of approximately 60 acres of a 440 acre parcel of land with a design capacity of 2.33 million tons. The East Expansion Cell is designed to expand to the east of the Landfill. The original Landfill is temporary closed and covered; the East Expansion Cell will be expanded back so that it will eventually be built on top of the original Landfill. The entire facility will have a total capacity of 8.72 million tons and is anticipated to be closed in 2040. The active landfill, including the original Landfill and East Expansion Landfill will encompass an area of approximately 80 acres.

Kootenai County Landfill operation generates potentially odorous landfill gas (LFG). LFG is a byproduct produced from decomposition of organic material in the MSW landfill. LFG is typically a mixture of approximately 50% methane and 50% carbon dioxide, and a minor amount of non-methane organic compounds (NMOC). Within the NMOC are some hazardous air pollutants (HAPs) and toxic air pollutants (TAPs). A trace amount of hydrogen sulfide gas is also found in the LFG. Landfills may continue to generate LFG for 10 to 20 years, or longer, after waste disposal has ceased.

Emissions Control Description

The LFG collection system and control system are required to control the LFG from KCFL in accordance with 40 CFR 60, Subpart WWW. The timeframe to install and operate the LFG collection system and control system to control the LFG produced at KCFL is specified in 40 CFR 60, Subpart WWW, which is included in this permit.

The existing KCFL gas collection system and control system consists of two enclosed flares. The landfill gas collection system and the first flare (John Zink, enclosed, 24.8 MMBtu/hr) were permitted in April 6, 1994. The second (Callidus, enclosed, 32.5 MMBtu/hr) flare was permitted on December 13, 1999.

Based on LANDGEM modeling data using anticipated growth patterns, the existing control system has the capacity to control LFG flows of Landfill and East Expansion Landfill cells until 2040 per the currently available data.

The Existing Control System – two enclosed LFG Flares

- The existing LFG control system consists of the following components:
- Condensate system (condensate traps, pump, and controls)
- Two variable speed blowers
- Two enclosed, smokeless flare units
- Two propane tank ignition systems

The extracted LFG is drawn to the flare system by two exhausters (vacuum blowers). Condensate is captured ahead of the blowers and collected in a small storage vessel (knockout drum). The condensate is automatically separated and drained to the leachate ponds via a condensate manhole pump station. The condensate consists primarily of water vapor generated at a rate of approximately 0.004 gallon per cubic foot of LFG. The blowers push the LFG into the flares. Two enclosed flares are operated in parallel. Propane-fired pilots provide for continuous auto-ignition of the LFG. Sensors (thermocouples) in the flare stacks continuously monitor flare operations. In the event the flame goes out, the integrated control system will shut down the flares. The flares are enclosed. The flare flame cannot be seen, but system operators are able to monitor the presence of the flame through sight glasses of the enclosure.

The physical and operation specifications for each flare, based on an initial manufacturer's submittal, are listed as follows:

Manufacturer/Model: John Zink enclosed ZTOF flare system

Height:	40 feet
Diameter:	6.0 feet
Exhaust flowrates:	825 scfm
Operating temperature:	1,400 °F to 1,800 °F
Heat Release:	Maximum 24.8 MMBtu/hr

Manufacturer/Model: Callidus enclosed landfill flare system

Height:	40 feet
Diameter:	7 feet
Exhaust flowrates:	1,200 scfm
Operating temperature:	1,400 °F to 1,800 °F
Heat Release:	Maximum 32.5 MMBtu/hr

According to the manufacturer, the flares operated at the appropriate temperature[1] combined with a flowrate to provide a residence time of no less than 0.7 seconds, will achieve a NMOC destruction efficiency of 98% or greater.

Table 2-1 itemizes the devices used to control emissions from the Landfill and East Expansion Landfill.

[1] The "appropriate" temperature may be an arbitrary temperature that is established in an applicable rule, or set by a PTC, or may be established during a source test in which the required destruction efficiency is achieved.

Table 2-1 Emission Units and Emissions Control Devices

Emission Units/Processes	Emissions Control Device		
Landfill and East Expansion Cell	Flare #1	PTC No. P-020100	March 24, 2003
	Flare #2	PTC No. P-990122	December 13, 1999
	Fugitive emission measurement – 40 CFR 60 Subpart WWW		
Leachate evaporation system	Flare No. 1	P-980073	July 28, 1998
	Exempt from new source review per referenced IDEQ technical analysis		

Emissions

Nearly all the emissions from the Kootenai County Farm Landfill are landfill gases (LFG) generated by the landfill. LFG is either collected by the collection system and combusted in the flares where it is exhausted as stack emissions, or it seeps out of the landfill in the form of fugitive emissions.

Primary Pollutants

The EPA Model LandGEM2 was used to estimate annual emissions of LFG. The collection system is required to have a collection efficiency of at least 75 percent, and the flares are required to have a destruction efficiency of at least 98 percent. This means that for every ton of LFG generated by the landfill, the most conservative estimate is that 0.735 ton will be collected and combusted, while the remaining 0.265 ton will escape to the atmosphere.

Table 2-2 Primary Air Pollutant Emissions from Landfill

Pollutant	Tons per year	
	2015	2035 (peak year)
Fugitive emissions		
Methane	2,335	5,964
Carbon dioxide	6,406	16,364
NMOC	100	256
VOC	9.42	24.07
Point source (flares)		
VOC, as hexane	3.70	3.70

Notes: All other emissions units within the facility are insignificant emission units and are not included in emission inventory.

Non-methane organic compounds (NMOC) are the pollutant of interest

Flare-controlled VOC emissions rate calculated from emission limit in PTC No. P-020100, Section 2.1, per instructions from Bill Rogers of Idaho DEQ.

Hazardous Air Pollutants

LandGEM 2 was also used to calculate annual emissions of hazardous air pollutants, as shown in the table below:

Table 2-3 Hazardous Air Pollutant Emissions from Landfill

Pollutant	Tons per year	
	2015	2035 (peak year)
Fugitive emissions		
HAP	7.87	20.11
Point source (flares)		
HAP	3.09	3.09
Total		
HAP	10.96	23.20

Notes: Hazardous air pollutants (HAP) are pollutants identified in LandGEM 2 model output that are also identified in §112(b) of the Federal Clean Air Act. All identified HAP pollutants are organic compounds.

Point source HAP was estimated by multiplying flare-controlled VOC emissions (3.70 tpy) by fugitive HAP (7.87 tpy) and dividing by fugitive VOC (9.42 tpy). Flare-controlled VOC calculated from emission limit in PTC No. P-020100, Section 2.1, per instructions from Bill Rogers of Idaho DEQ.

3. FACILITY-WIDE CONDITIONS

Table 3-1 contains a summary of requirements that apply generally to emissions units at the facility.

Table 3-1 Applicable Requirements Summary

Permit Conditions	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
2.1	Fugitive dust	Reasonable control	IDAPA 58.01.01.650-651	2.2, 2.3, 2.4, 2.11
2.5	Odors	Reasonable control	IDAPA 58.01.01.775-776	2.6, 2.11
2.7	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	2.8, 2.11
2.9	Excess emissions	Compliance with IDAPA 58.01.01.130-136	IDAPA 58.01.01.130-136	2.9, 2.11
2.14	Fuel oil sulfur content limit	ASTM Grade 1 fuel oil – 0.3% by weight; ASTM Grade 2 fuel oil – 0.5% by weight	IDAPA 58.01.01.728	2.14, 2.11
2.15	Open Burning	Compliance with IDAPA 58.01.01.600-617	IDAPA 58.01.01.600-617	2.11
2.16	Renovation or demolition	Compliance with 40 CFR 61, Subpart M	40 CFR 61, Subpart M	2.11
2.17	Chemical accident prevention	Compliance with 40 CFR 68	40 CFR 68	2.11, 2.17
2.18	Recycling and emission reductions	Compliance with 40 CFR 82, Subpart F	40 CFR 82, Subpart F	2.11, 2.18

Fugitive Dust

2.1 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]

2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each

complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

2.4 The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective. If fugitive dust emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.

Within three months of the permit issuance, the permittee shall develop a fugitive dust control plan for DEQ approval. The permittee shall comply with the plan.

The permittee shall submit the fugitive dust control plan to:

Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 North Orchard
Boise, Idaho 83709-2239
Phone: (208) 373-0550 Fax: (208) 373-0287

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Odors

2.5 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, 5/1/94]

2.6 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

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

Visible Emissions

2.7 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]

2.8 The permittee shall conduct a quarterly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Excess Emissions

Excess Emissions – General

2.9 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 Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

2.9.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing the excess emissions event; to reduce the frequency of occurrence of such events; to minimize the amount by which the emission standard is exceeded; and shall, as provided below or upon request of DEQ, submit a full report of such occurrence, including a statement of all known causes, and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

Excess Emissions – Startup, Shutdown, Scheduled Maintenance

2.9.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to, the following:

[IDAPA 58.01.01.133, 4/5/00]

A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory or a Wood Stove Curtailment Advisory has been declared by DEQ.

[IDAPA 58.01.01.133.01.a, 3/20/97]

Notifying DEQ of the excess emissions event as soon as reasonably possible, but no later than two hours prior to, the start of the event, unless the owner or operator demonstrates to DEQ's satisfaction that a shorter advance notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

Excess Emissions – Upset, Breakdown, or Safety Measures

2.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/5/00]

2.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

The owner or operator shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

2.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the period until such time as the condition causing the excess has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03 4/5/00]

Excess Emissions – Reporting and Recordkeeping

2.9.4 A written report for each excess emissions event shall be submitted to DEQ by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01 and 02, 3/20/97]

2.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request and shall include the information requested by IDAPA 58.01.01.136.03(a) and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

An excess emissions record book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, or safety preventative maintenance plans that have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97]

Performance Testing

2.10 Reserved.

Monitoring and Recordkeeping

2.11 The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this Tier I 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.

[IDAPA 58.01.01.322.07, 5/1/94]

Reports and Certifications

2.12 All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 North Orchard
Boise, Idaho 83709-2239
Phone: (208) 373-0550 Fax: (208) 373-0287

Fuel-Burning Equipment

2.13 Reserved.

Sulfur Content

2.14 The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

ASTM Grade 1 fuel oil - 0.3% by weight.

ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.725.03, 5/8/09]

2.14.1 The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

[IDAPA 58.01.01.322.06, 5/1/94]

Open Burning

2.15 Comply with the Rules for Control of Open Burning, IDAPA 58.01.01.600-616.

[IDAPA 58.01.01.600-617, 5/8/09]

Renovation/Demolition

2.16 Comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

Regulated Substances for Accidental Release Prevention

2.17 An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.

The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

Recycling and Emissions Reductions

2.18 Comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

4. EMISSION UNIT-SPECIFIC CONDITIONS

VOC Emission Limit (Flare #1)

Volatile organic compounds (VOCs) shall be reduced to a maximum concentration of twenty parts per million by volume on a dry basis (20 ppmdv) out of the stack outlet as hexane at 3% O_2.

[PTC No. P-020100, Section 2.1 (3/24/03)]

Proposed Monitoring Method: 40 CFR 60.752(b)(2)(iii)(b).

Fugitive Emissions

Fugitive particulate matter emissions from the landfill shall be reasonably controlled as required in IDAPA 58.01.01.651, Rules for the Control of Air Pollution of Idaho. This shall include but is not limited to, the application of dust suppressants of dust suppressants on all unpaved roads.

[PTC No. P-020100, Section 2.2 (3/24/03)]

Proposed Monitoring Method: Comply with Facility-wide Permit Condition 2.8.

Visible Emissions Limit (Flare #2)

Emissions from the landfill flare shall not exceed twenty percent (20%) opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period as required by IDAPA 16.01.01.625 (Rules for the Control of Air Pollution in Idaho). Opacity shall be determined by the procedures contained in IDAPA 16.01.01.625.

[PTC No. P-990122, Section 1.1 (12/13/99)[2]]

Proposed Monitoring Method: Comply with Facility-wide Permit Condition 2.7.

Operating Requirements

Wellhead Pressure

The gauge pressure at each wellhead in the gas collection header shall be maintained in accordance with 40 CFR 60.754

[PTC No. P-020100, Section 3.1 (3/24/03)]

Proposed Monitoring Method: Comply with PTC No. P-020100, Section 4.1.

Pilot Flame

An ultra-violet scanner on the flare device shall monitor the flare's flame at all times.

[PTC No. P-020100, Section 3.2 (3/24/03)], [PTC No. P-990122, Section 2.2 (12/13/99)]

Proposed Monitoring Method: Modify PTC No. P-020100, Section 4.2. The pilot system closes after a set time limit, then is monitored by a scanner to ensure combustion. If the flame goes out, the scanner signals the control system to shut down and closes the main flare valve, and then calls out emergency condition via an autodialer.

[2] Condition 1.1 in PTC No. P-990122 requires the same opacity standard as Condition 2.7 in Section 2 of this Tier I Permit, but it refers to what is suspected to be an out-of-date regulation.

Combustion Requirements

Flare No. 1: The combustion temperature shall be maintained at a minimum of 1,500 °F. Combustion temperature shall be maintained at or above the temperature recorded during the most recent source test that demonstrated compliance with Section 2.1 of PTC No. P-020100.

KCFL is requesting that this requirement be interpreted such that maintaining the lowest temperature in either of the two sentences will satisfy this requirement. They found during their most recent source test that compliance was achieved with Section 2.1 of PTC No. P-020100 at 1,486 °F.

[PTC No. P-020100, Section 3.3 (3/24/03)]

Flare No. 2: Combustion temperature shall be maintained at greater than or equal to an hourly average of 1,500 degrees Fahrenheit.

[PTC No. P-990122, Section 2.1 (12/13/99)]

Proposed Monitoring Method for both flares: Comply with PTC No. P-020100, Section 4.3.

Landfill Gas Flowrate

The landfill gas flowrate shall not exceed the maximum design capacity of the enclosed gas flare described in Section 1.2 of PTC No. P-020100.

[PTC No. P-020100, Section 3.4 (3/24/03)]

Proposed Monitoring Method: Comply with PTC No. P-020100, Section 4.4 and 40 CFR 60.758(b)(2).

Collection System

The collection system shall capture and collect landfill gas at sufficient extraction rates. Gas collection system expansion shall be performed for each area, cell, or group of cells for which future refuse will be accepted.

[PTC No. P-020100, Section 3.5 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60, §§60.752(b)(2)(ii) and 60,755(a)(3).

Monitoring and Recordkeeping Requirements

Wellhead Pressure

The permittee shall install a sampling port at each wellhead and measure the gauge pressure in the gas collection header on a monthly basis to determine compliance with Section 3.2 of PTC No. P-020100.

[PTC No. P-020100, Section 4.1 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60 §§60.755(a)(3) and 60.60.756(a)(1).

Pilot Flame

The permittee shall install, calibrate, maintain, and operate according to manufacturer specifications a heat sensing device at the pilot light to detect the continuous presence of a flame.

[PTC No. P-020100, Section 4.2 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60.756(b)(1).

Combustion Temperature

The permittee shall install, calibrate, maintain, and operate according to manufacturer specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 46.7 °F of the combustion temperature to determine compliance with Section 3.3 of PTC No. P-020100 and Section 2.1 of PTC No. P-990122.

[PTC No. P-020100, Section 4.3 (3/24/03)] , [PTC No. P-990122, Section 3.1 (12/13/99)]

Proposed Monitoring Method: Comply with 40 CFR 60.756(b)(1).

Monitor Flowrate to Flare

The permittee shall install, calibrate, maintain, and operate according to manufacturer specifications a flow indicator that provides a record of gas flow to the enclosed flare at maximum intervals of every 15 minutes (40 CFR 60.755) to determine compliance with Section 3.4 of PTC No. P-020100.

[PTC No. P-020100, Section 4.4 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60.756(b)(2).

Performance Tests

Within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after the initial startup, the permittee shall conduct an initial performance test to measure the nonmethane organic carbon (NMOC) emissions from the landfill gas flare stack in accordance with 40 CFR 60.8 and 40 CFR 60.

[PTC No. P-020100, Section 4.5 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60 §§60.8 and 60.754(d).

Recordkeeping Requirements

The permittee shall record the following information which shall remain onsite for a minimum period of two[3] years and made available to inspection personnel upon request:

- The landfill maximum design capacity, daily amount of refuse in place, and the yearly waste acceptance rate.
- The monthly gauge pressure reading in the gas collection header.

[3] Tier I permits require retention of records for no less than five years from date of origin.

- All three-hour periods when the average combustion temperature was more than 82 °F below the average combustion temperature demonstrated during the most recent performance test required in Section 4.5 of PTC No. P-020100.
- All periods when the pilot flame scanner or flare was absent and when the control device was not operating.
- All periods when the gas stream is diverted from the control device or has no flowrate.

[PTC No. P-020100, Section 4.6 (3/24/03)]

Proposed Monitoring Method: Comply with 40 CFR 60.758(a), (b)(4), (c).

Operations and Maintenance Manual Requirements

Within sixty (60) days after startup, the permittee shall have developed and Operations and Maintenance Manual (O&M) Manual for gas flare number two which describes the procedures that will be followed to comply with General Provision B and the manufacturer's air pollution control device specifications. This manual shall remain on site at all times and shall be made available to DEQ representatives upon request.

[PTC No. P-990122, Section 3.2 (12/13/99)[4]]

Proposed Monitoring Method: Comply with 40 CFR 63.6(e) and IDAPA 58.01.01.134 and IDAPA 58.01.01.135.

Reporting Requirements

Performance Tests

The permittee shall submit a test protocol for each performance test required in Section 4.5 of PTV No. P-020100 to the Department for approval at least 30 days prior to each test date. Each performance test report, including the required process data, shall be submitted to the Department within 30 days of the date on which the performance test is conducted.

[PTC No. P-020100, Section 5.1 (3/24/03)]

Proposed Monitoring Method: Comply with 60 CFR 60.8 and IDAPA 58.01.01.157

The permittee shall submit a quarterly report to DEQ of all instances when the average hourly temperature was less than 1,500 degrees Fahrenheit.

[PTC No. P-990122, Section 4.1 (12/13/99)]

Proposed Monitoring Method: Comply with IDAPA 58.01.01.322.15.q, IDAPA 58.01.01.135; and 40 CFR 70.6(a)(3)(iii)

Certification of Documents

All documents, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, and compliance

[4] Condition 1.1 in PTC No. P-990122 requires the same opacity standard as Condition 2.7 in Section 2 of this Tier I Permit, but it refers to what is suspected to be an out-of-date regulation.

certifications submitted to DEQ shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents(s) are true, accurate, and complete.

[PTC No. P-990122, Section 4.2 (12/13/99)]
[PTC No. P-020100, Section 8 (3/24/03)]

Proposed Monitoring Method: Comply with IDAPA 58.01.01.322.15.o, 40 CFR 70.6(a)(3)(iii)(A); and 40 CFR 70.5(d)

40 CFR 60 Subpart WWW Requirements

4.17 General Requirement

The permittee shall be in compliance with 40 CFR 60, Subpart WWW in accordance with IDAPA 58.01.01.859.03. The following permit conditions apply to KCFL based on the information in the application. Should, in the future, changes made to KCFL trigger other requirements in 40 CFR 60, Subpart WWW, requirements in 40 CFR 60, Subpart WWW shall govern.

The permittee shall be in compliance with the General Provisions of 40 CFR 60 when they are applicable.

[IDAPA 58.01.01.859, 4/4/00]

4.18 Standards for Air Emissions from Municipal Solid Waste Landfills (40 CFR 60.752)

4.18.1 The owner or operator of KCFL is subject to part 70 or Title V permitting requirements.

[40 CFR 60.752(b)]

4.18.2 The owner or operator of KCFL shall comply with 40 CFR 60.752(b)(2).

The owner or operator shall:

[40 CFR 60.752(b)(2)]

Submit a collection and control system design plan prepared by a professional engineer to DEQ within one year of when the calculated NMOC emission rate is equal to or greater than 50 megagrams per year.

[40 CFR 60.752(b)(2)(i)]

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

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

The collection and control system design plan shall conform with specifications for active collection systems in 40 CFR 60.759.

[40 CFR 60.752(b)(2)(i)(C)]

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) and 40 CFR 60.752 (b)(2)(iii) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, or by April 28, 2007.

[40 CFR 60.752(b)(2)(ii)]

An active collection system shall:

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

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;

[40 CFR 60.752(b)(2)(ii)(A)(1)]

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:

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

5 years or more if active; or

[40 CFR 60.752(b)(2)(ii)(A)(2)(i)]

Two years or more if closed or at final grade.

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

Collect gas at a sufficient extraction rate;

[40 CFR 60.752(b)(2)(ii)(A)(3)]

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

[40 CFR 60.752(b)(2)(ii)(A)(4)]

Route all the collected gas to a control system that complies with the requirements of 40 CFR 60.752(b)(2)(iii)(B).

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

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 ppm by volume, dry basis as hexane at 3% 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 40 CFR 60.754(d).

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

The control device shall be operated within the parameter ranges established during the initial or most recent performance test as required in Section 4.5of PTC No. P-020100. The operating parameters to be monitored are specified in 40 CFR 60.756;

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

Operate the collection and control device installed to comply with this subpart in accordance with the provisions of 40 CFR 60.753, 60.755 and 60.756.

[40 CFR 60.752(b)(2)(iv)]

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:

[40 CFR 60.752(b)(2)(v)]

The landfill shall be a closed landfill as defined in 40 CFR 60.751. A closure report shall be submitted to DEQ as provided in 40 CFR 60.757(d);

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

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

[40 CFR 60.752(b)(2)(v)(B)]

Following the procedures specified in 40 CFR 60.754(b), 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.

[40 CFR 60.752(b)(2)(v)(C)]

4.18.3 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 40 CFR 70 for the landfill if the landfill is not otherwise subject to the requirements of 40 CFR 70 and if the owner or operator meets the conditions for control system removal specified in 40 CFR 60.752 (b)(2)(v).

[40 CFR 60.752(d)]

4.19 Operational Standards for Collection and Control Systems (40 CFR 60.753)

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of 40 CFR 60.752(b)(2)(ii) shall:

4.19.1 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

[40 CFR 60.753(a)]:

5 years or more if active; or

[40 CFR 60.753(a)(1)]

Two years or more if closed or at final grade.

[40 CFR 60.753(a)(2)]

4.19.2 Operate the collection system with negative pressure at each wellhead except under the following conditions:

[40 CFR 60.753(b)]

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 40 CFR 60.757(f)(1);

[40 CFR 60.753(b)(1)]

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

[40 CFR 60.753(b)(2)]

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 DEQ.

[40 CFR 60.753(b)(3)]

4.19.3 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% or an oxygen level less than 5%. 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.

[40 CFR 60.753(c)]

The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i).

[40 CFR 60.753(c)(1)]

Unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that

[40 CFR 60.753(c)(2)]:

The span shall be set so that the regulatory limit is between 20% and 50% of the span;

[40 CFR 60.753(c)(2)(i)]

A data recorder is not required;

[40 CFR 60.753(c)(2)(ii)]

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

[40 CFR 60.753(c)(2)(iii)]

A calibration error check is not required;

[40 CFR 60.753(c)(2)(iv)]

The allowable sample bias, zero drift, and calibration drift are ±10%.

[40 CFR 60.753(c)(2)(v)]

4.19.4 Operate the collection system so that the methane concentration is less than 500 ppm 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 (100-foot) intervals at 4 inches above ground, 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.

[40 CFR 60.753(d)]

4.19.5 Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 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 one hour; and

[40 CFR 60.753(e)]

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

[40 CFR 60.753(f)]

4.19.7 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 40 CFR 60.755(a)(3) through (5) or 40 CFR60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in this section.

[40 CFR 60.753(g)]

4.20 Testing Methods and Procedures (40 CFR 60.754)

4.20.1 The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754 (a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60.754 (a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in 40 CFR 60.754 (a)(1)(ii), for part of the life of the landfill.

The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_0, and 4,000 ppm by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year. KCFL is located in geographical areas with a 30 year annual average precipitation of less than 25 inches.

[40 CFR 60.754(a)(1)]

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_0\,M_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

k = methane generation rate constant, year−1

L_0 = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

T_i = age of the i^{th} section, years

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

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

[40 CFR 60.754(a)(1)(i)]

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_0 R(e^{-kc} - e^{-kt})C_{NMOC}(3.6 \times 10^{-9})$$

Where:

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

L_0 = 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 landfill, years

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

c = time since closure, years; for **active** landfill c = 0 and e−kc1

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

[40 CFR 60.754(a)(1)(ii)]

4.20.2 After the installation of a collection and control system in compliance with 40 CFR 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 40 CFR 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} = N_{MOC} concentration, parts per million by volume as hexane

[40 CFR 60.754(b)]

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 40 CFR 60.

[40 CFR 60.754(b)(1)]

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 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, 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 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

[40 CFR 60.754(b)(2)]

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

[40 CFR 60.754(b)(3)]

4.20.3 For the performance test required in 40 CFR 60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 of Appendix A of 40 CFR 60 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 DEQ as provided by 40 CFR60.752(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to three 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 40 CFR 60, 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:

$$Control\ Efficiency = \frac{(NMOC_{in} - NMOC_{out})}{NMOC_{in}}$$

Where,

$NMOC_{in}$ = mass of NMOC entering control device

$NMOC_{out}$ = mass of NMOC exiting control device

[40 CFR 60.754(d)]

4.21 Compliance Provisions (40 CFR 60.755)

4.21.1 The following specified methods in 40 CFR 60.755(a)(1) through 40 CFR 60.755(a)(6) shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752(b)(2)(ii).

[40 CFR 60.755(a)]

For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR60.752(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 DEQ. 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.

[40 CFR 60.755(a)(1)]

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

$$Q_m = 2L_0R(e^{-kc} - e^{-kt})$$

Where,

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

L_0 = 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 = O and e−kc = 1)

[40 CFR 60.755(a)(1)(i)]

For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2\,k\,L_0\,M_i\left(e^{-kt_i}\right)$$

Where,

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

k = methane generation rate constant, year−1

L_0 = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

[40 CFR 60.755(a)(1)(ii)]

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.

[40 CFR 60.755(a)(1)(iii)]

For the purposes of determining sufficient density of gas collectors for compliance with 40 CFR 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 DEQ, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

[40 CFR 60.755(a)(2)]

For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 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 five calendar days, except for the three conditions allowed under 40 CFR 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 DEQ for approval.

[40 CFR 60.755(a)(3)]

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.

[40 CFR 60.755(a)(4)]

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 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five 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 DEQ for approval.

[40 CFR 60.755(a)(5)]

An owner or operator seeking to demonstrate compliance with 40 CFR60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR60.759 shall provide information satisfactory to DEQ as specified in 40 CFR60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

[40 CFR 60.755(a)(6)]

4.21.2 For purposes of compliance with 40 CFR 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 40 CFR 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

[40 CFR 60.755(b)]:

5 years or more if active; or

[40 CFR 60.755(b)(1)]

Two years or more if closed or at final grade.

[40 CFR 60.755(b)(2)]

4.21.3 The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60.753(d).

[40 CFR 60.755(c)]

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 40 CFR 60.755 (d).

[40 CFR 60.755(c)(1)]

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.

[40 CFR 60.755(c)(2)]

Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR 60, except that the probe inlet shall be placed within five to 10 centimeters (2 to 4 inches) of the ground. Monitoring shall be performed during typical meteorological conditions.

[40 CFR 60.755(c)(3)]

Any reading of 500 ppm or more above background at any location shall be recorded as a monitored exceedance and the actions specified in the following 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 40 CFR 60.753(d).

[40 CFR 60.755(c)(4)]

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

[40 CFR 60.755(c)(4)(i)]

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.

[40 CFR 60.755(c)(4)(ii)]

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 remonitoring 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.

[40 CFR 60.755(c)(4)(iii)]

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 one month from the initial exceedance. If the one-month remonitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one-month remonitoring shows an exceedance, the actions specified in 40 CFR 60.755(c)(4) (iii) or (v) shall be taken.

[40 CFR 60.755(c)(4)(iv)]

For any location where monitored methane concentration equals or exceeds 500 ppm 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 DEQ for approval.

[40 CFR 60.755(c)(4)(v)]

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

[40 CFR 60.755(c)(5)]

4.21.4 Each owner or operator seeking to comply with the provisions in 40 CFR 60.755 (c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices

[40 CFR 60.755(d)]:

The portable analyzer shall meet the instrument specifications provided in Section 3 of Method 21 of Appendix A of 40 CFR 60, except that "methane" shall replace all references to VOC.

[40 CFR 60.755(d)(1)]

The calibration gas shall be methane, diluted to a nominal concentration of 500 ppm in air.

[40 CFR 60.755(d)(2)]

To meet the performance evaluation requirements in section 3.1.3 of Method 21 of Appendix A of 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of Appendix A of 40 CFR 60 shall be used.

[40 CFR 60.755(d)(3)]

The calibration procedures provided in Section 4.2 of Method 21 of Appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.

[40 CFR 60.755(d)(4)]

4.21.5 The provisions apply at all times, except during periods of start-up, shutdown, or malfunction, as amended in 40 CFR 60.755.

[40 CFR 60.755(e)]

4.22 Monitoring of Operations (40 CFR 60.756)

4.22.1 Each owner or operator seeking to comply with 40 CFR 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

[40 CFR 60.756(a)]:

Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60.755(a)(3); and

[40 CFR 60.756(a)(1)]

Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5); and

[40 CFR 60.756(a)(2)]

Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).

[40 CFR 60.756(a)(3)]

4.22.2 Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

[40 CFR 60.756(b)]

A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater.

[40 CFR 60.756(b)(1)]

A device that records flow to or bypass of the control device. The owner or operator shall either

[40 CFR 60.756(b)(2)]:

Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

[40 CFR 60.756(b)(2)(i)]

4.22.4 Each owner or operator seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 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.

[40 CFR 60.756(f)]

4.23 Reporting Requirements (40 CFR 60.757)

4.23.1 Each owner or operator subject to the requirements shall submit an initial design capacity report to DEQ.

[40 CFR 60.757(a)]

The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required by 40 CFR 60.7(a)(1) and shall be submitted no later than:

[40 CFR 60.757(a)(1)]:

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

[40 CFR 60.757(a)(1)(i)]

Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commences construction, modification, or reconstruction on or after March 12, 1996. (KCFL modification date is when East Cell Expansion commenced construction in Month 2009).

[40 CFR 60.757(a)(1)(ii)]

The initial design capacity report shall contain the following information

[40 CFR 60.757(a)(2)]:

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.

[40 CFR 60.757(a)(2)(i)]

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. DEQ may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

[40 CFR 60.757(a)(2)(ii)]

An amended design capacity report shall be submitted to DEQ 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 3.5 million megagrams and 3.5 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 40 CFR 60.758(f).

[40 CFR 60.757(a)(3)]

4.23.2 Each owner or operator subject to the requirements shall submit an NMOC emission rate report to DEQ initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(3). DEQ may request such additional information as may be necessary to verify the reported NMOC emission rate.

[40 CFR 60.757(b)]

The NMOC emission rate report shall contain an annual or five-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR60.754(a) or (b), as applicable.

[40 CFR 60.757(b)(1)]

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

[40 CFR 60.757(b)(1)(i)]

Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commences construction, modification, or reconstruction on or after March 12, 1996. KCFL modification date is when the WC commenced construction in February 2006.

[40 CFR 60.757(b)(1)(i)(B)]

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

[40 CFR 60.757(b)(2)]

Each owner or operator subject to the requirements is exempted from the requirements of 40 CFR 60.757(b)(1) and 40 CFR 60.757(b)(2), 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 40 CFR 60.755.

[40 CFR 60.757(b)(3)]

4.23.3 Each owner or operator subject to the provisions of 40 CFR 60.752(b)(2)(i) shall submit a collection and control system design plan to DEQ within one year of the first report required under 40 CFR 60.757(b) in which the emission rate equals or exceeds 50 megagrams per year.

[40 CFR 60.757(c)]

4.23.4 Each owner or operator of a controlled landfill shall submit a closure report to DEQ within 30 days of waste acceptance cessation. DEQ 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 DEQ, no

additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[40 CFR 60.757(d)]

4.23.5 Each owner or operator of a controlled landfill shall submit an equipment removal report to DEQ 30 days prior to removal or cessation of operation of the control equipment.

[40 CFR 60.757(e)]

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

[40 CFR 60.757(e)(1)]

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

[40 CFR 60.757(e)(1)(i)]

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

[40 CFR 60.757(e)(1)(ii)]

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.

[40 CFR 60.757(e)(1)(iii)]

DEQ may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met.

[40 CFR 60.757(e)(2)]

4.23.6 Each owner or operator of a landfill seeking to comply with 40 CFR 60.752(b)(2) using an active collection system designed in accordance with 40 CFR 60.752(b)(2)(ii) shall submit to DEQ annual reports of the recorded information in 40 CFR 60.757 (f)(1) through 40 CFR 60.757(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 40 CFR60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).

[40 CFR 60.757(f)]

Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).

[40 CFR 60.757(f)(1)]

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 40 CFR 60.756.

[40 CFR 60.757(f)(2)]

Description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating.

[40 CFR 60.757(f)(3)]

All periods when the collection system was not operating in excess of five days.

[40 CFR 60.757(f)(4)]

The location of each exceedance of the 500 ppm methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

[40 CFR 60.757(f)(5)]

The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), and (c)(4).

[40 CFR 60.757(f)(6)]

4.23.7 Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40 CFR 60.8:

[40 CFR 60.757(g)]

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;

[40 CFR 60.757(g)(1)]

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;

[40 CFR 60.757(g)(2)]

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;

[40 CFR 60.757(g)(3)]

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

[40 CFR 60.757(g)(4)]

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

[40 CFR 60.757(g)(5)]

The provisions for the control of off-site migration.

[40 CFR 60.757(g)(6)]

4.24 Recordkeeping Requirements (40 CFR 60.758)

4.24.1 Each owner or operator of an MSW landfill subject to the provisions of 40 CFR 60.752(b) shall keep for at least five 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 four hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60.758(a)]

4.24.2 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 40 CFR 60.758(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 five years. Records of the control device vendor specifications shall be maintained until removal.

[40 CFR 60.758(b)]

Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

[40 CFR 60.758(b)(1)]

The maximum expected gas generation flow rate as calculated in 40 CFR 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 DEQ.

[40 CFR 60.758(b)(1)(i)]

The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).

[40 CFR 60.758(b)(1)(ii)]

Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 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:

[40 CFR 60.758(b)(2)]

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

[40 CFR 60.758(b)(2)(i)]

The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device.

[40 CFR 60.758(b)(2)(ii)]

Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 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.

[40 CFR 60.758(b)(3)]

Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), 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 40 CFR 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.

[40 CFR 60.758(b)(4)]

4.24.3 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 this subpart shall keep for five 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.

[40 CFR 60.758(c)]

The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f):

[40 CFR 60.758(c)(1)]

For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all three-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined.

[40 CFR 60.758(c)(1)(i)]

For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under 40 CFR 60.758 (b)(3).

[40 CFR 60.758(c)(1)(ii)]

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 40 CFR 60.756.

[40 CFR 60.758(c)(2)]

Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40 CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)

[40 CFR 60.758(c)(3)]

4.24.4 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.

[40 CFR 60.758(d)]

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 40 CFR 60.755(b).

[40 CFR 60.758(d)(1)]

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 40 CFR 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii).

[40 CFR 60.758(d)(2)]

4.24.5 Each owner or operator subject to the provisions of this subpart shall keep for at least five years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[40 CFR 60.758(e)]

4.24.6 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 four hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60.758(f)]

4.25 Specifications for Active Collection Systems (40 CFR 60.759)

4.25.1 Each owner or operator seeking to comply with 40 CFR 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 DEQ as provided in 40 CFR 60.752(b)(2)(i)(C) and (D):

[40 CFR 60.759(a)]

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 expandability, 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.

[40 CFR 60.759(a)(1)]

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.

[40 CFR 60.759(a)(2)]

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

[40 CFR 60.759(a)(3)]

Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40CFR 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 DEQ upon request.

[40 CFR 60.759(a)(i)]

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 DEQ 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:

[40 CFR 60.759(a)(ii)]

$$Q_i = 2\,k\,L_0\,M_i\,(e^{-kt_i})(C_{NMOC})(3.6\times10^{-9})$$

Where,

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

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

L_0 = methane generation potential, cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the i^{th} section, megagram

t_i = age of the solid waste in the i^{th} section, years

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

3.6×10^{-9} = conversion factor

The values for k and CNMOC 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, LO and CNMOC provided in 40 CFR 60.754(a)(1) or the alternative values from 40 CFR 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 in 40 CFR 60.759(a)(3)(i).

[40 CFR 60.759(a)(iii)]

4.25.2 Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

[40 CFR 60.759(b)]

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.

[40 CFR 60.759(b)(1)]

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.

[40 CFR 60.759(b)(2)]

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.

[40 CFR 60.759(b)(3)]

4.25.3 Each owner or operator seeking to comply with 40 CFR60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with 40 CFR 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:

[40 CFR 60.759(c)]

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.

[40 CFR 60.759(c)(1)]

For new collection systems, the maximum flow rate shall be in accordance with 40 CFR 60.755(a)(1).

[40 CFR 60.759(c)(2)]

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

4.26 General Requirement

Comply with 40 CFR 63, Subpart AAAA. The following permit conditions apply to KCFL based on the information in the application. Should, in the future, changes made to KCFL trigger other requirements in 40 CFR 63, Subpart AAAA, requirements in 40 CFR 63, Subpart AAAA shall govern.

[40 CFR 63.1930]
[40 CFR 63.1935]
[40 CFR 63.1940]

4.27 When do I have to comply with this subpart? (40 CFR 63.1945)

If your landfill is an existing affected source and is an area source meeting the criteria in 40 CFR 63.1935(a)(3), you must comply with the requirements in 40 CFR 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)[5].

[40 CFR 63.1945(f)]

4.28 When am I no longer required to comply with this subpart? (40 CFR 63.1950)

You are no longer required to comply with the requirements of this subpart when you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v).

[40 CFR 63.1950]

4.29 What requirements must I meet? (40 CFR 63.1955)

4.29.1 Comply with the requirements of EPA approved and effective State plan that implements 40 CFR 60, Subpart Cc, or IDAPA 58.01.01.859.

[40 CFR 63.1955(a)(2)]

4.29.2 If you are required by 40 CFR 60.752(b)(2), an EPA approved and effective State plan, to install a collection and control system, you must comply with the requirements in 40 CFR 63.1960 through 63.1985 and with the General Provisions of 40 CFR 60 specified in Table 1. (see Permit Condition 3.35)

[40 CFR 63.1955(b)]

4.30 How is compliance determined? (40 CFR 63.1960)

4.30.1 Compliance is determined in the same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

[5] §60.572(a)(2) says that an MSW landfill that had been exempt due to design capacity is increased in design capacity to above the applicability threshold, either calculate emissions each year and report to the Administrator, or submit a design for a control system within one year. "Within one year" means either one year from when the permit for expansion was obtained, or one year from when emissions, calculated in accordance with §60.754, are greater than 50 Mg per year. Calculations indicate that NMOC emissions exceeded 50 Mg in 1995. Therefore, Subpart WWW applies to the landfill now.

4.30.2 In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), and (d), 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.

4.30.3 Finally, you must develop and implement a written Start up, Shut down and Malfunctions (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, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

[40 CFR 63.1960]

4.31 What is a deviation? (40 CFR 63.1965)

A deviation is defined in 40 CFR 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in 40 CFR 63.1965(a) through (c). A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) are exceeded.

[40 CFR 63.1965 (a)]

A deviation occurs when one hour or more of the hours during the three-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.

[40 CFR 63.1965 (b)]

A deviation occurs when a SSM plan is not developed, implemented, or maintained on site.

[40 CFR 63.1965 (c)]

4.32 How do I calculate the three-hour block average used to demonstrate compliance? (40 CFR 63.1975)

Averages are calculated in the same way as they are calculated in 40 CFR 60, Subpart WWW, except that the data collected during the events listed in 40 CFR 63.1975(a), (b), (c), and (d) are not to be included in any average computed under this subpart:

Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

[40 CFR 63.1975(a)]

Startups.

[40 CFR 63.1975(b)]

Shutdowns.

[40 CFR 63.1975(c)]

Malfunctions.

[40 CFR 63.1975(d)]

4.33 What records and reports must I keep and submit? (40 CFR 63.1980)

Keep records and reports as specified in 40 CFR 60, Subpart WWW, an EPA approved State plan that implements 40 CFR 60, Subpart Cc, with one exception: You must submit a semi-annual report described in 40 CFR 60.757(f) every six months.

[40 CFR 63.1980(a)]

4.34 Who enforces this subpart? (40 CFR 63.1985)

This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

[40 CFR 63.1985 (a)]

The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in 40 CFR 63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

[40 CFR 63.1985 (c)]

4.35 General Provisions to 40 CFR 63 Subpart AAAA (40 CFR 63 Subpart AAAA Table 1)

Comply with the General Provisions of 40 CFR 63 included in 40 CFR 63 Subpart AAAA Table 1.

Table 4-1 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	

Part 63 Citation	Description	Explanation
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	

5. INAPPLICABLE REQUIREMENTS

Citation	Description	Explanation
40 CFR 60, Subpart XXX	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After July 17, 2014.	1. KCFL was not modified on or after July 17, 2014, and 2. Subpart XXX has not been promulgated in final form.
40 CFR 64	Compliance Assurance Monitoring (CAM)	§64.2(b)(1)(i) CAM does not apply to emission limitations or standards proposed after November 15, 1990.

6. INSIGNIFICANT ACTIVITIES

Activities and emission units identified as insignificant under IDAPA 58.01.01.317.01(b) are listed in the Tier I to qualify for a permit shield.

Item	IDAPA 58.01.01 citation	Notes
Caterpillar 143H grader, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
John Deere 350 excavator (track hoe), diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Al-Jon compactor (2), diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Caterpillar 963C tracked front loader, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Caterpillar D6 dozer	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Caterpillar D8R dozer (2), diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Caterpillar 621 scraper	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Cover Machine (hydro seeder) w/small diesel engine, towed by 644	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Dump trucks, doubles, (1 Stirling, 1 Peterbuilt), diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Fuel truck, Ford L9000, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Honda Foreman ATV (2), gasoline	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
John Deer 644E loader, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
John Deer Gator 6X4 small utility vehicle, gasoline	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Lull 824 extendable fork lift, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
New Holland 675E small back hoe, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Pickup trucks (5), gasoline engine, used on-site exclusively	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
MadVac garbage vacuum 13 Hp, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Water truck, Peterbuilt, diesel	317.01.a.i.(10)	ICE for propelling or powering a vehicle.
Honda generators, EU 2000i, (3)	317.01.a.i.(19)	Portable electrical generators.
Plant maintenance and upkeep	317.01.a.i.(28)	Plant maintenance and upkeep
General vehicle maintenance	317.01.a.i.(40)	General vehicle maintenance
Leachate pond and collection system (process waste water and ponds)	317.01.a.i.(109)	Process waste water and ponds.

Item	IDAPA 58.01.01 citation	Notes
Farley's Challenger VI pressure washer, fueled by stove oil (2.75 gal/hr * 138,000 Btu/gal)	317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Portable heaters, diesel-fired, (3 @ 150,000 Btu/hr, 1 @ 80,000 Btu/hr)	317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Shop heaters, diesel-fired	317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Generators, 10 kW (4), diesel, approx. 18.5 hp each	317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.
Wacker pumps (3), each powered by 16-hp gasoline engine	317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.
Leachate evaporator (1,800 gal capacity, 350 gal/hr evaporation rate), landfill gas fired	317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.

6.1 There are no monitoring, recordkeeping, or reporting requirements for insignificant emission units or activities beyond those required in the facility-wide Permit Conditions.

7.8. Upon request, the permittee shall 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

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

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

Changes Requiring Permit Revision or Notice

7.10. 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. Comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/6/05; 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)]

7.11. 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, 4/5/00; 40 CFR 70.4(b)(14) and (15)]

Federal and State Enforceability

7.12. Unless specifically identified as a "State-only" provision, all terms and conditions in this permit, including any terms and conditions designed to limit a source's potential to emit, are enforceable:

(i) by DEQ in accordance with state law; and

(ii) by the United States or any other person in accordance with federal law.

[IDAPA 58.01.01.322.15.j, 5/1/94; 40 CFR 70.6(b)(1) and (2)]

7.13. Provisions specifically identified as a "State-only" provision are enforceable only in accordance with state law. "State-only" provisions are those that are not required under the Federal Clean Air Act or under any of its applicable requirements or those provisions adopted by the state prior to federal approval.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.k, 3/23/98]

Inspection and Entry

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

a. 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;

b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

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

d. 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.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.i, 3/19/99; 40 CFR 70.6(c)(2)]

New Requirements During Permit Term

7.15. Comply with applicable requirements that become effective during the permit term on a timely basis.

[IDAPA 58.01.01.322.10, 7/1/02; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

Fees

7.16. 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 58.01.01.322.10.n, 7/1/02; 40 CFR 70.6(a)(7)]

Certification

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

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

Renewal

7.18. a. The owner or operator of a Tier I source 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)]

b. 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

7.19. 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:

a. Such applicable requirements are included and are specifically identified in the Tier I operating permit; or

i. 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.

b. 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).

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

i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;

ii. 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;

iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and

iv. 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

7.20. a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.

b. 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.

c. 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.

d. 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

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

a. The compliance certifications for all emissions units shall be submitted annually or more frequently if specified by the underlying applicable requirement or elsewhere in this permit by DEQ. The annual reporting period shall be from January 1 to December 31, unless another period is agreed upon by Idaho DEQ and the permittee. Any change in date shall not allow the annual reporting period to extend for more than one year.

b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;

c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;

ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required by this Tier I operating permit. If necessary, the owner or operator shall identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the CAA which prohibits knowingly making a false certification or omitting material information;

iii. The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Paragraph 21.c.ii above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred.

iv. Such other facts as DEQ may require to determine the compliance status of the source.

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

[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

7.22. No person shall knowingly 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.

[IDAPA 58.01.01.125, 3/23/98]

No Tampering

7.23. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Semiannual Monitoring Reports

7.24. 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. The permittee's semiannual reporting periods shall be from January 1 to June 31 and July 1 to December 31. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.

[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

7.25. The permittee shall promptly report all deviations from permit requirements including upset conditions, their probable cause, and any corrective actions or preventive measures taken. For excess emissions, the report shall be made in accordance with IDAPA 58.01.01.130-136. For all other deviations, the report shall be made in accordance with IDAPA 58.01.01.322.08.c, unless otherwise specified in this permit.

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/5/00; 40 CFR 70.6(a)(3)(iii)]

Permit Revision Not Required

7.26. No permit revision shall 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

7.27. 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)]

8. COMPLIANCE DECLARATION

Compliance Certification

Facility-wide conditions and associated monitoring, reporting and recordkeeping requirements affecting the Kootenai County Farm Landfill are contained in Section 3 of this application. **The Kootenai County Farm Landfill is in compliance with all facility-wide requirements.**

Emission unit-specific requirements and associated monitoring, reporting and recordkeeping requirements affecting the Kootenai County Farm Landfill are contained in Section 4 of this application. **The Kootenai County Farm Landfill is in compliance with all emission unit-specific requirements.**

Compliance Certification Schedule

Kootenai County Farm Landfill will submit annual compliance certifications as required in Term 21 of Section 7, utilizing forms available from the Idaho DEQ.

Compliance Plan

Compliance Description

- For each applicable requirement with which an emission unit is in compliance, that emission unit will continue to comply with the applicable requirement.
- For each applicable requirement that will become effective during the term of the Tier I operating permit that does not contain a more detailed schedule, the emissions unit will meet the applicable requirement on a timely basis.
- For each applicable requirement that will become effective during the term of the Tier I operating permit that contains a more detailed schedule, the emissions unit will comply with the applicable requirement on the schedule provided in the applicable requirement.
- For each applicable requirement with which the emission unit is not in compliance, the emissions unit will achieve compliance with the applicable requirement by the time the Tier I operating permit is issued or Kootenai County Farm Landfill will provide a compliance schedule in accordance with IDAPA 58.01.01.314.10.b.

Compliance Schedules

Compliance schedules submitted by Kootenai County Farm Landfill will:

- Include a schedule of remedial measures leading to compliance, including an enforceable sequence of actions and specific dates for achieving milestones and achieving compliance.
- Incorporate the terms and conditions of any applicable consent order, judicial order, judicial consent decree, administrative order, settlement agreement or judgment.
- Be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

- Provide a schedule for submission to the Idaho DEQ of periodic progress reports no less frequently than every six (6) months or at a more frequent period if one (1) is specified in the underlying applicable requirement or by the Idaho DEQ.

Appendix A – IDEQ Tier I Forms

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Cover Sheet for Air Permit Application – Tier I **Form CSTI**
Revision 5
08/28/08

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER			
1. Company Name	Kootenai County Solid Waste Department		
2. Facility Name	Kootenai County Farm Landfill	3. Facility ID No.	055-00044
4. Brief Project Description - One sentence or less	Renewal of Permit No. T1 2010.0028		

PERMIT APPLICATION TYPE

5. ☐ Initial Tier I ☐ Tier I Administrative Amendment ☐ Tier I Minor Modification ☐ Tier I Significant Modification
☒ Tier I Renewal: Permit No.: T1-2010-0028 Date Issued: 9/9/2011

FORMS INCLUDED

Included	N/A	Forms		DEQ Verify
☒	☐	Form CSTI – Cover Sheet		☐
☒	☐	Form GI – Facility Information		☐
☒	☐	Form EU0 – Emissions Units General		☐
☐	☐	Form EU1– Industrial Engine Information	Please specify number of EU1s attached: _____	☐
☐	☐	Form EU2– Nonmetallic Mineral Processing Plants	Please specify number of EU2s attached: _____	☐
☐	☐	Form EU3– Spray Paint Booth Information	Please specify number of EU3s attached: _____	☐
☐	☐	Form EU4– Cooling Tower Information	Please specify number of EU4s attached: _____	☐
☐	☐	Form EU5 – Boiler Information	Please specify number of EU5s attached: _____	☐
☐	☐	Form CBP– Concrete Batch Plant	Please Specify number of CBPs attached: _____	☐
☐	☐	Form HMAP – Hot Mix Asphalt Plant	Please specify number of HMAPs attached:	☐
☐	☐	PERF – Portable Equipment Relocation Form		☐
☐	☐	Form BCE– Baghouses Control Equipment		☐
☐	☐	Form SCE– Scrubbers Control Equipment		☐
☐	☐	Form VSCE – Venturi Scrubber Control Equipment		☐
☐	☐	Form ESP – Electrostatic Precipitator		☐
☐	☐	Form AO – Afterburner/Oxidizer		☐
☐	☐	Form CYS – Cyclone Separator		☐
☐	☐	Form CA – Carbon Adsorber		☐
☒	☐	Forms EI-CP1 - EI-CP4– Emissions Inventory– criteria pollutants	(Excel workbook, all 4 worksheets)	☐
☐	☐	Form CAM – Compliance Assurance Monitoring		☐
☒	☐	Form FRA – Federal Regulation Applicability		☐

Instructions for Form CSTI

This form is the cover sheet for an air quality permit application. It provides DEQ with basic information regarding the company and the proposed permitting action. This form helps DEQ efficiently determine whether the application is administratively complete. This form also provides the applicant with a list of forms available to aid the applicant to successfully submit a complete application.

Company Name, Facility Name, and Facility ID Number

1-3. Provide the name of your company, the name of the facility (if different than company name), and the facility identification (ID) number (Facility ID No.) in the boxes provided. The facility ID number is also known as the AIRS number or AIRS/AFS number (example: 095-00077). If you already have a permit, the facility ID number is located in the upper right hand corner of the cover page. The facility ID number must be provided unless your facility has not received one, in which case you may leave this box empty. **Use these same names and ID number on all forms**. This is useful in case any pages of the application are separated.

4. Provide a brief description of this permitting project in one sentence or less. Examples might be "Tier I Administrative Amendment to allow for the change of ownership of this facility" or "Tier I Significant Modification to change the existing monitoring, recordkeeping, and reporting requirements Boiler #1." **This description will be used by DEQ as a unique identifier for this permitting project, in conjunction with the name(s) and ID number referenced in 1-3.** You will need to put this description, using the exact same words, on all other forms that are part of this project application. This is useful in case any pages of the application are separated.

   If this Tier I is being issued as a result of a PTC issued pursuant to IDAPA 58.01.01.209.05.c, the source or modification may operate upon submittal for an administrative amendment issued pursuant to IDAPA 58.01.01.381.

Permit Application Type

5. Provide the reason you are submitting the permit application by checking the appropriate box and filling in the number and/or date if needed.

Forms Included

Check the "Included" box for each form included in this permit to construct application. If there are multiples of a form for multiple units of that type, check the box and fill in the number of forms in the blank provided.

The "N/A" box should only be checked if the form is absolutely unnecessary to complete the application. Additional information may be requested.

When complete, enclose the hardcopy application certified by a responsible official (as defined in IDAPA 58.01.01.006.94), and send to:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline: 1-877-5PERMIT

General Information **Form GI**
Revision 7
6/29/12

Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

Identification

1. Facility name: Kootenai County Farm Landfillll

2. Existing facility identification number: 055-00044

☐ **Check if new facility (not yet operating)**

3. Brief project description: Renewal of Permit No. T1 2010.0028

Facility Information

4. Primary facility permitting contact name: Cathy Mayer
Contact type: Responsible official
Telephone number: 208-446-1430
E-mail: cmayer@kcgov.us

5. Alternate facility permitting contact name: Alan Butler
Alternate contact type: Facility permitting contact
Telephone number: 253-863-5128
E-mail: abutler@parametrix.com

6. Mailing address where permit will be sent (street/city/county/state/zip code): Kootenai County Solid Waste Department
3650 North Ramsey Rd., Coeur d' Alene, ID 83815

7. Physical address of permitted facility (if different than mailing address) (street/city/county/state/zip code): 22089 South Highway 95, Coeur d' Alene, ID 83814

8. Is the equipment portable? ☐ **Yes*** ☒ **No** ***If yes, complete and attach PERF; see instructions.**

9. NAICS codes: **Primary NAICS**: 52212 **Secondary NAICS**:

10. Brief business description and principal product produced: Solid waste landfill

11. Identify any adjacent or contiguous facility this company owns and/or operates: None

12. Specify type of application ☐ **Permit to construct (PTC); application fee of $1,000 required. See instructions.**

☒ **Tier I permit** ☐ **Tier II permit** ☐ **Tier II/Permit to construct**

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

☐ **Co-process Tier I modification and PTC** ☐ **Incorporate PTC at the time of Tier I renewal** ☐ **Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)**

Certification

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name: Cathy Mayer **Official's title**: Director
Official's address: 3650 North Ramsey Rd., Coeur d' Alene, ID 83815
Telephone number: 208-446-1430 **E-mail**: cmayer@kcgov.us
Official's signature: Cathy Mayer **Date**: 7-29-15

☒ **14. Check here to indicate that you want to review the draft permit before final issuance.**

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be required.

Identification

1. Provide the facility name. If the facility is *doing business as* (dba) a facility different in name than the primary facility, provide the dba name.
2. If the facility is an existing permitted facility in Idaho, provide the facility identification number. If the facility is new and not yet operating, check the box.
3. Provide a brief project description as on Form CS, Cover Sheet. This is useful in case any pages of the application are separated.

Facility information

4. Provide name of the *primary* person who should be contacted regarding this permit. Provide telephone number and e-mail address for the primary person.
5. Provide name of an *alternate* person who should be contacted if the person listed in 4 is not available. Provide telephone number and e-mail address for the alternate person.
6. Provide the mailing address where DEQ should mail the permit.
7. Provide the physical address where the equipment is located (if different than 6).
8. Indicate if the permitted equipment is portable by checking the appropriate box. If the permitted equipment is portable, complete and attach the Portable Equipment Relocation Form (PERF) to this application. The PERF is available from DEQ's website at http://www.deq.idaho.gov/media/576773-ptc_relocation.pdf or http://www.deq.idaho.gov/media/576769-ptc_relocation.doc (for Word format).
9. Provide the North American Industry Classification System (NAICS) code for your facility. NAICS codes can be found at http://www.census.gov/epcd/naics02/naicod02.htm.
10. Describe the primary activity and principal product of your business as it relates to the NAICS code listed in 9.
11. Identify and describe any other sources or equipment owned and operated by the primary facility that are located on contiguous or adjacent properties and the role the source or equipment plays in supporting the primary facility.
12. Check the box describing the type of permit application.

    Important note: If application is for a permit to construct (PTC), include the application fee of $1,000 when submitting the application. Per IDAPA 58.01.01.226.02, DEQ cannot process the application without the fee, which must be submitted with the application.

    For existing Tier I facilities that are applying for a PTC, the applicant must specify how the PTC will be incorporated into the Tier I permit (IDAPA 58.01.01.209.05). If you have questions, call the Air Permit Hotline at 1-877-573-7648.

Certification

13. Provide the name, title, address, telephone number, and e-mail of the facility's responsible official. Responsible official is defined in IDAPA 58.01.01.006.99. The responsible official must sign and date the application before it is submitted to DEQ.
14. Check this box to indicate that you want to review a draft before the final permit is issued.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Kootenai County Solid Waste Department	Kootenai County Farm Landfill	055-00044

4. Brief Project Description: Renewal of Permit No. T1 2010.0028

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	SOLID WASTE LANDFILL & LFG COLLECTION SYSTEM
6.	EU ID Number:	EU-1
7.	EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:T1-2010-0028 Date Issued: 9/9/2011
8.	Manufacturer:	
9.	Model:	
10..	Maximum Capacity:	8.72 MILLION TONS OF MSW
11.	Date of Construction:	
12.	Date of Modification (if any):	
13.	Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Landfill gas flare No. 1
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	John Zink
18. ID(s) of Emission Unit Controlled:	CU-1.1
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency					98%	

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Rated heat capacity 24.8 MMBtu/hr, operating temp 1,400 °F to 1,800 °F

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	8,760 HR/YR
23.	Maximum Operation:	8,760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, indicate all that apply below)
	☐ Operation Hour Limit(s):	
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.

6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.

7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.

8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.

9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.

10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.

11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.

13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.

14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.

16. If the air pollution control equipment has been modified, provide the date of the modification.

17. Provide the name of the manufacturer and the model number for the air pollution control equipment.

18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).

19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.

20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).

21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.

22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.

23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.

24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.

25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Kootenai County Solid Waste Department	Kootenai County Farm Landfill	055-00044

4. Brief Project Description: Renewal of Permit No. T1 2010.0028

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	SOLID WASTE LANDFILL & LFG COLLECTION SYSTEM
6.	EU ID Number:	EU-1
7.	EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:T1-2010-0028 Date Issued: 9/9/2011
8.	Manufacturer:	
9.	Model:	
10..	Maximum Capacity:	8.72 MILLION TONS OF MSW
11.	Date of Construction:	
12.	Date of Modification (if any):	
13.	Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Landfill gas flare No. 2
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	Callidus
18. ID(s) of Emission Unit Controlled:	CU-1.2
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency					98%	

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Rated heat capacity 32.5 MMBtu/hr, operating temp 1,400 °F to 1,800 °F

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	8,760 HR/YR
23.	Maximum Operation:	8,760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, indicate all that apply below)
	☐ Operation Hour Limit(s):	
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.

6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.

7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.

8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.

9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.

10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.

11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.

13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.

14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.

16. If the air pollution control equipment has been modified, provide the date of the modification.

17. Provide the name of the manufacturer and the model number for the air pollution control equipment.

18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).

19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.

20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).

21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.

22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.

23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.

24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.

25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Kootenai County Solid Waste Department	Kootenai County Farm Landfill	055-00044

4. Brief Project Description: Renewal of Permit No. T1 2010.0028

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	LEACHATE EVAPORATION SYSTEM
6.	EU ID Number:	EXEMPT UNDER P-980073, 7/31/98
7.	EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:T1-2010-0028 Date Issued: 9/9/2011
8.	Manufacturer:	
9.	Model:	
10..	Maximum Capacity:	500 GAL LEACHATE PER HOUR
11.	Date of Construction:	
12.	Date of Modification (if any):	
13.	Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Landfill gas flares No.s 1 and 2
15. Date of Installation:	16. Date of Modification (if any):
17. Manufacturer and Model Number:	John Zink
18. ID(s) of Emission Unit Controlled:	CU-1.1 & 2
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency					98%	

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	8,760 HR/YR
23.	Maximum Operation:	8,760 HR/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, indicate all that apply below)
	☐ Operation Hour Limit(s):	
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.

6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.

7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.

8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.

9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.

10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.

11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

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Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.

13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.

14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.

16. If the air pollution control equipment has been modified, provide the date of the modification.

17. Provide the name of the manufacturer and the model number for the air pollution control equipment.

18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).

19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.

20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).

21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.

22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.

23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.

24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.

25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION
Revision 3
4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	**Stack ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Point Source(s)													
Flare 1 (LFG + evaporator)	Flare 1	0.74	3.25			1.69	7.39	9.18	40.19	0.12	0.52		
Flare 2 (LFG)	Flare 2	1.08	4.73			2.21	9.68	12.03	52.67	0.16	0.68		
Generators, 10 kW (3), diesel		0.04	0.18	0.04	0.17	0.57	2.51	0.12	0.54	0.05	0.20		
Wacker pumps (3), gas engines		0.01	0.05	0.01	0.04	0.18	0.77	0.11	0.49	0.11	0.46		
Leachate Evaporator		0.02	0.07			0.24	1.05	0.04	0.17				
name of the emissions unit6													
name of the emissions unit7													
name of the emissions unit8													
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total		1.89	8.28	0.05	0.21	4.89	21.40	21.47	94.06	0.43	1.87		

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Source(s)													

Instructions for Form EI-CP1

This form is designed to provide the permit writer and air quality modeler with a summary of the criteria pollutant emissions of each emission unit/point located at the facility. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

1. Provide the name of all emission units at the facility. This name must match names on other submittals to IDEQ and within this application.

2. Provide the identification number for the stack which the emission unit exits.

3. Provide the emission rate in pounds per hour and tons per year for all criteria pollutants emitted by this point source. In this form, emission rates for a point source are the maximum allowable emissions for both short term (pounds per hour) and long term (tons per year). These emission rates are its permitted limits (if any). Otherwise, potential to emit should be shown. Potential to emit is defined as uncontrolled emissions at maximum design or achievable capacity (whichever is higher) and year-round continuous operation (8760 hours per year) if there are no federally enforceable permit limits on the emission point. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, the control efficiency or proposed permit limit(s) may be used in calculating potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION
Revision 2
4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - FUGITIVE SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_x		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Fugitive Source(s)													
Landfill uncollected VOC (25%)		0.34	1.48							4.59	20.11		
Landfill operations (grading)		0.34	1.48										
Landfill operations (dozing		0.66	2.89										
name of fugitive source4													
name of fugitive source5													
name of fugitive source6													
name of fugitive source7													
name of fugitive source8													
name of fugitive source9													
name of fugitive source10													
name of fugitive source11													
name of fugitive source12													
name of fugitive source13													
name of fugitive source14													
name of fugitive source15													
name of fugitive source16													
name of fugitive source17													
name of fugitive source18													
name of fugitive source19													
name of fugitive source20													
name of fugitive source21													
(insert more rows as needed)													
Total		1.34	5.85							4.59	20.11		

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 2 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF FACILITY WIDE EMISSION RATES FOR CRITERIA POLLUTANTS - FUGITIVE SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_x		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Fugitive Source(s)													

Instructions for Form EI-CP2

This form is designed to provide the permit writer and air quality modeler with a summary of the criteria pollutant emissions of each emission unit/point located at the facility. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

Fugitive emissions are those emissions that cannot reasonably be made to pass through a stack or vent or equivalent opening. Examples include coal piles, unpaved roads, etc. Fugitive emission sources at your plant must be included in this form.

1. Provide the name of all fugitive sources at the facility. This name must match names on other submittals to IDEQ and within this application.

2. Provide the identification number for the fugitive source. This ID number should match ID numbers on other submittals to IDEQ and within this application.

3. Provide the emission rate in pounds per hour and tons per year for all criteria pollutants emitted by this fugitive source. In this form, emission rates for a fugitive source are the maximum allowable emissions for both short term (pounds per hour) and long term (tons per year). These emission rates are its permitted limits (if any). Otherwise, potential to emit should be shown. Potential to emit is defined as uncontrolled emissions at maximum design or achievable capacity (whichever is higher) and year-round continuous operation (8760 hours per year) if there are no federally enforceable permit limits on the emission point. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, then, the control efficiency or proposed permit limit(s) may be used in calculating potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	**Stack ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Point Source(s)													
name of the emissions unit1	No emissions increase data provided, as this permit application is for a Tier I air operating permit, not a minor new source review permit.												
name of the emissions unit2													
name of the emissions unit3													
name of the emissions unit4													
name of the emissions unit5													
name of the emissions unit6													
name of the emissions unit7													
name of the emissions unit8													
name of the emissions unit9													
name of the emissions unit10													
name of the emissions unit11													
name of the emissions unit12													
name of the emissions unit13													
name of the emissions unit14													
name of the emissions unit15													
name of the emissions unit16													
name of the emissions unit17													
name of the emissions unit18													
name of the emissions unit19													
name of the emissions unit20													
name of the emissions unit21													
(insert more rows as needed)													
Total													

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Source(s)													

Instructions for Form EI-CP3

This form is designed to provide the permit writer and air quality modeler with a summary of the change in criteria pollutant emissions of each emission unit/point associated with this permit application. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID number, and brief project description as on form CS in the boxes provided. This is useful in case any pages of the application get separated.

1. Provide the name of the emission unit. This name should match names on other submittals to IDEQ and within this application.

2. Provide the identification number for the stack which the emission unit exits.

3. Provide the increase in emissions in pounds per hour and tons per year for all criteria pollutants emitted by this emission unit. In this form, increase in emissions for an emission unit are the proposed PTE - Previously modeled PTE. If the emission point has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, then, the control efficiency or proposed permit limit(s) may be used in calculating proposed potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - FUGITIVE SOURCES

1.	2.	3. Air Pollutant Maximum Change in Emissions Rate (lbs/hr or t/yr)											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Fugitive Source(s)													
name of fugitive source1	No emissions increase data provided, as this permit application is for a Tier I air operating permit, not a minor new source review permit.												
name of fugitive source2													
name of fugitive source3													
name of fugitive source4													
name of fugitive source5													
name of fugitive source6													
name of fugitive source7													
name of fugitive source8													
name of fugitive source9													
name of fugitive source10													
name of fugitive source11													
name of fugitive source12													
name of fugitive source13													
name of fugitive source14													
name of fugitive source15													
name of fugitive source16													
name of fugitive source17													
name of fugitive source18													
name of fugitive source19													
name of fugitive source20													
name of fugitive source21													
(insert more rows as needed)													
Total													

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	**Kootenai County Solid Waste Department**
Facility Name:	Kootenai County Farm Landfill
Facility ID No.:	055-00044
Brief Project Description:	Renewal of Permit No. T1 2010.0028

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - FUGITIVE SOURCES

1.	2.	3. Air Pollutant Maximum Change in Emissions Rate (lbs/hr or t/yr)											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Fugitive Source Name	**Fugitive ID**	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Fugitive Source(s)													

Instructions for Form EI-CP4

This form is designed to provide the permit writer and air quality modeler with a summary of the change in criteria pollutant emissions of each emission unit/point associated with this permit application. This information may be used by the IDEQ to perform an air quality analysis or to review an air quality analysis submitted with the permit application or requested by the IDEQ.

Please fill in the same company name, facility name, facility ID Number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.

1. Provide the name of the emission unit. This name should match names on other submittals to IDEQ and within this application.

2. Provide the identification number for the fugitive source. This ID should match IDs on other submittals to IDEQ and within this application.

3. Provide the increase in emissions in pounds per hour and tons per year for all criteria pollutants emitted by this fugitive source. In this form, increase in emissions for an emission unit are the proposed PTE - Previously modeled PTE. If the fugitive source has or will have control equipment or some other proposed permit limitation such as hours of operation or material usage, the control efficiency or proposed permit limit(s) may be used in calculating proposed potential to emit.

NOTE: Attach a separate sheet of paper, or electronic file, to provide additional documentation on the development of the emission rates. Documentation can include emissions factors, throughput, and example calculations.

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Preapplication Meeting Information Form FRA (Federal Requirements Applicability) - Regulatory Review

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name:	2. Facility Name:
Kootenai County Solid Waste Department	**Kootenai County Farm Landfilll**
3. Brief Project Description:	**Renewal of Permit No. T1 2010.0028**

APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not. Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s): **WWW** List of all non-applicable subpart(s) which may appear to apply but do not: **XXX (Does not apply because KCFL has not commenced construction, reconstruction, or modification after July 17, 2014)** ☑ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR part 61 and 40 CFR part 63). List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference EPA's webpage on NESHAPs for more information.	List of all applicable subpart(s): **AAAA** List of all non-applicable subpart(s) which may appear to apply but do not: ☐ Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages. **Note** - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	☑ A detailed regulatory review is provided (Follow instructions and example). ☐ DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT 1-877-5PERMIT.

It is emphasized that it is the applicant's responsibility to satisfy all technical and regulatory requirements, and that DEQ will help the applicant understand those requirements prior to submittal of the application but that DEQ will not perform the required technical or regulatory analyses on the applicant's behalf.

Instructions for Form FRA

Item 4 & 5. It is important that facilities review the most recent federal regulations when submitting their permit application to DEQ. Current federal regulations can be found at the following website: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.

Item 6. For each applicable subpart identified under items 4-5, conduct a complete regulatory analysis. The facility must follow the procedure given below or obtain permission from DEQ to provide the necessary information using an alternative procedure:

1. Retrieve a TEXT or PDF copy of the applicable federal regulation subpart(s) online at http://www.gpoaccess.gov/cfr/retrieve.html.

2. Copy and paste the regulation(s) into the DEQ air permit application.

3. Highlight or underline sections in the regulation(s) that are applicable to the source(s).

4. Under each section of the subpart, explain why the source is or is not subject to the section in addition to how the source will comply with the section. When providing the explanation use a different font than the regulation (i.e. ***bold, italic***) so that it is easy for the reader to determine the text provided by the applicant. An example NSPS regulatory analysis is attached. The applicant must provide all information needed to determine applicability. If information is lacking or the analysis is incomplete, the application will be determined incomplete.

   Information on NSPS/NESHAP applicability determinations that may be useful to applicants is available on EPA's website: Clean Air Act Applicability Determination Index - Compliance Monitoring - EPA. Another useful source of information is the preamble to the regulation which is published in the Federal Register on the date the regulation was promulgated. Federal Registers may be found online at Federal Register: Main Page. The date the regulation was published in the Federal Register is included in the footnotes of the regulation.

5. DEQ will assist in identifying the applicable requirements that the applicant must include in the application, but will not perform the required technical or regulatory analysis on the applicant's behalf. Applicants should contact the Air Quality Permit Hotline (1-877-573-7648) to discuss NSPS/NESHAP regulatory analysis requirements or to schedule a meeting.

6. Facilities should also document a non-applicability determination on federal air regulations which may appear to apply to the facility but actually do not. A non-applicability determination will avoid future confusion and expedite the air permit application review. If you conduct an applicability determination and find that your activity is not NSPS or NESHAP affected facility, an analysis should be submitted using the methods described above.

7. **It is not sufficient to simply provide a copy of the NSPS or NESHAP. The applicant must address each section of the regulation as described above and as shown in the example that is provided.**

Regulatory Analysis

Note: Please examine the sample regulatory analysis below to determine the level of detail DEQ requires.

- Text highlighted in yellow indicates sections applicable to the source.
- *Text in italics* shows sample explanations of why the source is or is not subject to the regulation.
- When a regulation makes reference to another regulation, be sure to copy and paste the full text of the referenced regulation into your regulatory analysis.

e-CFR Data is current as of May 28, 2015

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Browse Previous | Browse Next

Subpart WWW—Standards of Performance for Municipal Solid Waste Landfills

Source: 61 FR 9919, Mar. 12, 1996, unless otherwise noted.

§ 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.

(b) The following authorities shall be retained by the Administrator and not transferred to the State: §60.754(a)(5).

(c) Activities required by or conducted pursuant to a CERCLA, RCRA, or State remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.

Regulatory Analysis: *The Kootenai County Farm Landfill is an applicable source because it is a landfill, for which construction commenced in 1993.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998]

§ 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.

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under §60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time a collection and control system design plan is submitted in compliance with §60.752(b)(2)(i).

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site specific density, which must be recalculated annually.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under §257.2 of this title.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Modification means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (§257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of §60.754.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Regulatory Analysis: *The definitions apply, but it is my understanding that they do not go into the air operating permit.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998; 64 FR 9262, Feb. 24, 1999]

§ 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.

(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.

(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.

(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.

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

(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.

(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.

Regulatory Analysis: *Before the East Cell Expansion project began in 2009, the Kootenai County Farm Landfill had a design capacity of 2.33 million tons, which is equivalent to 2.09 million megagrams. Total capacity of the landfill with the East Cell Expansion was increased to 7.93 million megagrams, so KCFL was required to have an air operating permit. NMOC emission rate for 2009 is projected to be 293 Mg per year, so KCFL had to submit a plan for a collection and control system that conforms with §60.759, and then install and operate that system. The collection and control system can be removed after production of LFG drops off per stated minimums. At that time we can have our air operating permit rescinded.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 71 FR 55127, Sept. 21, 2006]

§ 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.

Regulatory Analysis: *This whole section applies.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 61778, Oct. 17, 2000]

§ 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_O, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

(i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

where,

M_{NMOC}=Total NMOC emission rate from the landfill, 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 solid waste in the i^{th}section, megagrams

t_i=age of the i^{th}section, years

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

3.6×10^{-9}=conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for $M_i$if documentation of the nature and amount of such wastes is maintained

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$M_{NMOC} = 2L_oR (e^{-kc} - e^{-kt}) C_{NMOC}(3.6 \times 10^{-9})$

Where:

M_{NMOC}=mass emission rate of NMOC, megagrams 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 landfill, years

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

c=time since closure, years; for active landfill c=O and $e^{-kc}1$

3.6×10−9=conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

(2) *Tier 1.* The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

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

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with §60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3) of this section.

(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 paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.

(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 paragraph (a)(4) of this section.

(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.

(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 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 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 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.

(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 paragraphs (a)(3) and (a)(4) of this section if the method has been approved by the Administrator.

(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.

(c) When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter using AP–42 or other approved measurement procedures.

(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 = $(NMOC_{in} - NMOC_{out})/(NMOC_{in})$

where,

$NMOC_{in}$= mass of NMOC entering control device

$NMOC_{out}$= mass of NMOC exiting control device

(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).

Regulatory Analysis: *Section (a)(1) applies because we know the actual year-to-year solid waste acceptance rate and are using the equations to calculate NMOC emission rate. Sections (a)(2),(3), and (4) don't apply because we believe the NMOC emission rate is already over 50 Mg per year, and we already have controls in place. We are using the EPA model* LandGEM - Landfill Gas Emissions Model, Version 3.02.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 65 FR 61778, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.755 Compliance provisions.

(a) Except as provided in §60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section 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 $L_o$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 = O and $e^{-kc} = 1$)

(ii) For 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 i^{th}section, megagrams

t_i=age of the i^{th}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 paragraphs (a)(1) (i) and (ii) of this section. 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 paragraphs (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 paragraph (a)(3) of this section 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.

(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.

(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 paragraph (d) of this section.

(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 paragraphs (c)(4) (i) through (v) of this section 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 paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in paragraph (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 paragraph (c)(4) (ii) or (iii) of this section 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 paragraph (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.

(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.

(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.

Regulatory Analysis: *This whole section applies.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998]

§ 60.756 Monitoring of operations.

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).

(b) Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

(2) A device that records flow to or bypass of the control device. 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.

(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.

(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.

(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.

(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.

Regulatory Analysis: *Kootenai County Farm Landfill is using a landfill gas collection system and an enclosed flare for primary control, and surface monitoring for secondary control; only those subsections describing monitoring for those control strategies apply. NOTE: An "enclosed flare," two of which are currently being used at KCFL, is included in the definition of an "enclosed combustion unit."*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 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.

(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).

(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.

(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.

(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).

(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.

(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.

(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.

Regulatory Analysis: *This whole section applies, except for those subsections that refer to alternative reporting for alternative monitoring.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 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.

(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) The following constitute exceedances that shall be recorded and reported under §60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 oC below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is

introduced into the flame zone as required under paragraph (b)(3) of this section.

(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) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with §60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)

(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.

(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.

(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.

Regulatory Analysis: *This whole section applies, except for those subsections that refer to open flares or alternative compliance methods.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.759 Specifications for active collection systems.

(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 paragraph (a)(1) of this section 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 paragraph (a)(1) of this section shall control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(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:

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

where,

Q_i = NMOC emission rate from the i^{th} 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 i^{th} section, megagram

t_i = age of the solid waste in the i^{th} 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 in paragraph (a)(3)(i) of this section.

(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.

(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 paragraph (c)(2) of this section shall be used.

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

Regulatory Analysis: *This whole section applies.*

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32753, June 16, 1998; 64 FR 9262, Feb. 24, 1999; 65 FR 18909, Apr. 10, 2000]

e-CFR Data is current as of May 28 1015

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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Subpart AAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Source: 68 FR 2238, Jan. 16, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.1930 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills. This subpart requires all landfills described in §63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

§ 63.1935 Am I subject to this subpart?

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

(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 (m^3) 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.

(b) 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, that includes a bioreactor, as defined in §63.1990, and that meets any one of the criteria in paragraphs (b)(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 our greater than 2.5 million Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003.

Regulatory Analysis: *Subsections apply that refer to applicability of a landfill hat has accepted waste since November 8, 1987 and is an area source for HAP but is subject to 40 CFR 60 Subpart WWW. Kootenai County Farm Landfill does not have a bioreactor.*

§ 63.1940 What is the affected source of this subpart?

(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.

Regulatory Analysis: *Subsections apply that refer to applicability of a landfill hat has accepted waste since November 8, 1987 and is an area source for HAP but is subject to 40 CFR 60 Subpart WWW. Kootenai County Farm Landfill does not have a bioreactor.*

§ 63.1945 When do I have to comply with this subpart?

(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.

Regulatory Analysis: *Subsection (f) applies because Kootenai County Farm Landfill is an existing affected source.*

§ 63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?

You must comply with this subpart by the dates specified in §63.1945(a) or (b) of this subpart. If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003 and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 , then you must install and operate a collection and control system that meets the criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan according to the schedule specified in paragraph (a), (b), or (c) of this section.

(a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content

instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

(b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006 or by the date your bioreactor is required to install a gas collection and control system under 40 CFR part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan or tribal plan that applies to your landfill, whichever is earlier.

(c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

Regulatory Analysis: *This section does not apply because Kootenai County Farm Landfill does not have a bioreactor.*

§ 63.1950 When am I no longer required to comply with this subpart?

You are no longer required to comply with the requirements of this subpart when you 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 your landfill.

Regulatory Analysis: *This section applies.*

§ 63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?

If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraphs (a) or (b).

(a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of part 60, subpart WWW.

(b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, subpart WWW, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in 40 CFR 60.757(d) of subpart WWW.

(c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR part 60, subpart WWW or the Federal plan, whichever applies to your bioreactor.

Regulatory Analysis: *This section does not apply because Kootenai County Farm Landfill does not have a bioreactor.*

Standards

§ 63.1955 What requirements must I meet?

(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 m^3 , 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*).

Regulatory Analysis: *Subsection (a)(2) applies because Kootenai County Farm Landfill is subject to 40 CFR 60 Subpart WWW and an EPA approved and effective State plan that implements 40 CFR 60 Subpart Cc.*

General and Continuing Compliance Requirements

§ 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.

Regulatory Analysis: *This section applies.*

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 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.

Regulatory Analysis: *This section applies.*

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 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.

Regulatory Analysis: *This section applies.*

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.

(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.

(c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(a)(2) of this subpart.

(d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date specified in §63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.

(e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in §63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance tests results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(c) of this subpart.

(f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semiannual compliance report for the bioreactor according to paragraphs (f)(1) through (3) of this section so that the reports may be submitted on the same schedule.

(1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.

(2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.

(3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be

submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.

(g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§63.1947, 63.1955(c) and 63.1980(c) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.

(h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under §63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

Regulatory Analysis: *Subsection (a) of this section applies.*

Other Requirements and Information

§ 63.1985 Who enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in §63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

Regulatory Analysis: *Subsections (a) and (c) of this section applies.*

§ 63.1990 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, and WWW; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

Bioreactor means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in theFederal Registerannouncing EPA's approval.

Federal plan means the EPA plan to implement 40 CFR part 60, subpart Cc for existing MSW landfills located in States and Indian country where State plans or tribal plans are not currently in effect. On the effective date of an EPA approved State or tribal plan, the Federal plan no longer applies. The Federal plan is found at 40 CFR part 62, subpart GGG.

Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see §257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.

Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR part 60, subpart Cc.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

Regulatory Analysis: *The definitions apply, but it is my understanding that they do not go into the air operating permit.*

As stated in §§63.1955 and 63.1980, you must meet each requirement in the following table that applies to you.

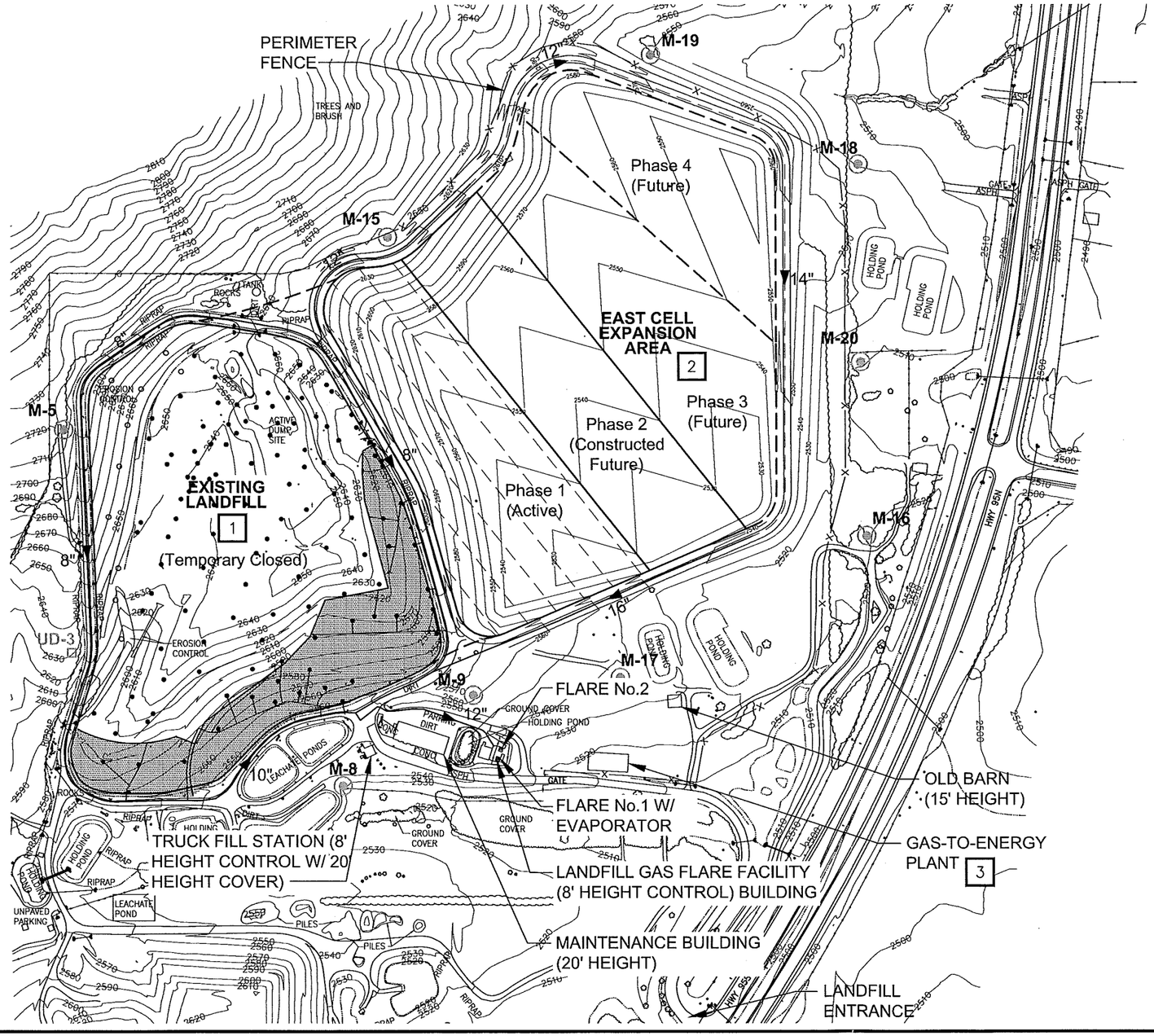
Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA

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	

Part 63 Citation	Description	Explanation
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	

Regulatory Analysis: *The Subpart A requirements apply, and the table goes into the air operating permit. .*

Appendix B – Source Plan View (Plot Plan)



LEGEND

- M-20 — GROUNDWATER MONITORING WELL
- LANDFILL LIMITS
- FUTURE LANDFILL LIMITS
- 12" — PERIMETER BURIED LANDFILL GAS MANIFOLD W/SIZE AND FLOW DIRECTION
- 12" — FUTURE BURIED LFG MANIFOLD
- HORIZONTAL GAS TRENCHES (FUTURE)
- FENCE LINE
- GAS WELL(S) LOCATION
- FUTURE GAS WELL LOCATION
- LANDFILL CLOSURE AREA

NOTES

1 EXISTING LANDFILL GAS SYSTEM HAS CONNECTIONS TO EXTRACTING WELLS, SIDESLOPE TRENCHES AND LEACHATE CLEANOUTS. LATERAL CONNECTION PIPE WITHIN THE LANDFILL IS IN A TEMPORARY ALIGNMENT UNTIL CLOSURE AND IS NOT SHOWN

2 NEW LANDFILL GAS SYSTEM WILL USE HORIZONTAL GAS TRENCHES AND CONNECT TO THE LEACHATE CLEANOUTS AT THE PERIMETER OF THE LANDFILL.

3 GAS-TO-ENERGY PLANT IS OWNED AND OPERATED BY KOOTENAI ELECTRIC UNDER SEPARATE PERMIT.

FACILITY:
KOOTENAI COUNTY FARM LANDFILL
22089 HIGHWAY 95 SOUTH
COEUR D'ALENE, ID 83814

CATHY MAYER, DIRECTOR
208-446-1430

Topographic Base Map dated 2006

Parametrix DATE: Jul 14, 2015 FILE: BL1660037P02T05-FIG

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SCALE IN FEET

Figure
Kootenai County Farm Landfill
Tier 1 Application Renewal

Appendix C – Emission Calculations

Potential to emit, 10 kW generators:

Generators, 10 kW (3), diesel (Assume engine 18.5 hp, based on similar generators)

	Factor, lb/hp-hr	PTE, ton/yr	§ 006 level, ton/yr
NO_X	0.031	2.51	100
CO	0.00668	0.54	40
SO_X	0.00205	0.17	40
PM_{10}	0.0022	0.18	15
TOC	0.0025141	0.20	40
PTE for all pollutants is < 58.01.01.317.b.i.(30) criteria			

Potential to emit, Wacker pumps

Wacker pumps are powered by 16-hp gasoline engines

	Factor, lb/hp-hr	PTE, ton/yr	§ 006 level, ton/yr
NO_X	0.011	0.78	100
CO	0.00696	0.49	40
SO_X	0.000591	0.04	40
PM_{10}	0.000721	0.05	15
TOC	0.006591	0.46	40
PTE for all pollutants is < 58.01.01.317.b.i.(30) criteria			

Note: Factors for both engine types taken from AP-42, Table 3.3-1
Engine operation is assumed to be 8,760 hours per year

Potential to emit (uncontrolled), Leachate evaporator

Leachate evaporator, rated heat input: 4.8 MMBtu/hr
Methane heat content: 0.841 (U.S. Energy Information Administration)
Fuel combustion rate = 4.8 MMBtu/hr / 0.841 MMBtu/10^3 ft^3 = 5.7075 10^3 ft^3/hr

	Factor, lb/10^6 gal	PTE, ton/yr	§ 006 level, ton/yr
NO_X	42	1.05	100
CO	7	0.17	40
PM_{10}	3	0.07	15
Dioxin/Furan	3.20×10^{-7}	3.20×10^{-9}	1
PTE for all pollutants is < 58.01.01.317.b.i.(30) criteria			

Note: Factors taken from AP-42, Table 2.4-4, revised, draft
Leachate evaporator operation assumed to be 8,760 hours per year
All filterable PM assumed to be PM_{10}
Exhaust from leachate evaporator is routed to flare. CO, and organic compounds will be combusted.

Potential to emit, Landfill

Emissions from the landfill are the sum of landfill gases (LFG) that escape from the collection system (fugitive emissions), and emissions of combusted LFG and other by-products, such as oxides of nitrogen, from the flare.

Landfill gas generated by the landfill (uncontrolled).

Landfill gas model (LandGEM) calculated emissions for 2015 (year of permit renewal), and 2035 (peak year of emissions following planned shutdown in 2040)

	2015		2035 (peak)	
Gas / Pollutant	Captured, tpy	**Fugitive, tpy**	Captured, tpy	**Fugitive, tpy**
Total landfill gas	26,221	8,740	66,985	22,328
Methane	7,004	2,335	17,892	5,964
Carbon dioxide	19,217	6,406	49,092	16,364
NMOC	301	100	769	256
1,1,1-Trichloroethane (methyl chloroform) - HAP	5.59E-02	1.86E-02	1.43E-01	4.76E-02
1,1,2,2-Tetrachloroethane - HAP/VOC	1.61E-01	5.37E-02	4.12E-01	1.37E-01
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	2.07E-01	6.91E-02	5.30E-01	1.77E-01
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	1.69E-02	5.64E-03	4.33E-02	1.44E-02
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	3.54E-02	1.18E-02	9.05E-02	3.02E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	1.78E-02	5.92E-03	4.54E-02	1.51E-02
2-Propanol (isopropyl alcohol) - VOC	2.62E+00	8.75E-01	6.71E+00	2.24E+00
Acetone	3.55E-01	1.18E-01	9.07E-01	3.02E-01
Acrylonitrile - HAP/VOC	2.92E-01	9.73E-02	7.46E-01	2.49E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	1.30E-01	4.32E-02	3.31E-01	1.10E-01
Benzene - Co-disposal - HAP/VOC	7.50E-01	2.50E-01	1.92E+00	6.39E-01
Bromodichloromethane - VOC	4.44E-01	1.48E-01	1.13E+00	3.78E-01
Butane - VOC	2.54E-01	8.46E-02	6.48E-01	2.16E-01
Carbon disulfide - HAP/VOC	3.86E-02	1.29E-02	9.85E-02	3.28E-02
Carbon monoxide	3.42E+00	1.14E+00	8.75E+00	2.92E+00
Carbon tetrachloride - HAP/VOC	5.37E-04	1.79E-04	1.37E-03	4.58E-04
Carbonyl sulfide - HAP/VOC	2.57E-02	8.57E-03	6.57E-02	2.19E-02
Chlorobenzene - HAP/VOC	2.46E-02	8.19E-03	6.28E-02	2.09E-02
Chlorodifluoromethane	9.82E-02	3.27E-02	2.51E-01	8.36E-02
Chloroethane (ethyl chloride) - HAP/VOC	7.32E-02	2.44E-02	1.87E-01	6.24E-02
Chloroform - HAP/VOC	3.13E-03	1.04E-03	7.99E-03	2.66E-03
Chloromethane - VOC	5.29E-02	1.76E-02	1.35E-01	4.51E-02
Dichlorobenzene - (HAP for para isomer/VOC)	2.70E-02	8.99E-03	6.89E-02	2.30E-02
Dichlorodifluoromethane	1.69E+00	5.63E-01	4.32E+00	1.44E+00
Dichlorofluoromethane - VOC	2.34E-01	7.79E-02	5.97E-01	1.99E-01

	2015		2035 (peak)	
Gas / Pollutant	Captured, tpy	**Fugitive, tpy**	Captured, tpy	**Fugitive, tpy**
Dichloromethane (methylene chloride) - HAP	1.04E+00	3.46E-01	2.65E+00	8.84E-01
Dimethyl sulfide (methyl sulfide) - VOC	4.23E-01	1.41E-01	1.08E+00	3.60E-01
Ethane	2.34E+01	7.79E+00	5.97E+01	1.99E+01
Ethanol - VOC	1.09E+00	3.62E-01	2.78E+00	9.25E-01
Ethyl mercaptan (ethanethiol) - VOC	1.25E-01	4.16E-02	3.19E-01	1.06E-01
Ethylbenzene - HAP/VOC	4.26E-01	1.42E-01	1.09E+00	3.63E-01
Ethylene dibromide - HAP/VOC	1.64E-04	5.47E-05	4.19E-04	1.40E-04
Fluorotrichloromethane - VOC	9.12E-02	3.04E-02	2.33E-01	7.76E-02
Hexane - HAP/VOC	4.97E-01	1.66E-01	1.27E+00	4.23E-01
Hydrogen sulfide	1.07E+00	3.57E-01	2.74E+00	9.12E-01
Mercury (total) - HAP	5.08E-05	1.69E-05	1.30E-04	4.33E-05
Methyl ethyl ketone - HAP/VOC	4.47E-01	1.49E-01	1.14E+00	3.81E-01
Methyl isobutyl ketone - HAP/VOC	1.66E-01	5.54E-02	4.25E-01	1.42E-01
Methyl mercaptan - VOC	1.05E-01	3.50E-02	2.68E-01	8.94E-02
Pentane - VOC	2.08E-01	6.93E-02	5.31E-01	1.77E-01
Perchloroethylene (tetrachloroethylene) - HAP	5.36E-01	1.79E-01	1.37E+00	4.56E-01
Propane - VOC	4.24E-01	1.41E-01	1.08E+00	3.61E-01
t-1,2-Dichloroethene - VOC	2.37E-01	7.90E-02	6.06E-01	2.02E-01
Toluene - No or Unknown Co-disposal - HAP/VOC	3.14E+00	1.05E+00	8.02E+00	2.67E+00
Toluene - Co-disposal - HAP/VOC	1.37E+01	4.56E+00	3.49E+01	1.16E+01
Trichloroethylene (trichloroethene) - HAP/VOC	3.21E-01	1.07E-01	8.21E-01	2.74E-01
Vinyl chloride - HAP/VOC	3.98E-01	1.33E-01	1.02E+00	3.39E-01
Xylenes - HAP/VOC	1.11E+00	3.71E-01	2.84E+00	9.47E-01
Total HAP	23.6	**7.87**	60.3	**20.1**
Total VOC	28.3	**9.42**	72.2	**24.1**

Note: Factors taken from LandGEM 2 model
"Captured" is LFG that has been collected and combusted by flares.
"Fugitive" is LFG that has not been collected by the LFG system.

Potential to emit VOC, Flares

Bill Rogers of Idaho DEQ stated that the permitted volatile organic compound (VOC) emission limit should be used as the end result of the LFG that is collected and burned by the flare. The VOC emission limit is 20 ppmdv, corrected to 3% O_2, (PTC No. P-020100, Section 2.1 (3/24/03)).

Equation 1 Total flare Flowrate

$$Q_{actual} = Q_{Flare\,1} + Q_{Flare\,2} = 824\,acfm + 12{,}000\,acfm = 12{,}824\,acfm$$

Equation 2 Stack flow correction for temperature and pressure

$$Q_d = 12{,}824 \times \frac{(68+460)}{(1{,}500+460)} \times \frac{27.26}{29.92} = 3{,}147\,dscfm$$

Equation 3 Calculation of emission rate

$$E = 20\,ppm \times 10^{-6} \times 3{,}147\frac{ft^3}{min} \times 60\frac{min}{hr} \times \frac{86.19\,\frac{lb}{lb-mole}}{385.3\,\frac{ft^3}{lb-mole}} = 0.84\frac{lb}{hr} \times \frac{8{,}760\frac{hr}{yr}}{2{,}000\frac{lb}{ton}}$$

$$= 3.70\frac{ton}{yr}$$

The potential to emit VOC of 3.70 tpy was used in Table 2-2.

Item	Exempt?	Notes
Caterpillar 143H grader, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Caterpillar 330C excavator (track hoe), diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Caterpillar 826G compactor (2), diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Caterpillar 963C tracked front loader, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Caterpillar D5M roller & scraper, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Caterpillar D8R dozer (2), diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Clark fork lift	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Cover Machine (hydro seeder) w/small diesel engine, towed by 644E	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Dump trucks, doubles, (1 Stirling, 1 Ford), diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Fuel truck, Ford L9000, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Honda Foreman ES quad, gasoline	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
John Deer 644E loader, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
John Deer Gator 6X4 small utility vehicle, gasoline	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Lull 824 extendable fork lift, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
New Holland 675E small back hoe, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Pickup trucks (5), gasoline engine, used on-site exclusively	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Tree planter, towed behind truck, diesel-powered hydraulic system	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Water truck, Freightliner, diesel	IDAPA 58.01.01.317.01.a.i.(10)	Internal combustion engines for propelling or powering a vehicle.
Honda generators, EU 2000i, (4), gasoline	IDAPA 58.01.01.317.01.a.i.(19)	Portable electrical generators that can be moved by hand.
Plant maintenance and upkeep	IDAPA 58.01.01.317.01.a.i.(28)	Plant maintenance and upkeep
General vehicle maintenance	IDAPA 58.01.01.317.01.a.i.(40)	General vehicle maintenance
Leachate pond and collection system (process waste water and ponds)	IDAPA 58.01.01.317.01.a.i.(109)	Process waste water and ponds.
Farley's Challenger VI pressure washer, fueled by stove oil (2.75 gal/hr * 138,000 Btu/gal)	IDAPA 58.01.01.317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Portable heaters, diesel-fired, (3 @ 150,000 Btu/hr, 1 @ 80,000 Btu/hr)	IDAPA 58.01.01.317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Shop heaters, diesel-fired	IDAPA 58.01.01.317.01.b.i.(7)	Combustion source, < 1,000,000 Btu/hr, using kerosene, No. 1, or No. 2 fuel.
Generators, 10 kW (3), diesel, approx. 18.5 hp each	IDAPA 58.01.01.317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.
Wacker pumps (3), each powered by 16-hp gasoline engine	IDAPA 58.01.01.317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.
Leachate evaporator, diesel-fired, 4,800,000 Btu/hr	IDAPA 58.01.01.317.01.b.i.(30)	Emission unit with PTE < values in § 006 and actual emissions < 10% values in § 006.
Landfill (controlled by landfill gas collection system and flares)		
Control device: Flare No. 1 - John Zink s/n A05292, 825 acfm		
Control device: Flare No. 2 - Callidus, 12,000 acfm		

Generators, 10 kW (3), diesel

Assume, based on similar engines on web, 18.5 hp.

	lb/hp-hr	PTE, ton/yr	§ 006 level, ton/yr
NOX	0.031	2.51	100
CO	0.00668	0.54	40
SOX	0.00205	0.17	40
PM10	0.0022	0.18	15
TOC	0.0025141	0.20	40

Wacker pumps (3), each powered by 16-hp gasoline engine

	lb/hp-hr	PTE, ton/yr	§ 006 level, ton/yr
NOX	0.011	0.77	100
CO	0.00696	0.49	40
SOX	0.000591	0.04	40
PM10	0.000721	0.05	15
TOC	0.006591	0.46	40

Note: Factors for both engine types taken from AP-42, Table 3.3-1

Heat content values from US Energy Information Administration
http://www.eia.doe.gov/cneaf/solar.renewables/page/trends/table10.html

LFG heat content: 0.490 MMBtu/1,000 ft3

CH4 heat content: 0.841 MMBtu/1,000 ft3

Leachate evaporator, landfill gas-fired, 4.8 MMBtu/hr

Fuel rate, 1,000 ft3/hr 5.70749

Fuel rate, 1,000,000 ft3/hr 0.00571

	lb/1,000,000 ft3	PTE, ton/yr	§ 006 level, ton/yr
NOX	42	1.05	100
CO	7	0.17	40
PM10	3	0.07	15
Dioxin/Furan	3.20E-07	8.00E-09	40

Note: emission factors taken from AP-42, Table 2.4-4 (revised, draft)
All filterable PM assumed to be PM10

Flare emissions

John Zink ZTOF at 24.8 MMBtu/hr and Callidus at 32.5 MMBtu/hr

Emissions are due to combustion of propane and landfill gas, total of 57.3 MMBtu/hr

VOC Emissions due to landfill gas

VOC generated, 2035 (peak)	96.289	ton/yr
VOC captured	60.336	ton/yr
VOC fugitive	20.112	ton/yr
VOC combusted flare 1	0.522	ton/yr
VOC combusted flare 2	0.684	ton/yr

	lb/1,000,000 ft3	PTE, ton/yr	§ 006 level, ton/yr
NOX	39	1.18	
CO	46	1.39	
PM10	15	0.45	
Dioxin/Furan	4.20E-07	1.27E-08	

Note: emission factors taken from AP-42, Table 2.4-4 (revised, draft)

Emissions due to propane, 57.3 MMBtu/hr

	lb/MMBtu	PTE, ton/yr	Flare 1 PTE, ton/yr	Flare 2 PTE, ton/yr
NOX	0.068	17.07	7.39	9.68
CO	0.370	92.86	40.19	52.67
Total HC	0.140	35.14	15.21	19.93

Note: emission factors from AP-42, Table 13.5-1.
All filterable PM assumed to be PM10

Total flare emissions

	ton/yr
NOX	18.24
CO	94.25
Total HC	35.14
PM10	0.45
Dioxin/Furan	1.27E-08

NMOC destruction efficiency

generated	1.000	ton
collected	0.750	
combusted	0.735	
uncontrolled	0.265	

Emissions in 2035 from LandGEM2 model

Assumed landfill gas capture rate 75%

Gas / Pollutant	Emission Rate						
	Mg/yr	m3/yr	ft3/min	ft3/yr	ton/yr	Captured, tpy	Fugitive, tpy
Total landfill gas	81,194	65,016,028	4,368	2,296,041,035	89,313	66,985	22,328
Methane	21,688	32,508,014	2,184	1,148,020,518	23,856	17,892	5,964
Carbon dioxide	59,506	32,508,014	2,184	1,148,020,518	65,456	49,092	16,364
NMOC	932	260,064	17	9,184,164	1,025	769	256
1,1,1-Trichloroethane (methyl chloroform) - HAP	1.73E-01	3.12E+01	2.10E-03	1.10E+03	1.90E-01	1.43E-01	4.76E-02
1,1,2,2-Tetrachloroethane - HAP/VOC	4.99E-01	7.15E+01	4.81E-03	2.53E+03	5.49E-01	4.12E-01	1.37E-01
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	6.42E-01	1.56E+02	1.05E-02	5.51E+03	7.07E-01	5.30E-01	1.77E-01
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	5.24E-02	1.30E+01	8.74E-04	4.59E+02	5.77E-02	4.33E-02	1.44E-02
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	1.10E-01	2.67E+01	1.79E-03	9.41E+02	1.21E-01	9.05E-02	3.02E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	5.50E-02	1.17E+01	7.86E-04	4.13E+02	6.05E-02	4.54E-02	1.51E-02
2-Propanol (isopropyl alcohol) - VOC	8.13E+00	3.25E+03	2.18E-01	1.15E+05	8.94E+00	6.71E+00	2.24E+00
Acetone	1.10E+00	4.55E+02	3.06E-02	1.61E+04	1.21E+00	9.07E-01	3.02E-01
Acrylonitrile - HAP/VOC	9.04E-01	4.10E+02	2.75E-02	1.45E+04	9.94E-01	7.46E-01	2.49E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	4.01E-01	1.24E+02	8.30E-03	4.36E+03	4.41E-01	3.31E-01	1.10E-01
Benzene - Co-disposal - HAP/VOC	2.32E+00	7.15E+02	4.81E-02	2.53E+04	2.56E+00	1.92E+00	6.39E-01
Bromodichloromethane - VOC	1.37E+00	2.02E+02	1.35E-02	7.12E+03	1.51E+00	1.13E+00	3.78E-01
Butane - VOC	7.86E-01	3.25E+02	2.18E-02	1.15E+04	8.64E-01	6.48E-01	2.16E-01
Carbon disulfide - HAP/VOC	1.19E-01	3.77E+01	2.53E-03	1.33E+03	1.31E-01	9.85E-02	3.28E-02
Carbon monoxide	1.06E+01	9.10E+03	6.12E-01	3.21E+05	1.17E+01	8.75E+00	2.92E+00
Carbon tetrachloride - HAP/VOC	1.66E-03	2.60E-01	1.75E-05	9.18E+00	1.83E-03	1.37E-03	4.58E-04
Carbonyl sulfide - HAP/VOC	7.96E-02	3.19E+01	2.14E-03	1.13E+03	8.76E-02	6.57E-02	2.19E-02
Chlorobenzene - HAP/VOC	7.61E-02	1.63E+01	1.09E-03	5.74E+02	8.37E-02	6.28E-02	2.09E-02
Chlorodifluoromethane	3.04E-01	8.45E+01	5.68E-03	2.98E+03	3.34E-01	2.51E-01	8.36E-02
Chloroethane (ethyl chloride) - HAP/VOC	2.27E-01	8.45E+01	5.68E-03	2.98E+03	2.49E-01	1.87E-01	6.24E-02
Chloroform - HAP/VOC	9.69E-03	1.95E+00	1.31E-04	6.89E+01	1.07E-02	7.99E-03	2.66E-03
Chloromethane - VOC	1.64E-01	7.80E+01	5.24E-03	2.76E+03	1.80E-01	1.35E-01	4.51E-02
Dichlorobenzene - (HAP for para isomer/VOC)	8.35E-02	1.37E+01	9.17E-04	4.82E+02	9.18E-02	6.89E-02	2.30E-02
Dichlorodifluoromethane	5.23E+00	1.04E+03	6.99E-02	3.67E+04	5.75E+00	4.32E+00	1.44E+00
Dichlorofluoromethane - VOC	7.24E-01	1.69E+02	1.14E-02	5.97E+03	7.96E-01	5.97E-01	1.99E-01
Dichloromethane (methylene chloride) - HAP	3.22E+00	9.10E+02	6.12E-02	3.21E+04	3.54E+00	2.65E+00	8.84E-01
Dimethyl sulfide (methyl sulfide) - VOC	1.31E+00	5.07E+02	3.41E-02	1.79E+04	1.44E+00	1.08E+00	3.60E-01
Ethane	7.24E+01	5.79E+04	3.89E+00	2.04E+06	7.96E+01	5.97E+01	1.99E+01
Ethanol - VOC	3.36E+00	1.76E+03	1.18E-01	6.20E+04	3.70E+00	2.78E+00	9.25E-01
Ethyl mercaptan (ethanethiol) - VOC	3.86E-01	1.50E+02	1.00E-02	5.28E+03	4.25E-01	3.19E-01	1.06E-01
Ethylbenzene - HAP/VOC	1.32E+00	2.99E+02	2.01E-02	1.06E+04	1.45E+00	1.09E+00	3.63E-01
Ethylene dibromide - HAP/VOC	5.08E-04	6.50E-02	4.37E-06	2.30E+00	5.59E-04	4.19E-04	1.40E-04
Fluorotrichloromethane - VOC	2.82E-01	4.94E+01	3.32E-03	1.74E+03	3.11E-01	2.33E-01	7.76E-02
Hexane - HAP/VOC	1.54E+00	4.29E+02	2.88E-02	1.52E+04	1.69E+00	1.27E+00	4.23E-01
Hydrogen sulfide	3.32E+00	2.34E+03	1.57E-01	8.27E+04	3.65E+00	2.74E+00	9.12E-01
Mercury (total) - HAP	1.57E-04	1.89E-02	1.27E-06	6.66E-01	1.73E-04	1.30E-04	4.33E-05
Methyl ethyl ketone - HAP/VOC	1.38E+00	4.62E+02	3.10E-02	1.63E+04	1.52E+00	1.14E+00	3.81E-01
Methyl isobutyl ketone - HAP/VOC	5.15E-01	1.24E+02	8.30E-03	4.36E+03	5.66E-01	4.25E-01	1.42E-01
Methyl mercaptan - VOC	3.25E-01	1.63E+02	1.09E-02	5.74E+03	3.58E-01	2.68E-01	8.94E-02
Pentane - VOC	6.44E-01	2.15E+02	1.44E-02	7.58E+03	7.08E-01	5.31E-01	1.77E-01
Perchloroethylene (tetrachloroethylene) - HAP	1.66E+00	2.41E+02	1.62E-02	8.50E+03	1.83E+00	1.37E+00	4.56E-01
Propane - VOC	1.31E+00	7.15E+02	4.81E-02	2.53E+04	1.44E+00	1.08E+00	3.61E-01
t-1,2-Dichloroethene - VOC	7.34E-01	1.82E+02	1.22E-02	6.43E+03	8.07E-01	6.06E-01	2.02E-01
Toluene - No or Unknown Co-disposal - HAP/VOC	9.72E+00	2.54E+03	1.70E-01	8.95E+04	1.07E+01	8.02E+00	2.67E+00
Toluene - Co-disposal - HAP/VOC	4.24E+01	1.11E+04	7.43E-01	3.90E+05	4.66E+01	3.49E+01	1.16E+01
Trichloroethylene (trichloroethene) - HAP/VOC	9.95E-01	1.82E+02	1.22E-02	6.43E+03	1.09E+00	8.21E-01	2.74E-01
Vinyl chloride - HAP/VOC	1.23E+00	4.75E+02	3.19E-02	1.68E+04	1.36E+00	1.02E+00	3.39E-01
Xylenes - HAP/VOC	3.44E+00	7.80E+02	5.24E-02	2.76E+04	3.79E+00	2.84E+00	9.47E-01
Total HAP	7.31E+01	1.92E+04	1.29E+00	6.79E+05	8.04E+01	6.03E+01	2.01E+01
Total VOC	8.75E+01	2.58E+04	1.73E+00	9.11E+05	9.63E+01	7.22E+01	2.41E+01

Flare emissions

lb/hr = ppm*1.0E-06*Qd*60*MW/385.3

Combined flowrate: 12825 acfm	12,825
Stack temperature, degrees F	1,500
PTC No. P-020100, Section 2.1 (3/24/03) emission limit	
max concentration, ppmdv	20
Oxygen correction factor:	3
Pressure altitude at 2,550 feet MSL, in Hg	27.26
Flowrate, dscfm	3,147.7
Hexane, lb/hr	0.84
Hexane, ton/yr	3.70

Emissions in 2040 from LandGEM2 model

Assumed landfill gas capture rate 75%

Gas / Pollutant	Emission Rate						
	Mg/yr	m3/yr	ft3/min	ft3/yr	ton/yr	Captured, tpy	Fugitive, tpy
Total landfill gas	38,353	30,711,397	2,063	1,084,572,989	42,188	31,641	10,547
Methane	10,245	15,355,699	1,032	542,286,494	11,269	8,452	2,817
Carbon dioxide	28,109	15,355,699	1,032	542,286,494	30,919	23,190	7,730
NMOC	440	122,846	8	4,338,292	484	363	121
1,1,1-Trichloroethane (methyl chloroform) - HAP	8.18E-02	1.47E+01	9.90E-04	5.21E+02	9.00E-02	6.75E-02	2.25E-02
1,1,2,2-Tetrachloroethane - HAP/VOC	2.36E-01	3.38E+01	2.27E-03	1.19E+03	2.59E-01	1.95E-01	6.49E-02
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	3.03E-01	7.37E+01	4.95E-03	2.60E+03	3.34E-01	2.50E-01	8.34E-02
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	2.48E-02	6.14E+00	4.13E-04	2.17E+02	2.72E-02	2.04E-02	6.81E-03
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	5.18E-02	1.26E+01	8.46E-04	4.45E+02	5.70E-02	4.28E-02	1.43E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	2.60E-02	5.53E+00	3.71E-04	1.95E+02	2.86E-02	2.14E-02	7.14E-03
2-Propanol (isopropyl alcohol) - VOC	3.84E+00	1.54E+03	1.03E-01	5.42E+04	4.22E+00	3.17E+00	1.06E+00
Acetone	5.19E-01	2.15E+02	1.44E-02	7.59E+03	5.71E-01	4.28E-01	1.43E-01
Acrylonitrile - HAP/VOC	4.27E-01	1.93E+02	1.30E-02	6.83E+03	4.70E-01	3.52E-01	1.17E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	1.90E-01	5.84E+01	3.92E-03	2.06E+03	2.09E-01	1.56E-01	5.21E-02
Benzene - Co-disposal - HAP/VOC	1.10E+00	3.38E+02	2.27E-02	1.19E+04	1.21E+00	9.05E-01	3.02E-01
Bromodichloromethane - VOC	6.49E-01	9.52E+01	6.40E-03	3.36E+03	7.14E-01	5.35E-01	1.78E-01
Butane - VOC	3.71E-01	1.54E+02	1.03E-02	5.42E+03	4.08E-01	3.06E-01	1.02E-01
Carbon disulfide - HAP/VOC	5.64E-02	1.78E+01	1.20E-03	6.29E+02	6.20E-02	4.65E-02	1.55E-02
Carbon monoxide	5.01E+00	4.30E+03	2.89E-01	1.52E+05	5.51E+00	4.13E+00	1.38E+00
Carbon tetrachloride - HAP/VOC	7.86E-04	1.23E-01	8.25E-06	4.34E+00	8.65E-04	6.48E-04	2.16E-04
Carbonyl sulfide - HAP/VOC	3.76E-02	1.50E+01	1.01E-03	5.31E+02	4.14E-02	3.10E-02	1.03E-02
Chlorobenzene - HAP/VOC	3.59E-02	7.68E+00	5.16E-04	2.71E+02	3.95E-02	2.97E-02	9.88E-03
Chlorodifluoromethane	1.44E-01	3.99E+01	2.68E-03	1.41E+03	1.58E-01	1.18E-01	3.95E-02
Chloroethane (ethyl chloride) - HAP/VOC	1.07E-01	3.99E+01	2.68E-03	1.41E+03	1.18E-01	8.84E-02	2.95E-02
Chloroform - HAP/VOC	4.58E-03	9.21E-01	6.19E-05	3.25E+01	5.03E-03	3.77E-03	1.26E-03
Chloromethane - VOC	7.74E-02	3.69E+01	2.48E-03	1.30E+03	8.51E-02	6.38E-02	2.13E-02
Dichlorobenzene - (HAP for para isomer/VOC)	3.94E-02	6.45E+00	4.33E-04	2.28E+02	4.34E-02	3.25E-02	1.08E-02
Dichlorodifluoromethane	2.47E+00	4.91E+02	3.30E-02	1.74E+04	2.72E+00	2.04E+00	6.80E-01
Dichlorofluoromethane - VOC	3.42E-01	7.98E+01	5.37E-03	2.82E+03	3.76E-01	2.82E-01	9.40E-02
Dichloromethane (methylene chloride) - HAP	1.52E+00	4.30E+02	2.89E-02	1.52E+04	1.67E+00	1.25E+00	4.18E-01
Dimethyl sulfide (methyl sulfide) - VOC	6.19E-01	2.40E+02	1.61E-02	8.46E+03	6.81E-01	5.11E-01	1.70E-01
Ethane	3.42E+01	2.73E+04	1.84E+00	9.65E+05	3.76E+01	2.82E+01	9.40E+00
Ethanol - VOC	1.59E+00	8.29E+02	5.57E-02	2.93E+04	1.75E+00	1.31E+00	4.37E-01
Ethyl mercaptan (ethanethiol) - VOC	1.83E-01	7.06E+01	4.75E-03	2.49E+03	2.01E-01	1.51E-01	5.02E-02
Ethylbenzene - HAP/VOC	6.24E-01	1.41E+02	9.49E-03	4.99E+03	6.86E-01	5.15E-01	1.72E-01
Ethylene dibromide - HAP/VOC	2.40E-04	3.07E-02	2.06E-06	1.08E+00	2.64E-04	1.98E-04	6.60E-05
Fluorotrichloromethane - VOC	1.33E-01	2.33E+01	1.57E-03	8.24E+02	1.47E-01	1.10E-01	3.67E-02
Hexane - HAP/VOC	7.27E-01	2.03E+02	1.36E-02	7.16E+03	7.99E-01	5.99E-01	2.00E-01
Hydrogen sulfide	1.57E+00	1.11E+03	7.43E-02	3.90E+04	1.72E+00	1.29E+00	4.31E-01
Mercury (total) - HAP	7.43E-05	8.91E-03	5.98E-07	3.15E-01	8.17E-05	6.13E-05	2.04E-05
Methyl ethyl ketone - HAP/VOC	6.54E-01	2.18E+02	1.47E-02	7.70E+03	7.19E-01	5.40E-01	1.80E-01
Methyl isobutyl ketone - HAP/VOC	2.43E-01	5.84E+01	3.92E-03	2.06E+03	2.67E-01	2.01E-01	6.68E-02
Methyl mercaptan - VOC	1.54E-01	7.68E+01	5.16E-03	2.71E+03	1.69E-01	1.27E-01	4.22E-02
Pentane - VOC	3.04E-01	1.01E+02	6.81E-03	3.58E+03	3.35E-01	2.51E-01	8.36E-02
Perchloroethylene (tetrachloroethylene) - HAP	7.84E-01	1.14E+02	7.63E-03	4.01E+03	8.62E-01	6.47E-01	2.16E-01
Propane - VOC	6.20E-01	3.38E+02	2.27E-02	1.19E+04	6.81E-01	5.11E-01	1.70E-01
t-1,2-Dichloroethene - VOC	3.47E-01	8.60E+01	5.78E-03	3.04E+03	3.81E-01	2.86E-01	9.53E-02
Toluene - No or Unknown Co-disposal - HAP/VOC	4.59E+00	1.20E+03	8.05E-02	4.23E+04	5.05E+00	3.79E+00	1.26E+00
Toluene - Co-disposal - HAP/VOC	2.00E+01	5.22E+03	3.51E-01	1.84E+05	2.20E+01	1.65E+01	5.50E+00
Trichloroethylene (trichloroethene) - HAP/VOC	4.70E-01	8.60E+01	5.78E-03	3.04E+03	5.17E-01	3.88E-01	1.29E-01
Vinyl chloride - HAP/VOC	5.83E-01	2.24E+02	1.51E-02	7.92E+03	6.41E-01	4.81E-01	1.60E-01
Xylenes - HAP/VOC	1.63E+00	3.69E+02	2.48E-02	1.30E+04	1.79E+00	1.34E+00	4.47E-01
Total HAP	3.45E+01	9.09E+03	6.10E-01	3.21E+05	3.80E+01	2.85E+01	9.50E+00
Total VOC	4.13E+01	1.22E+04	8.19E-01	4.30E+05	4.55E+01	3.41E+01	1.14E+01

Flare emissions

lb/hr = ppm*1.0E-06*Qd*60*MW/385.3

Combined flowrate: 12825 acfm	12,825
Stack temperature, degrees F	1,500
PTC No. P-020100, Section 2.1 (3/24/03) emission limit	
max concentration, ppmdv	20
Oxygen correction factor:	3
Pressure altitude at 2,550 feet MSL, in Hg	27.26
Flowrate, dscfm	3,147.7
Hexane, lb/hr	0.84
Hexane, ton/yr	3.70

Appendix D – Annotated Tier I Permit

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

September 23, 2011

Roger Saterfiel, Director
Kootenai County Farm Landfill
3650 North Ramsey Road
Coeur d'Alene, Idaho 83815

RE: Facility ID No. 055-00044, Kootenai County Farm Landfill, Coeur d'Alene
Final Amended Tier I Operating Permit Letter

Dear Mr. Saterfiel:

The Department of Environmental Quality (DEQ) is issuing Amended Tier I Operating Permit No. T1 -2010.0028 Project 60911 to Kootenai County Farm Landfill at Coeur d'Alene in accordance with IDAPA 58.01.01.300 through 386, Rules for the Control of Air Pollution in Idaho (Rules).

The enclosed permit is effective immediately, summarizes the applicable requirements for your facility, and requires an annual compliance certification for all emissions units. This permit replaces Tier I Operating Permit No. T1-2010.0028, issued January 14, 2011. The enclosed operating permit is based on the information contained in your permit application received on August 11, 2011. Modifications to and/or renewal of this operating permit shall be requested in a timely manner in accordance with the Rules.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Almer Casile, Air Quality Analyst, at 208-769-1422 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Robert Baldwin at 208 373-0502 or robert.baldwin@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Bill Rogers for

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS/REB

Permit No. T1-2010.0028 PROJ 60911

Enclosure

Air Quality
TIER I OPERATING PERMIT

State of Idaho
Department of Environmental Quality

PERMIT No.: T1-2010.0028
FACILITY ID No.: 055-00044
AQCR: 62 **CLASS:** A **ZONE:** 11
SIC: 4953 **NAICS:** 52212
UTM COORDINATE (km): 504.8, 5364.2

1. **PERMITTEE**
Kootenai County Farm Landfill

2. **PROJECT**
Amended Tier I Operating Permit Project No. 60911

3. **MAILING ADDRESS**	**CITY**	**STATE**	**ZIP**
3650 North Ramsey Road	Coeur d'Alene	Idaho	83815

4. **FACILITY CONTACT**	**TITLE**	**TELEPHONE**
Roger Saterfiel Cathy Mayer	Director	208-446-1430

5. **RESPONSIBLE OFFICIAL**	**TITLE**	**TELEPHONE**
Roger Saterfiel Cathy Mayer	Director	208-446-1430

6. **EXACT PLANT LOCATION**	**COUNTY**
22089 South Highway 95	Kootenai

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
Solid waste disposal facility

8. **PERMIT AUTHORITY**

This Tier I operating permit is issued pursuant to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.300 through 386. The permittee shall comply with the terms and conditions of this permit.

This permit incorporates all applicable terms and conditions of prior air quality permits issued by the Idaho Department of Environmental Quality (DEQ) for the permitted source, unless the permittee emits toxic pollutants subject to state-only requirements pursuant to IDAPA 58.01.01.210, and the permittee elects not to incorporate those terms and conditions into this operating permit.

The effective date of this permit is the date of signature by DEQ on the cover page.

ROBERT BALDWIN, PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

Bill Rogers for
MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED:	**January 14, 2011**
DATE MODIFIED/AMENDED:	**September 23, 2011**
DATE EXPIRES:	**January 14, 2016**

Table of Contents

Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
KCFL	Kootenai County Farm Landfill
km	kilometers
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Non-Methane Organic Compounds
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PC	Permit Condition
PM	particulate matter
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
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor

SO_2	sulfur dioxide
SO_x	sulfur oxides
SSMP	Startup, Shutdown & Maintenance Plan
T/yr	tons per year
TAP	toxic air pollutants
U.S.C.	United States Code
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
$\mu g/m^3$	micrograms per cubic meter

1. TIER I OPERATING PERMIT SCOPE

Purpose

1.1 This amended Tier I permit is to correct formatting errors and to clarify two permit conditions. No permit conditions were changed for the original Tier I permit issued on January 14, 2011. Facility's request is located in the Statement of Basis appendix.

1.2 This Tier I operating permit establishes facility-wide requirements in accordance with the Idaho State Implementation Plan control strategy and the Rules.

This permit is the initial Tier I permit for Kootenai County Farm Landfill.

1.3 This Tier I permit incorporates the following permit(s):

- Permit to Construct No. P-020100, issued March 24, 2003 amending P-940104 issued April 6, 1994 correcting the maximum design capacity of KCLF.
- Permit to Construct No. P-990122, issued December 13, 1999 for installation of Flare No. 2
- Permit to Construct No. P-940104 issued April 6, 1994 for construction of landfill gas collection system and installation of Flare No. 1 replacing P-020100.

Regulated Sources

1.4 Listed are all sources of emissions regulated in this Tier I operating permit.

REGULATED SOURCES

Permit Section	Source Description	Emissions Control
2	General operational conditions for the facility including but not limited to: roads paved and unpaved, dozing and grading activities, and applying daily cover.	Reasonable controls prescribed in facility-wide conditions
3	Kootenai County Farm Landfill Existing Cell and East Expansion Cell	~~Landfill gas collection system vented to two flares, Flare No. 1 and Flare No. 2~~
3	Kootenai County Farm Landfill Existing Cell and East Expansion Cell	Fugitive emissions from landfill, Periodic measurements taken per 40 CFR 60 Subpart WWW

Landfill gas collection system controlled by two county flares, Flare No. 1 and Flare No. 2, or landfill gas-to-energy plant, owned and operated by others

2. FACILITY-WIDE CONDITIONS

Table 2.1 contains a summary of requirements that apply generally to emissions units at the facility.

Table 2.1 APPLICABLE REQUIREMENTS SUMMARY

Permit Condition	Parameter	Permit Limit/ Standard Summary	Applicable Requirement References	Monitoring and Recordkeeping Requirements
2.1	Fugitive dust	Reasonable control	IDAPA 58.01.01.650-651	2.2, 2.3, 2.4, 2.11
2.5	Odors	Reasonable control	IDAPA 58.01.01.775-776	2.6, 2.11
2.7	Visible missions	20% opacity for no more than 3 minutes in any 60-minute period	IDAPA 58.01.01.625	2.8, 2.11
2.9	Excess missions	Compliance with IDAPA 58.01.01.130-136	IDAPA 58.01.01.130-136	2.9, 2.11
2.14	Fuel oil sulfur content limit	ASTM Grade 1 fuel oil – 0.3% by weight; ASTM Grade 2 fuel oil - 0.5% by weight	IDAPA 58.01.01.728	2.14, 2.11
2.15	Open burning	Compliance with IDAPA 58.01.01.600-617	IDAPA 58.01.01.600-617	2.11
2.16	Renovation or demolition	40 CFR 61, Subpart M	40 CFR 61, Subpart M	2.11
2.17	Chemical accident prevention	Compliance with 40 CFR 68	40 CFR 68	2.11, 2.17
2.18	Recycling and emission reductions	Compliance with 40 CFR 82, Subpart F	40 CFR 80, Subpart F	2.11, 2.18

Fugitive Dust

2.1 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]

2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants) to reasonably control fugitive dust emissions.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

2.4 The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective. If fugitive dust emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each fugitive dust emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive dust emissions, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

Odors

2.5 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]

2.6 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

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

Visible Emissions

2.7 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]

2.8 The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition. The inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either

a) take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with b).

or

b) perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20%, as measured using Method 9, for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136.

The permittee shall maintain records of the results of each visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Excess Emissions

Excess Emissions - General

2.9 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 Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

2.9.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing the excess emissions event; to reduce the frequency of occurrence of such events; to minimize the amount by which the emission standard is exceeded; and shall, as provided below or upon request of DEQ, submit a full report of such occurrence, including a statement of all known causes, and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

Excess Emissions – Startup, Shutdown, Scheduled Maintenance

2.9.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to, the following:

[IDAPA 58.01.01.133, 4/5/00]

- A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory or a Wood Stove Curtailment Advisory has been declared by DEQ.

[IDAPA 58.01.01.133.01.a, 3/20/97]

- Notifying DEQ of the excess emissions event as soon as reasonably possible, but no later than two hours prior to, the start of the event, unless the owner or operator demonstrates to DEQ's satisfaction that a shorter advance notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

- The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

Excess Emissions – Upset, Breakdown, or Safety Measures

2.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/11/06]

2.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

- The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

- The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

- The owner or operator shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

2.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the period until such time as the condition causing the excess has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03 4/5/00]

Excess Emissions – Reporting and Recordkeeping

2.9.4 A written report for each excess emissions event shall be submitted to DEQ by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01 and 02, 4/11/06]

2.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request and shall include the information requested by IDAPA 58.01.01.136.03(a) and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

- An excess emissions log book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

- Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, or safety preventative maintenance plans that have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97]

Performance Testing

2.10 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

Unless a longer time is approved by DEQ, the permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Pkwy.
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

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

Monitoring and Recordkeeping

2.11 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.

[IDAPA 58.01.01.322.07, 5/1/94]

Reports and Certifications

2.12 All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Pkwy.
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10
Air Operating Permits, OAQ-107
1200 Sixth Ave.
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

Fuel-Burning Equipment

2.13 The permittee shall not discharge PM to the atmosphere from any fuel-burning equipment in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.

[IDAPA 58.01.01.676-677, 5/1/94]

Sulfur Content

2.14 The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]

2.14.1 The permittee shall not sell, distribute, use, or make available for use, any coal containing greater than 1.0% sulfur by weight.

[IDAPA 58.01.01.729, 5/1/94]

2.14.2 The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

[IDAPA 58.01.01.322.06, 5/1/94]

Open Burning

2.15 The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 04/02/08T]

Asbestos

2.16 The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M – Asbestos.

[40 CFR 61, Subpart M]

Regulated Substances for Accidental Release Prevention

2.17 An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

Recycling and Emissions Reductions

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

[40 CFR 82, Subpart F]

Documentation for Exemptions under IDAPA 58.01.01.200

2.19 Unless the source is subject to, and the owner or operator complies with IDAPA 58.01.01.385, the owner or operator of the source, except for those sources listed in IDAPA 58.01.01.222.02.a. through 222.02.g., shall maintain documentation on site that shall indentify the exemption determined to identify the source and verify that the source qualifies for the identified exemption. The records shall be kept for a period of time not less than five years from the date the exemption determination has been made or for the life of the source for which the exemption has been determined to apply, whichever is greater, or

until such time as a permit to construct or an operating permit is issued which covers the operation of the source. The owner or operator shall submit the documentation to DEQ upon request.

[IDAPA 58.01.01.220.2, 4/5/00; IDAPA 58.01.01.322.01, 3/19/99]

NSPS/NESHAP General Provisions

2.20 **NSPS 40 CFR 60, Subpart A – General Provisions**

The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A – General Provisions in accordance with 40 CFR 60.1. A summary of requirements for affected facilities is provided.

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

Table 2.2 NSPS 40 CFR 60 SUBPART A - SUMMARY OF GENERAL PROVISIONS FOR AFFECTED FACILITIES

Section	Section Title	Summary of Section
60.2	Definitions	***For delegated NSPS*** 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	***For delegated NSPS*** All requests, reports, applications, submittals, and other communications associated with 40 CFR 60, Subparts A and WWW shall be submitted to: Coeur d'Alene Regional Office Department of Environmental Quality 2110 Ironwood Pkwy Coeur d'Alene, ID 83814
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.
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 or 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]

2.21 NESHAP 40 CFR 63, Subpart A – General Provisions

The permittee shall comply with the requirements of 40 CFR 63, Subpart A – General Provisions. A summary of applicable requirements for affected sources is provided in Table 2.4

Table 2.4 NSPS 40 CFR 63 SUBPART A – SUMMARY OF GENERAL PROVISIONS FOR AFFECTED FACILITIES

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP in this part.	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.
Part 63 Citation	**Description**	**Explanation**
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 CPR, 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 A]

Incorporation of Federal Requirements by Reference

2.22 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. Documents include, but are not limited to:

- Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60
- National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP), 40 CFR Part 63

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS or NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.

3. WEST AND EAST EXPANSION CELL

Summary Description

began

Kootenai County Landfill (KCFL) operation consists of the existing active West Cell and a ~~future constructed~~ East Expansion Cell that ~~is planned to begin~~ accepting municipal solid waste (MSW) in approximately 2012. The West Cell encompasses an area of approximately 29 acres of a 440 acre parcel of land with a design capacity of 2.33 million tons. The East Expansion Cell is designed to expand to the east of the Landfill. The West Cell ~~will be~~ is temporarily closed and covered; the East Expansion Cell will be expanded back so that it will eventually be built on top of the West Cell. The entire landfill will encompass an area of approximately 79 acres, will have a total design capacity of 8.72 million tons and is anticipated to be closed in ~~2034~~. 2040.

A gas-to-energy plant, owned and operated by others, became operational under a separate air permit in February 2012.

Table 3.1 describes the devices used to control emissions from landfill and east expansion cell.

Table 3.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES

Emissions Unit / Process	Emissions Control Device
Kootenai County Farm Landfill Existing West Cell and East Expansion Cell	Collection and control system including Flare #1 and Flare #2

Table 3.2 contains only a summary of the requirements that apply to Flare #1 and Flare #2. Specific permit requirements are listed below Table 3.2.

Table 3.2 APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit / Standard Summary	Applicable Requirements Reference	Operating and Monitoring and Recordkeeping Requirements
3.1	Flare #1	VOC maximum concentration of 20 ppmdv as hexane at 3% O_2	PTC No. P-020100, 40 CFR 60.752(b)(2)(iii)(B)	40 CFR Subpart WWW, 3.14
3.3	Flare #1	≤20% opacity	IDAPA 58.01.01.625	2.7, 2.8
3.1	Flare #2	VOC maximum concentration of 20 ppmdv as hexane at 3% O_2	40 CFR 60.752(b)(2)(iii)(B)	40 CFR Subpart WWW, 3.14
3.3	Flare #2	≤20% opacity	PTC No. P-990122	2.7, 2.8

Permit Limits / Standard Summary

Flare No. 1 and Flare No. 2

3.1 Volatile organic compounds (VOCs) shall be reduced to a maximum concentration of twenty part per million by volume on a dry basis (20 ppmdv) out of the stack outlet as hexane at 3% O_2.

[PTC No. P-020100, 3/24/03, 40 CFR 60 Subpart WWW]

3.2 Fugitive emission shall be in compliance with Permit Conditions 2.1-2.4.

[PTC No. P-020100, 3/24/03; IDAPA 58.01.01.322.06, 07, 5/1/94]

3.3 Opacity emission shall be in compliance with Permit Conditions 2.7 and 2.8.

[IDAPA 58.01.01.625, 4/5/00]

3.4 <u>40 CFR 60.752 Standard for Air Emissions from Municipal Solid Waste Landfills</u>
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 **(PC 3.26-3.28)**.

[40.CFR 60.752(b)(2)]

- 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 40 CFR 60.753 through 40 CFR 60.758 proposed by the owner or operator.

[40.CFR 60.752(b)(2)(i)(B)]

- The collection and control system design plan shall conform to the specifications for active collection systems in 40 CFR 60.759 **(PC 58-63)**.

[40 CFR 60.752(b)(2)(i)(C)]

3.5 An active collection system shall route all the collected gas to a control system that complies with the requirements of 40 CFR 60.752(b)(2)(iii)(B) **(PC3.6)** in accordance with 40 CFR 60.752(b)(2)(iii) **(PC3.5)**.

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

3.6 The active collection system shall have 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 ppm by volume, dry basis as hexane at 3 % 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 40 CFR 60.754(d) **(PC 3.28)** in accordance with 40 CFR 60 754(b)(2)(iii)(B).

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

3.7 In an active collection system the control devices (Flare No. 1 and Flare No. 2) shall be operated within the parameter ranges established during the initial or most recent performance test as required in 40 CFR 60.752(b)(2) **(PC 3.4-3.9)**and 40 CFR 60.752(d) **(PC 3.10)**. The operating parameters to be

monitored are specified in 40 CFR 60.756(b) **(PC 3.43)** in accordance with 40 CFR60.752(b)(2)(iii)(B)(2);

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

3.8 The permittee shall operate the collection and control device installed to comply with this subpart in accordance with the provisions of 40 CFR 60 753 **(PC 3.17-24)** , 60.755 **(PC 3.29-39)** and 60.756 **(PC 3.42-44)**.

[40 CFR 60.752(b)(2)(iv)]

3.9 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) **(PC 3.9)** are met:

[40 CFR 60.752(b)(2)(v)]

- The landfill shall be a closed landfill as defined in 40 CFR 60.751 **(PC 3.79).** A closure report shall be submitted to DEQ as provided in 40 CFR 60.757(d) **(PC 3.59)**;

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

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

[40 CFR 60.752(b)(2)(v)(B)]

- Following the procedures specified in 40 CFR 60.754(b) **(PC 3.27)** 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.

[40 CFR 60.752(b)(2)(v)(C)]

3.10 When the landfill is closed the permittee is no longer subject to the requirement to maintain an operating permit under 40 CFR 70 for the landfill if the landfill is not otherwise subject to the requirements of 40 CFR 70 and if the permittee meets the conditions for control system removal specified in accordance with 40 CFR 60.752(d) **(PC 3.10)**.

[40 CFR 60.752(d)]

Operating Requirements

3.11 The gauge pressure at each wellhead in the gas collection header shall be maintained in accordance with 40 CFR 60.754 **(PC 3.26)**.

[PTC No. P-020100, 3/24/03; 40 CFR 60.754]

3.12 The ultra-violet scanner on the flare device shall monitor the flare's flame at all times.

[PTC No. P·020100, 3/24/03; PTC No. P-990122, 12/13/99]

3.13 Flare No. 1. The combustion temperature shall be maintained at a minimum of 1500 ^{o}F. Combustion temperature shall be maintained at or above the temperature recorded during the most recent source test that demonstrated compliance with Permit Condition Section 3.1. (1,486 degrees F during most recent test).

[PTC No. P-020100, 3/24/03]

3.14 Flare No. 2. Combustion temperature shall be maintained at greater than or equal to an hourly average of 1,500 degrees Fahrenheit. (1,600 degrees F during most recent test).

[PTC No. P-990122, 12/13/99]

3.15 The landfill gas flow rate shall not exceed the maximum design capacity of the enclosed gas flare (flare #1).

[PTC No. P-020100, 3/24/03]

3.16 The collection system shall capture and collect landfill gas at sufficient extraction rates. Gas collection system expansion shall be preformed for each area, cell, or group of cells for which future refuse will be accepted.

[PTC No. P-020100, 3/24/03]

3.17 **NSPS 40 CFR 60.753 Operational Standards for Collection and Control Systems**
In accordance with 40 CFR 60.753(a) the permittee shall 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 five (5) years or more if active.

[40 CFR 60.753(a)]

3.18 In accordance with 40 CFR 60.753(b) the permittee shall operate the collection system with negative pressure at each wellhead except under the following conditions:

- For a fire or increased well temperature: The permittee 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 40 CFR 60.757(f)(1) **(PC 3.56)**;
- When using of a geomembrane or synthetic cover: The owner or operator shall develop acceptable pressure limits in the design plan;
- For 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 DEQ.

[40 CFR 60.753(b)]

3.19 In accordance with 40 CFR 60.753(c) the permittee shall operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F) and with an oxygen level less than 5%. The permittee 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.

[40 CFR 60.753(c)]

3.20 Unless an alternative test method is established as allowed by 40 CFR 60.752(b)(2)(i) **(PC 3.4)** the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

- The span shall be set so that the regulatory limit is between 20% and 50% of the span;
- A data recorder is not required;
- Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
- A calibration error check is not required;
- The allowable sample bias, zero drift, and calibration drift are ±10%.

[40 CFR 60.753(c)(2)]

3.21 In accordance with 40 CFR 60.753(d) the permittee shall operate the collection system so that the methane concentration is less than 500 ppm above background at the surface of the landfill. To determine if this level is exceeded, the permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter (100-foot) intervals at 4 inches above ground, and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The permittee 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.

[40 CFR 60.753(d)]

3.22 In accordance with 40 CFR 60.753(e) the permittee shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii) **(PC 3.5)**. 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 one hour; and

[40 CFR 60.753(e)]

3.23 In accordance with 40 CFR 60.753(f) the permittee shall operate the control or treatment system at all times when the collected gas is routed to the system.

[40 CFR 60.753(f)]

3.24 In accordance with 40 CFR 60.753(g) if monitoring demonstrates that the operational requirements in 40 CFR 60.753 (b), (c) or (d) **(PC 3.18, 19, 20 or 21)** are not met, corrective action shall be taken by the permittee as specified in 40 CFR 60.755 (a)(3) through (5) **(PC 3.33 through 3.34)** or 40 CFR 60.755 (c) **(PC 3.37)** of this subpart. If corrective actions are taken as specified in 40 CFR 60.755 **(PC 3.29-39)**, the monitored exceedance is not a violation of the operational requirements in this section.

[40 CFR 60.753(g)]

Testing Procedures

3.25 Within 60 days after achieving the maximum production rate at which the source will operate, but not later than 180 days after the initial startup, the permittee shall conduct an initial performance test to measure the non methane organic carbon (NMOC) emissions from the landfill gas flare stack in accordance with 40 CFR 60.8 and 40 CFR 60.

[PTC No. P-020100, 3/24/03; 40 CFR 60.8]

3.26 **NSPS 40 CFR 60.754 Test Methods and Procedure**

In accordance with 40 CFR 60.754 (a)(1) the permittee shall calculate the NMOC emission rate using the equation in paragraph (a)(1)(i) of this section. The values to be used in the equation are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 ppm by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

[40 CFR 60.754 (a)(1)]

- In accordance with 40 CFR 60.754(a)(1)(i) the following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o\,M_i(e^{-kt}i)\,(C_{NMOC})\,(3.6 \times 10^{-9})$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year
k = methane generation rate constant, 0.05 year-1
L_o = methane generation potential, 170 cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, megagrams
T_i = age of the i^{th} section, years
C_{NMOC} = concentration of NMOC, 4000 parts per million by volume as hexane
3.6×10^{-9} = conversion factor

The mass of non degradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for Mi if documentation of the nature and amount of such wastes is maintained.

[40 CFR 60.754(a)(1)(i)]

3.27 In accordance with 40 CFR 60.754(b) after the installation of a collection and control system in compliance with 40 CFR 60.755 **(PC 3.29-39)**, the permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in 40 CFR 60.752(b)(2)(v) **(PC 3.9)**, 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

- 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 40 CFR 60.

- 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 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, 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 permittee shall divide the NMOC concentration from Method 25C of appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

[40 CFR 60.754(b)]

3.28 In accordance with 40 CFR 60.754(d) the performance test required in 40 CFR 60.752(b)(2)(iii)(B) **(PC 3.6)**, Method 25, 25C, or Method 18 of Appendix A of 40 CFR 60 must be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level. Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to three 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 40 CFR 60, 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

[40 CFR 60.754(d)]

3.29 **40 CFR 60.755 Compliance Provisions**

In accordance with 40 CFR 60.755(a) the following methods, as specified in 40 CFR 60.755(a)(2) through (a)(6) **(PC 3.32-3.35)** of this section shall be used to determine whether the gas collection system is in compliance with the requirements in compliance with 40 CFR 60.752(b)(2)(ii).

[40 CFR 60.755(a)]

3.30 In accordance with 40 CFR 60.755(a)(1)(ii) for the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(1), the following equation 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 DEQ. 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.

- In accordance with 40 CFR 60.755(a)(1)(ii) for sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2\ k\ L_o\ M_i\ (e^{-kt}i)$$

Where,
QM = 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
Mi = mass of solid waste in the ith section, megagrams
ti = age of the ith section, years

[40 CFR 60.755(a)(1)(ii)]

3.31 In accordance with 40 CFR 60.755(a)(1)(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 equation 40 CFR 60.755(a)(1)(ii) **(PC 3.30)**of this section. 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 equation in 40 CFR 60.755(a)(1)(ii) **(PC 3.30)** 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.

[40 CFR 60.755(a)(1)(iii)]

3.32 In accordance with 40 CFR 60.755(a) (2) for the purposes of determining sufficient density of gas collectors for compliance with 40 CFR 60.752(b) (2)(ii)(A)(2) the permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to DEQ, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

[40 CFR 60.755(a)(2)]

3.33 In accordance with 40.CFR 60.755(a)(3) for the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b) (2)(ii)(A)(3), the permittee 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 five calendar days, except for the three conditions allowed 40 CFR 60.753(b) **(PC 3.18)**. 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 DEQ for approval.

[40 CFR 60.755(a)(3)]

3.34 In accordance with 40.CFR 60.755(a)(5) for the purpose of identifying whether excess air infiltration into the landfill is occurring, the permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c) **(PC 3.19-20)**. If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five 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 DEQ for approval.

[40 CFR 60.755(a)(5)]

3.35 In accordance with 40.CFR 60.755(a)(6) a permittee seeking to demonstrate compliance 40 CFR 60.752(b) (2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759 **(PC 3.58-63)** shall provide information satisfactory to DEQ as specified in 40 CFR 60.752(b) (2)(i)(C) **(PC 3.4)** demonstrating that off-site migration is being controlled.

[40 CFR 60.755(a)(6)]

3.36 In accordance with 40.CFR 60.755(b) for purposes of compliance with 40 CFR 60.753(a) the permittee of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in 40 CFR 60.752(b) (2)(i) **(PC 3.4)**. 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 5 years or more if active.

[40 CFR 60.755(b)]

3.37 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 40 CFR 60.753(d) **(PC 3.21)**.

[40 CFR 60.755(c)]

- In accordance with 40 CFR 60.755(c)(1) after installation of the collection system, the permittee 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 40 CFR 60.755(d) **(PC 3.38).**

[40 CFR 60.755(c)(1)]

- In accordance with 40 CFR 60.755(c)(2) the permittee shall determine the background concentration by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters (100 feet) from the perimeter wells.

[40 CFR 60.755(c)(2)]

- In accordance with 40 CFR 60.755(c)(3) the permittee shall perform surface emission monitoring in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR 60, except that the probe inlet shall be placed within five to 10 centimeters (two to four inches) of the ground. Monitoring shall be performed during typical meteorological conditions.

[40 CFR 60.755(c)(3)]

- In accordance with 40 CFR 60.755(c)(4) the permittee shall for any reading of 500 ppm or more above background at any location record as a monitored exceedance and the actions specified in the following 40 CFR 60.755(c)(4)(i) through 40 CFR 60.755(c)(4)(v) shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

[40 CFR 60.755(c)(4)]

  - In accordance with 40 CFR 60.755(c)(4)(i) the location of each monitored exceedance shall be marked and the location recorded.

[40 CFR 60.755(c)(4)(i)]

  - In accordance with 40 CFR 60.755(c)(4)(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.

[40 CFR 60.755(c)(4)(ii)]

  - In accordance with 40 CFR 60.755(c)(4)(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.

[40 CFR 60.755(c)(4)(iii)]

  - In accordance with 40 CFR 60.755(c)(4)(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 one month from the initial exceedance. If the one-month re-

monitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one-month re-monitoring shows an exceedance, the actions specified in 40 CFR 60.755(c)(4)(iii) or (v) shall be taken.

[40 CFR 60.755(c)(4)(iv)]

- In accordance with 40 CFR 60.755(c)(4)(v) for any location where monitored methane concentration equals or exceeds 500 ppm 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 DEQ for approval.

[40 CFR 60.755(c)(4)(v)]

- In accordance with 40 CFR 60.755(c)(5) the permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[40 CFR 60.755(c)(5)]

3.38 In accordance with 40 CFR 60.755(d) the permittee to demonstrate compliance with the provisions in 40 CFR 60.755(c) **(PC 3.37)** shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

[40 CFR 60.755(d)]

- The portable analyzer shall meet the instrument specifications provided in Section 3 of Method 21 of Appendix A of 40 CFR 60, except that "methane" shall replace all references to VOC.

[40 CFR 60.755(d)(1)]

- The calibration gas shall be methane, diluted to a nominal concentration of 500 ppm in air.

[40 CFR 60.755(d)(2)]

- To meet the performance evaluation requirements in section 3.1.3 of Method 21 of Appendix A of 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of Appendix A of 40 CFR 60 shall be used.

[40 CFR 60.755(d)(3)]

- The calibration procedures provided in Section 4.2 of Method 21 of Appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.

[40 CFR 60.755(d)(4)]

3.39 In accordance with 40 CFR 60.755(e) the provisions 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.

[40 CFR 60.755(e)]

Monitoring and Recordkeeping Requirements

3.40 The permittee shall install a sampling port at each wellhead and measure the gauge pressure in the gas collection header on a monthly basis to determine compliance with Permit Condition 3.4 of this permit

[PTC No. P-020100, 3/24/03]

3.41 The permittee shall install, calibrate, maintain; and operate according to manufacturer specifications a temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 46.7 ^{O}F of the combustion temperature to determine compliance with Permit Conditions 3.13 and 3.14.

[PTC No. P-020100, 3/24/03; PTC No. P-990122, 12/13/99]

3.42 <u>40 CFR 60.756 Monitoring of Operations</u>
In accordance with 40 CFR 60.756(a) the permittee to demonstrate compliance with 40 CFR 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

[40 CFR 60.756(a)]

- Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60.755(a)(3) **(PC 3.33)**and

[40 CFR 60.756(a)(1)]

- Monitor oxygen or nitrogen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5) **(PC 3.34)**and

[40 CFR 60.756(a)(2)]

- Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5) **(PC 3.34).**

[40 CFR 60.756(a)(3)]

3.43 In accordance with 40 CFR 60.756(b) the permittee to demonstrate compliance with 40 CFR 60.752(b)(2)(iii) **(PC 3.5)** using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

[40 CFR 60.756(b)]

- A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±l percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater.

[40 CFR 60.756(b)(1)]

- A device that records flow to the control device. The permittee shall

[40 CFR 60.756(b)(2)]

  - Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

[40 CFR 60.756(b)(2)(i)]

3.44 In accordance with 40 CFR 60.756(f) the permittee to demonstrate compliance with 40 CFR 60.755(c) **(PC 3.37)** shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60.755(d) **(PC 3.38)**. 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.

[40 CFR 60.756(f)]

3.45 **40 CFR 60.758 Recordkeeping Requirements**

In accordance with 40 CFR 60.758(a) the permittee shall keep for at least five years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b) **(PC 3.4)** 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 four hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60.758(a)]

3.46 In accordance with 40 CFR 60.758(b) the permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in 40CFR 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 five years. Records of the control device vendor specifications shall be maintained until removal.

[40 CFR 60.758(b)]

- Where an permittee subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

[40 CFR 60.758(b)(1)]

  - The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1) **(PC 3.30)**. The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by DEQ.

[40 CFR 60.758(b)(1)(i)]

  - The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1) **(PC 3.39)** .

[40 CFR 60.758(b)(1)(ii)]

- Where an permittee subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii) **(PC 3.5)** 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:

[40 CFR 60.758(b)(2)]

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

[40 CFR 60.758(b)(2)(i)]

  - The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) **(PC 3.5)** achieved by the control device.

[40 CFR 60.758(b)(2)(ii)]

3.47 In accordance with 40 CFR 60.758(c) the permittee shall keep for five years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in

40 CFR 60.756 **(PC 3.42-44)** 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.

[40 CFR 60.758(c)]

- The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f) **(PC 3.56)**:

[40 CFR 60.758(c)(1)]

  - For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all three-hour periods of operation during which the average combustion temperature was more than 28°C below the average combustion temperature during the most recent performance test at which compliance with 40CFR 60.752(b)(2)(iii) **(PC 3.5)**was determined.

[40 CFR 60.758(c)(1)(i)]

  - The permittee 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 **(PC 3.42)**.

[40 CFR 60.758(c)(2)]

3.48 In accordance with 40 CFR 60.758(d) the permittee 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.

[40 CFR 60.758(d)]

- The permittee shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 60.755(b) **(PC 3.37)**.

[40 CFR 60.758(d)(1)]

- The permittee 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 40 CFR 60.759(a)(3)(i) **(PC 3.61)** as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)(3)(ii) **(PC 3.61)**.

[40 CFR 60.758(d)(2)]

3.49 In accordance with 40 CFR 60.758(e) the permittee shall keep for at least five years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.752(b)(2)(i)(B) **(PC 3.4)**, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[40 CFR 60.758(e)]

Reporting Requirements

3.50 The permittee shall submit a test protocol for each performance test required in Permit Condition 3.25 of this permit to the Department for approval at least 30 days prior to each test date. Each performance test report, including the required process data, shall be submitted to the DEQ within 30 days of the date on which the performance test is conducted.

[PTC No. P-020100, 3/24/03]

3.51 The permittee shall submit a quarterly report to DEQ of all instances when the average hourly temperature was less than 1,500 degrees Fahrenheit in accordance with Permit Condition 3.47.

[PTC No. P-990122, 12/13/99]

3.52 All documents, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, and compliance certifications submitted to DEQ shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents(s) are true, accurate, and complete.

[PTC No. P-990122, 12/13/99; PTC No. P-020100, 3/24/03]

3.53 **40 CFR 60.757 Reporting Requirements**

The permittee subject to the requirements of this subpart is exempted from the requirements of 40 CFR 60.757(b)(1) and (b)(2) **(PC 3.4)**, after the installation of a collection and control system in compliance with 40 CFR 60.752(b)(2) **(PC 3.4)**, during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 **(PC 3.17)** and 40 CFR 60.755 **(PC 3.29)**.

[40 CFR 60.757(b(3))]

3.54 In accordance with 40 CFR 60.757(d) the permittee shall submit a closure report to DEQ within 30 days of waste acceptance cessation. DEQ may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 60.258.60. If a closure report has been submitted to DEQ, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[40 CFR 60.757(d)]

3.55 In accordance with 40 CFR 60.757(e) the permittee shall submit an equipment removal report to DEQ 30 days prior to removal or cessation of operation of the control equipment.

[40 CFR 60.757(e)]

- The equipment removal report shall contain all of the following items:

[40 CFR 60.757(e)(1)]

  - A copy of the closure report submitted in accordance with 40 CFR 60.757(d) **(PC 3.54)** of this section;

[40 CFR 60.757(e)(1)(i)]

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

[40 CFR 60.757(e)(1)(ii)]

  - 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.

[40 CFR 60.757(e)(1)(iii)]

- DEQ may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) **(PC 3.9)**have been met.

[40 CFR 60.757(e)(2)]

3.56 In accordance with 40 CFR 60.757(f) the permittee to demonstrate compliance with 40 CFR 60.752(b)(2) **(PC 3.4)** using an active collection system designed in accordance with 40 CFR 60.752(b)(2)(ii) shall submit to DEQ annual reports of the recorded information in 40 CFR 60.757(f)(1)) through 40 CFR 60.757(f)(6) **(PC 3.56)**. 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 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c) **(PC 3.47)**.

[40 CFR 60.757(f)]

- Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d) **(PC 3.42 and PC 3. 43)**.

[40 CFR 60.757(f)(1)]

- Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of by pass flow as specified .under 40 CFR 60.756.

[40 CFR 60.757(f)(2)]

- Description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating.

[40 CFR 60.757(f)(3)]

- All periods when the collection system was not operating in excess of five days.

[40 CFR 60.757(f)(4)]

- The location of each exceedance of the 500 ppm methane concentration as provided in 40 CFR 60.753(d) **(PC 3.21)**and the concentration recorded at each location for which an exceedance was recorded in the previous month.

[40 CFR 60.757(f)(5)]

- The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.757(a)(3), (b), **(PC 3.53)**and (c)(4) of 40 CFR 60.755**(PC 3.37)**.

[40 CFR 60.757(f)(6)]

3.57 In accordance with 40 CFR 60.757(g) the permittee to demonstrate compliance 40 CFR 60.752(b)(2)(iii) **(PC 3.5)**shall include the following information with the initial performance test report required under 40 CFR60.8:

[40 CFR 60.757(g)]

- 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;

[40 CFR 60.757(g)(1)]

- 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;

[40 CFR 60.757(g)(2)]

- 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;

[40 CFR 60.757(g)(3)]

- 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

[40 CFR 60.757(g)(4)]

- 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

[40 CFR 60.757(g)(5)]

- The provisions for the control of off-site migration.

[40 CFR 60.757(g)(6)]

3.58 **40 CFR 60.759 Specification of Active Collection Systems**

In accordance with 40 CFR 60.759(a) the permittee to demonstrate compliance with 40 CFR 60.752(b)(2)(i) **(PC 3.4)** 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 DEQ as provided in 40 CFR 60.752(b)(2)(i)(C) and (D) **(PC 3.4)**:

[40 CFR 60.759(a)]

3.59 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 expandability, 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.

[40 CFR 60.759(a)(1)]

3.60 The sufficient density of gas collection devices determined in 40 CFR 60.759(a)(1) **(PC 3.59)**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.

[40 CFR 60.759(a)(2)]

3.61 The placement of gas collection devices determined in 40 CFR 60.759(a)(1) **(PC 3.59)**shall control all gas producing areas, except as provided by 40 CFR 60.759(a)(3)(i) **(PC 3.61)** and (a)(3)(ii) **(PC 3.61)**.

[40 CFR 60.759(a)(3)]

- Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 60.758(d) **(PC 3.48)**. 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 DEQ upon request.

[40 CFR 60.759(a)(3)(i)]

- 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 DEQ 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:

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

Where,
Qi = 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
ti = age of the solid waste in the ith section, years
C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume
$3.6x10^{-9}$ = conversion factor

[40 CFR 60.759(a)(3)(ii)]

- 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 40 CFR 60.754(a)(1) **(PC 3.26)** 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 in 40 CFR 60.759(a)(3)(i) **(PC 3.61)**.

[40 CFR 60.759(a)(3)(iii)]

3.62 In accordance with 40 CFR 60.759(b) the permittee to demonstrate compliance with 40 CFR 60.752(b)(2)(i)(A) **(PC 3.4)**shall construct the gas collection devices using the following equipment or procedures:

[40 CFR 60.759(b)]

- 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.

[40 CFR 60.759(b)(1)]

- 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.

[40 CFR 60.759(b)(2)]

- 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.

[40 CFR 60.759(b)(3)]

3.63 In accordance with 40 CFR 60.759(c) the permittee to demonstrate compliance with 40 CFR 60.752(b)(2)(i)(A) **(PC 3.4)**shall convey the landfill gas to a control system in compliance with 40 CFR 60.752(b)(2)(iii) **(PC 3.5)**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:

[40 CFR 60.759(c)]

- 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) **(PC 3.63)**shall be used.

[40 CFR 60.759(c)(1)]

- For new collection systems, the maximum flow rate shall be in accordance with 40 CFR 60.759(c)(2) **(PC 3.63)**.

[40 CFR 60.759(c)(2)]

3.64 **<u>40 CFR 63 Subpart AAAA Requirements - National Emission Standards for Hazardous Air Pollutants : Municipal Solid Waste Landfills</u>**

In accordance with 40 CFR 63.1935(a) the permittee is subject to Subpart AAAA and shall meet the requirements of 40 CFR 60 Subpart WWW. The permittee shall meet the startup, shutdown and malfunction (SSM) requirements of the general provisions of subpart AAA and shall demonstrate compliance with the operating conditions by parameter monitoring results that are in specific ranges.

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.
(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 (m^3) 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.

[40 CFR 63.1935]

3.65 **What is the affected source of this subpart?**

In accordance with 40 CFR 63.1940(a) the permittee (affected source) shall include the entire facility in a contiguous geographic space where household waste is placed in or on land.

[40 CFR 63.1940]

3.66 **When do I have to comply with this subpart?**

In accordance with 40 CFR 63.1945(f) the permittee shall demonstrate compliance as an existing affected source and as an area source by meeting the criteria of 40 CFR 63.1935(a)(3) **(PC 3.64)** and the requirements of 40 CFR 63.1955(b)**(PC 3.68)** and 40 CFR63.1960 through 63.1980 by the date the permittee is required to install a collection and control system by 40 CFR 60.752(b)(2) **(PC 3.4)** of subpart WWW.

[40 CFR 63.1945]

3.67 **When am I no longer required to comply with this subpart?**

In accordance with 40 CFR 63.1950(a)(1) the permittee shall no longer be required to demonstrate compliance with subpart AAAA when the permittee is no longer required to apply controls as specified in 40 CFR.752(b)(2)(v) **(PC 3.9)** of subpart WWW.

[40 CFR 63.1950]

3.68 **What requirements must I meet?**

In accordance with 40 CFR 63.1955(b) **(PC 3.68)** the permittee shall as required by 40 CFR 60.752(b)(2) **(PC 3.4)** of subpart WWW install a collection and control system. The permittee shall comply with the requirements of 40 CFR 63.1960 **(PC 3.69)** through 63.1985**(PC 3.73)** and the general provisions specified in Table 1 of subpart AAAA **(PC 2.21).**

[40 CFR 63.1955]

3.69 **How is compliance determined?**

In accordance with 40 CFR 63.1960 the permittee shall demonstrate compliance as determined for 40 CFR 60 subpart WWW, including the performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. The permittee shall use continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) **(PC 3.43)** of subpart WWW to demonstrate compliance with the operating conditions for control systems. The permittee shall develop a written startup, shutdown, maintenance (SSM) plan according to the provisions in 40 CFR 63.6(e)(3)**(PC 2.21).** A copy of the SSM plan shall be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

[40 CFR 63.1960]

3.70 **What is a deviation?**

A deviation is defined in 40 CFR 63.1990**(PC 3.74).** For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in 40 CFR 63.1965(a) through (c).

A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) **(PC 3.47)** are exceeded.

[40 CFR 63.1965 (a)]

A deviation occurs when one hour or more of the hours during the three-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.

[40 CFR 63.1965 (b)]

A deviation occurs when a SSM plan is not developed, implemented, or maintained on site.

[40 CFR 63.1965 (c)]

3.71 **How do I calculate the 3-hour block average used to determine compliance?**

In accordance with 40 CFR 63.1975 the permittee shall calculate the 3-block averages in the same way as calculated in 40 CFR 60 subpart WWW, except the data collected during the event listed below are not to be included in any average computed under this subpart:

- Monitoring systems breakdowns, repairs, calibration checks, and zero (low level) and high level adjustments
- Startups
- Shutdowns
- Malfunctions

[40 CFR 63.1975]

3.72 **What records and reports must I keep and submit?**

In accordance with 40 CFR 63.1980(a)the permittee shall keep records and reports as specified in 40 CFR 60, subpart WWW, except the permittee must submit the annual report described in 40 CFR 60.757(f) **(PC 3.56)** every 6 months.

[40 CFR 63.1980(a)]

3.73 In accordance with 40 CFR 63.1980(b)the permittee shall keep records and reports as specified in the general provisions of 40 CFR part 60 and part 63 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.

[40 CFR 63.1980(b)]

3.74 **What definitions apply to this subpart?**

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under 40 CFR 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill is no longer closed.

[40 CFR 60.751]

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;
(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

[40 CFR 63.1990]

Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see §257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.

[40 CFR 63.1990]

4. INSIGNIFICANT ACTIVITIES

Activities and emission units identified as insignificant under IDAPA 58.01.01.317.01(b) are listed to qualify for a permit shield.

Table 4.1 INSIGNIFICANT ACTIVITIES

Description	Insignificant Activities IDAPA 58.01.01.317.01(b)(I) Citation
Generators, 10 kW (3), diesel, approx. 18.5-hp each	317.01.b.i.(30)
Wacker pumps (3), each powered by 16-hp gasoline engine	317.01.b.i.(30)
Leachate evaporator (1,800 gal capacity, 350 gal/hr evaporation rate), landfill gas fired	317.01.b.i.(30)

There are no monitoring, recordkeeping, or reporting requirements for insignificant emission units or activities beyond those required in the Facility-Wide Permit Conditions.

5. TIER I OPERATING PERMIT GENERAL PROVISIONS

General Compliance

1. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application.

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

2. It shall not be a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the terms and conditions of this permit.

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

3. Any permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

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

Reopening

4. This permit may be revised, reopened, revoked and reissued, or terminated for cause. Cause for reopening exists under any of the circumstances listed in IDAPA 58.01.01.386. Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable in accordance with IDAPA 58.01.01.360 through 369.

[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)]

5. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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

Property Rights

6. 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

7. The permittee shall furnish all information requested by DEQ, within a reasonable time, that DEQ may request 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)]

8. Upon request, the permittee shall 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

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

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

Changes Requiring Permit Revision or Notice

10. 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 shall 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)]

11. 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

12. Unless specifically identified as a "state-only" provision, all terms and conditions in this permit, including any terms and conditions designed to limit a source's potential to emit, are enforceable: (i) by DEQ in accordance with state law; and (ii) by the United States or any other person in accordance with federal law.

[IDAPA 58.01.01.322.15.j, 5/1/94; 40 CFR 70.6(b)(1) and (2)]

13. Provisions specifically identified as a "state-only" provision are enforceable only in accordance with state law. "State-only" provisions are those that are not required under the federal Clean Air Act or under any of its applicable requirements or those provisions adopted by the state prior to federal approval.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.k, 3/23/98]

Inspection and Entry

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

    a. 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;

    b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

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

    d. 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.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

New Requirements During Permit Term

15. The permittee shall comply with applicable requirements that become effective during the permit term 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

16. 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

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

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

Renewal

18. a. The owner or operator of a Tier I source 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)]

b. 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

19. 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:

a. 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.

b. 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).

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

i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;

ii. 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;

iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and

iv. 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

20. a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.

b. 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.

c. 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.

d. 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

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

a. The compliance certifications for all emissions units shall be submitted annually from July 1 to June 30 or more frequently if specified by the underlying applicable requirement or elsewhere in this permit by DEQ.

b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;

c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;

ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under Subsections 322.06, 322.07, and 322.08;

iii. The status of compliance with the terms and conditions of the Tier I operating permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Subsection 322.11.c.ii. above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

iv. Such information as the Department may require to determine the compliance status of the emissions unit.

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

[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

22. No person shall knowingly 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.

[IDAPA 58.01.01.125, 3/23/98]

No Tampering

23. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Semiannual Monitoring Reports

24. 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. The permittee's semiannual reporting periods shall be from July 1 to December 31 and January 1 to June 30. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.

[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

25. The permittee shall promptly report all deviations from permit requirements including upset conditions, their probable cause, and any corrective actions or preventive measures taken. For excess emissions, the report shall be made in accordance with IDAPA 58.01.01.130-136. For all other deviations, the report shall be made in accordance with IDAPA 58.01.01.322.08.c, unless otherwise specified in this permit.

[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

26. No permit revision shall 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

27. 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)]

Appendix E – Annotated Statement of Basis for Tier I Permit

State of Idaho
Department of Environmental Quality
Air Quality Division

AIR QUALITY PERMIT
STATEMENT OF BASIS

Tier I Operating Permit No. T1-2010.0028 Project 60911

Amended FINAL

Permittee

Kootenai County Farm Landfill

Coeur d'Alene, Idaho

Facility ID No. 055-00044

September 9, 2011

Robert Baldwin

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

Table of Contents

Acronyms, Units and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
gr	grain (1 lb = 7,000 grains)
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
HAP	hazardous air pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
KCFL	Kootenai County Farm Landfill
lb/hr	pounds per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
$\mu g/m^3$	micrograms per cubic meter
MMBtu	million British thermal units
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM	particulate matter
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
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO_2	sulfur dioxide
SO_x	sulfur oxides
TAP	toxic air pollutant

Tier I	Tier I operating permit
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

The amended permit and amended statement of basis are for errors and additional clarification of permit conditions. No permit conditions were changed. A copy of the facility's request and DEQ's response is located in the appendix.

1. INTRODUCTION AND APPLICABILITY

Kootenai County Farm Landfill (KCFL) is a landfill composed of solid waste, and is located at 22089 South Highway 95. The facility is requires a Tier I operating permit as required by IDAPA 58.01.01.859.04, because the facility was an existing landfill with a modification after May 30, 1991. IDAPA 58.01.01.859.04 states "all owners or operators of landfills subject to Section 859 must comply with Federal Operating Permit Requirements (Title V) as specified in Section 300 through 399 of IDAPA 58.01.01 (Rules). KCFL is subject of Section 859 of 40 CFR 60 Subpart WWW because the submitted application requested the Tier I permit to apply the requirements for a facility with a total capacity of 8.72 million tons. KCFL presently has a designed capacity of 2.33 million tons but is expected to expand to 8.72 million tons before closure in 2034. As a major facility, KCFL is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301. The application for a Tier I operating permit must contain a certification from KCFL as to its compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

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 KCFL.

The format of this Statement of Basis follows that of the permit with the exception of the facility's information discussed first followed by the scope, the applicable requirements and permit shield, and finally the general provisions.

KCFL Tier I operating permit is organized into sections. They are as follows:

Section 1 – Tier I Operating Permit Scope

The scope describes this permitting action.

Section 2 – 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 sufficient to assure compliance with each permit condition follows the permit condition.

Section 3– Emissions Unit/Source Name

The emissions unit-specific sections of the permit contain the applicable requirements that specially apply to each regulated emissions unit. 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.

Section 4 – Non-Applicable Requirements and Insignificant Activities

This section lists those requirements that the applicant has requested as 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 5 – General Provisions

The final section of the permit contains standard terms and conditions that apply to all major 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.

2. FACILITY INFORMATION

2.1 Facility Description

began

is

Kootenai County Landfill (KCFL) operation consists of the existing active West Cell and a future constructed East Expansion Cell that ~~is planned to begin~~ accepting municipal solid waste (MSW) in approximately 2012. The West Cell encompasses an area of approximately 29 acres of a 440 acre parcel of land with a design capacity of 2.33 million tons. The East Expansion Cell is designed to expand to the east of the Landfill. The West Cell ~~will be~~ temporarily closed and covered; the East Expansion Cell will be expanded back so that it will eventually be built on top of the West Cell. The entire landfill will encompass an area of approximately 79 acres, will have a total design capacity of 8.72 million tons and is anticipated to be closed in ~~2034.~~ 2040. A gas-to-energy plant, by others, became operational under a separate air permit in February 2012.

2.2 Facility Permitting History

2.2.1 Tier I Operating Permit History – Previous 5-year permit term

This is KCFL's initial Tier I operating permit.

2.2.2 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).

March 24, 2003	P-020100, revised P-940104 to change the annual acceptance rate to a maximum landfill capacity quantity of 2.33 million tons. Permit status (A)
December 13, 1999	P-990122, construction of Flare No. 2. Permit status (A)
April 6, 1994	P-940104, installation of Flare No. 1 and the daily tonnage rate of solid waste to be accepted. Permit status (A)

3. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

3.1 Application Scope

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

KCFL has a designed capacity of 2.33 million tons. KCFL because it is subject to IDAPA 58.01.01.859 and required to obtain a Tier I operating permit and subject to IDAPA 58.01.01301 through 399. KCFL's application requested the facility to be permitted as subject to 40 CFR 60 Subpart WWW and 40 CFR 63 Subpart AAAA, because the total capacity of KCFL by the expected closure in ~~2034~~ 2040 will be approximately 8.72 million tons.

3.2 Application Chronology

February 18, 2010	DEQ received the Tier I application
March 16, 2010	DEQ determined the application to be complete.
May 20.2010	DEQ sent the first draft permit to the facility for comments.
June 3, 2010	KCFL requested an extension of time to respond with comments to the first draft permit. The extension was granted and comments were due July 9, 2010.
July 8, 2010	Comments on the first draft permit were received from the facility.
July 9, 2010	Additional comments on the first draft permit were received and a call from the facility's consultant stated the July 9 comments were to be used in the drafting of the final permit.
July 26, 2010	DEQ received the Federal Regulatory Analysis summation from the facility.
August 24, 2010	DEQ sent the third draft permit and SOB to the facility.
January 14, 2011	DEQ sent final Tier I permit.
August 11, 2011	DEQ received addendum request.
August 26, 2011	DEQ sent response to addendum to facility.
September 6, 2011	DEQ received agreement to response from facility.

4. 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.

4.1 Process No. 1 – KCFL's Existing Cell and East Expansion Cell

Table 4.1 lists the emissions units and control devices associated with existing landfill cell and the East expansion cell.

Table 4.1 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emission Unit ID No.	Emissions Unit Description	Control Device Description (if applicable)	Emissions Discharge Point ID No. or Description
KCFL Existing Cell and East Expansion Cell	KCFL Existing Cell and East Expansion Cell, existing cell encompasses 29 acres with extension encompasses 79 acres, present design capacity 2.33 million tons, total capacity of 8.72 million tons	Flare No. 1	Manufacturer: John Zink Height: 40 feet Diameter: 6.0 feet Flowrate: 825 scfm Operating Temp: 1400 to 1800 °F Heat Release: 24.8 MMBtu/hr Maximum
KCFL Existing Cell and East Expansion Cell	KCFL Existing Cell and East Expansion Cell, existing cell encompasses 29 acres with extension encompasses 79 acres, present design capacity 2.33 million tons, total capacity of 8.72 million tons	Flare No. 2	Manufacturer: Callidus Height: 40 feet Diameter: 7.0 feet Flowrate: 1200 scfm Operating Temp: 1400 to 1800 °F Heat Release: 32.5 MMBtu/hr Maximum

Kootenai County Landfill operation generates potentially odorous landfill gas (LFG). LFG is a by-product produced from decomposition of organic material in the MSW landfill. LFG is typically a mixture of approximately 50 percent methane and 50 percent carbon dioxide, and a minor amount of non-methane organic compounds (NMOC). Within the NMOC are some hazardous air pollutants (HAPs) and toxic air pollutants (TAPs). A trace amount of hydrogen sulfide gas is also found in the LFG. Landfills may continue to generate LFG for 10 to 20 years, or longer, after waste disposal has ceased.

The LFG collection system and control system are required to control the LFG from KCFL in accordance with 40 CFR 60, Subpart WWW. The timeframe to install and operate the LFG collection system and control system to control the LFG produced at KCFL is specified in 40 CFR 60, Subpart WWW. KCFL had previously developed a collection system with approved plans and permitted flares.

The existing KCFL gas collection system and control system consists of two enclosed flares. The landfill gas collection system and the first flare (John Zink, enclosed, 24.8 MMBtu/hr) were permitted in April 6, 1994. The second flare (Callidus, enclosed, 32.5 MMBtu/hr) was permitted on December 13, 1999. The 1994 permit was revised to clarify the design capacity of the landfill to millions of tons.

The extracted LFG is drawn to the flare system by two exhausters (vacuum blowers). Condensate is captured ahead of the blowers and collected in a small storage vessel (knockout drum). The condensate is automatically separated and drained to the leachate ponds via a condensate manhole pump station. The condensate consists primarily of water vapor generated at a rate of approximately 0.004 gallon per cubic foot of LFG. The blowers push the LFG into the flares. Two enclosed flares are operated in parallel. Propane-fired pilots provide for continuous auto-ignition of the LFG. Sensors (thermocouples) in the flare stacks continuously monitor flare operations. In the event the flame goes out, the integrated control system will shut down the flares. The flares are enclosed. The flare flame cannot be seen, but system operators are able to monitor the presence of the flame through sight glasses of the enclosure.

According to the manufacturer, the flares operated at this temperature combined with a flow rate to provide a residence time of no less than 0.7 seconds, will achieve a NMOC destruction efficiency of 98 percent or greater.

or gas-to-energy plant generators

Nearly all the emissions from the Kootenai County Farm Landfill are landfill gases (LFG) generated by the landfill. LFG is either collected by the collection system and combusted in the flares where it is exhausted as stack emissions, or it seeps out of the landfill in the form of fugitive emissions. The EPA Model LandGEM2 was used to estimate annual emissions of LFG. The collection system is required to have a collection efficiency of at least 75 percent, and the flares are required to have a destruction efficiency of at least 98 percent. This means that for every ton of LFG generated by the landfill, the most conservative estimate is that 0.25 ton of LFG will escape in the form of fugitive emissions, and 0.75 ton of LFG will be collected and combusted by the flares.

4.2 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 4.2 lists the IEU's identified in the permit application. Also summarized is the regulatory authority or justification for each IEU.

Table 4.2 INSIGFIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION

Emissions Unit/Activity	Regulatory Authority/Justification
Generators, 10 kW (3), diesel, approx. 18.5-hp each	317.01.b.i.(30)
Wacker pumps (3), each powered by 16-hp gasoline engine	317.01.b.i.(30)
Leachate evaporator (1,800 gal capacity, 350 gal/hr evaporation rate), landfill gas fired	317.01.b.i.(30)

Non-Applicable Requirements for Which a Permit Shield is Requested

This section of the permit lists the regulations for which the facility has requested, and DEQ proposes to grant, a permit shield pursuant to IDAPA 58.01.01.325. The findings on which this shield is based are presented below:

Requirements for Which a Permit Shield Will Be Granted

No permit shield was requested, no permit shield was granted.

Requirements for Which a Permit Shield Will Not Be Granted

No permit shield was requested, no permit shield was granted.

4.3 Emissions Inventory

Table 4.3 summarizes the emissions inventory for this major 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 4.3 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 is provided as Appendix B of this statement of basis.

Table 4.3 EMISSIONS INVENTORY – POTENTIAL TO EMIT (T/yr)

Emissions Unit Description	PM_{10}	NO_X	SO_2	CO	VOC
Flare No. 1 plus evaporator	3.25	8.46	--	9.97	--
Flare No. 2	4.73	12.3	--	14.51	--
TOTAL EMISSIONS	**1.98**	**20.76**		**24.48**	

5. EMISSIONS LIMITS AND MRRR

This section contains the applicable requirements for this major 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;
- KCFL existing cell and East expansion cell;
- Insignificant emissions units;
- 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 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.

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, describe why and how the condition was changed. See instructions on the cover page for Appendix D for other options.

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, the MRRR for the facility-wide permit conditions has been paraphrased. Refer to the permit for the complete requirement.

5.1 Facility-Wide Conditions

Permit Condition 2.1 – 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 2.2 through 2.4)

- 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 a monthly facility-wide inspection of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.
- Records of each fugitive dust inspection and corrective action taken are to be maintained at the permitted facility.

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

Permit Condition 2.5 – 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 Condition 2.6)

- 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 2.7 – 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, 4/2/08T]

MRRR (Permit Condition 2.8)

- Conduct a quarterly facility-wide inspection during daylight hours and under normal operating conditions for the purposes of observing points of visible emissions from all emissions units subject to the visible emissions standards.

- Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition.
    - Each inspection shall be conducted as follows:
        - Initial see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either:
            - Take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions, and conduct another see/no see evaluation within 24 hours. If the visible emissions are not eliminated, the permittee shall comply with b).

OR

- Perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. If the measured opacity is greater than 20% for the time period specified in Section 625, the permittee shall take corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136.

- Records of each visible emission inspection and each opacity test and corrective action taken are to be maintained at the permitted facility.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Permit Condition 2.9 – 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 Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

MRRR

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in Sections 131 through 136.

Permit Condition 2.10 – 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

The permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Pkwy
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

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

MRRR

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

However, if performance testing is required, it is to be conducted in accordance with IDAPA 58.01.01.157, including any and all monitoring, recordkeeping and reporting requirements. Emissions-unit specific MRRR will be listed within the permit condition requiring performance testing permit condition.

Permit Condition 2.11 – 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.

[IDAPA 58.01.01.322.07, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.12 – Reports and Certifications

All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be

submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Pkwy
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10
Air Operating Permits, OAQ-107
1200 Sixth Ave.
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.13 – Fuel Burning Equipment PM Standards

The permittee shall not discharge PM to the atmosphere from any fuel-burning equipment in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.

[IDAPA 58.01.01.676-677, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.14 – Distillate Fuel Oil Sulfur Content Limits

The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]
[IDAPA 58.01.01.729, 5/1/94]

MRRR

The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

[IDAPA 58.01.01.322.06, 5/1/94]

Permit Condition 2.15 – Open Burning

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 4/2/08T]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.16 – Renovation/Demolition

The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.17 – Regulated Substances for Accidental Release Prevention

(a)
An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

(b)
This facility is subject to 40 CFR Part 68 and shall certify compliance with all requirements of 40 CFR Part 68, including the registration and submission of the RMP, as part of the annual compliance certification required by 40 CFR 70.6(c)(5).

[40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 68.215(a)(ii)]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.18 – Recycling and Emissions Reductions

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

[40 CFR 82, Subpart F]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, KCFL 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 2.19 – Documentation for Exemptions

Documentation shall be maintained on site that shall indentify the exemption determined to identify the source and verify that the source qualifies for the identified exemption. The records shall be kept for a period of time not less than five years from the date the exemption determination has been made or for the life of the source for which the exemption has been determined to apply, whichever is greater, or until such time as a permit to construct or an operating permit is issued which covers the operation of the source.

[IDAPA 58.01.01.200]

Permit Condition 2.20 – NSPS 40 CFR Part 60, Subpart A – General Provisions

The General Provisions provide a requirement summary including startup, shutdown and malfunction the facility is required to apply.
[40 CFR 60, Subpart A]

Permit Condition 2.21 – NESHAPS 40 CFR Part 63 Subpart A – General Provisions

The General Provisions provide a requirement summary including startup, shutdown and malfunction the facility is required to apply.

[40 CFR 63, Subpart A]

Permit Condition 2.22 – Incorporation of Federal Requirements by Reference

If any conflict between the requirements of the permit condition and the requirements of the document (40 CFR Part 60, 40 CFR Part 63), the requirements of the document shall govern, including any amendments to that regulation

5.2 Emissions Unit-Specific Emissions Limits and MRRR

Landfill and East Expansion Cell

Permit Condition 3.1
Volatile organic compounds (VOCs) shall be reduced to a maximum concentration of twenty part per million by volume on a dry basis (20 ppmdv) out of the stack outlet as hexane at 3% O_2.

MRRR
No changes were made to the Flare No. 1 emission limit and operation requirements set forth in PTC No. P-020100 issued 3/24/03.

This requirement was not in the PTC No. P-990122 issued12/13/99 for Flare No. 2, but the landfill became subject to IDAPA 58.01.01.859 on April 5, 2000. The landfill became subject to 40CFR 60 subpart WWW and Flare No. 2 became subject to the same emissions limits as Flare No. 1. The same monitoring and recordkeeping required by the PTC and Permit Condition 3.28 of this permit. KCFL is required to operate flares 1 and 2 at no less than 1,500 °F per Conditions 3.13 and 3.14 respectively, and to measure combustion temperatures per Condition 3.43.

Permit Condition 3.2
Fugitive emission shall be reasonable controlled.

MRRR
No changes were made for Flare No. 1 or Flare No. 2 concerning fugitive emissions since the flares are permitted. KCFL is required by PCs 2.1 through 2.4 to perform regular observations, monitoring, and recording of the fugitive emissions from the operations at KCLF.

Permit Condition 3.3
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

MRRR
No changes were made for Flare No. 1 or Flare No. 2 concerning opacity since the permitting the flares. KCFL is required by PC 2.7 and 2.8 to perform regular observation of visible emissions from any source to demonstrate compliance with permit condition 3.3.

Permit Condition 3.4 through 3.10

The permit conditions of 3.4 through 3.10 are included since KCLF became applicable to IDAPA 58.01.01.859 and applicable to 40 CFR 60 subpart WWW.

The permit conditions of 40 CFR 60.752 establishes the designs, procedures and method (collection and control system) to be installed to demonstrate compliance with 40 CFR 60.752. There are several citations of 40 CFR 60.752 that were not reiterated in this permit because KCFL has already performed those requirements. These requirements concerning the construction plans have already been approved by DEQ. However KCFL is still required to meet any applicable requirement of 40 CFR 60.752 in demonstrating compliance with PC 2.22 of the permit.

Supplemental application materials indicate KCFL will have an actual design capacity greater than 2.5 million cubic meters before the expiration of this Tier I operating permit.

MRRR

KCFL has demonstrated compliance by already having the plans provided and approved by DEQ and by the permitting of the two previously installed enclosed combustion flares.

Permit condition 3.5

The permit condition established the collected gas be routed to a control system that complies with PC 3.6 and 3.5.

MRRR

KCFL has a collection system that routes the collected gas to either Flare No. 1 or Flare No. 2. Each flare was permitted and has its own operating conditions. KCFL has provided the plans of the existing collection system and the future collection system as KCFL expands. These plans have been approved by DEQ.

Permit Condition 3.6 and 3.7

Permit Conditions 3.6 and 3.7 establishes the limit of NMOC to be emitted from either flare. A source test is to be performed to demonstrate compliance with the established emissions and operating parameter ranges. Flare No. 2 was not required by PTC P-990122 to have a performance test.

MRRR

The parameter ranges obtained by PC 3.6 and 3.7 shall be used to determine compliance with Permit Conditions 3.4-3.9, 3.10 and 3.43. These permit conditions determine the parameter operating ranges and the monitoring required for compliance. No performance test was performed on Flare No. 2 to demonstrate compliance with the emission limit stated in 3.6

Permit Condition 3.8

PC 3.8 establishes the collection and control device installed shall operate in accordance with the provisions of 40 CFR 60.753 (PC 3.17-24) , 60.755 (PC 3.29-39) and 60.756 (PC 3.42-44).

MRRR

KCFL shall demonstrate compliance with PC 3.8 by complying with the applicable requirements state in the Federal Regulatory Analysis submitted by KCFL and con be found in appendix A. These include but not limited to the operational standards of 40 CFR 60.753 (PC 3.17-24), the compliance provisions of 40 CFR 60.755 (PC 3.29-39) and the monitoring of operation of 40 CFR 60.756 (PC 3.42-44).

Permit Condition 3.9 and 3.10

Permit Condition 3.9 and 3.10 establishes the conditions KCFL is required to perform when in the future KCFL is to cap the collection system, remove the collection system or close the landfill.

MRRR

KCFL shall demonstrate compliance with PC 3.9 and 3.10 by calculation of NMOC to be less the 50 megagrams per year on three successive test dates and once the requirement of 3.9 is met KCFL would no longer be subject to an operating permit under 40 CFR 70.

Permit Conditions 3.11 through 3.16

Permit Conditions 3.11 through 3.16 were incorporated from the two PTCs (P-202100, P-990122) issued prior to KCFL.

PC 3.11 establishes the gauge pressure at the wellhead in the gas collection header in accordance with 40 CFR 60.754 (PC 3.26 of the permit). PC 3.33 requires monthly measurements and corrective actions if the pressure of any wellhead is found to be outside of the acceptable range

PC 3.12 establishes that a uv-scanner on the flare device shall monitor the flares's flame at all times. A UV scanner has been installed, and is operated and maintained per manufacturer's specifications

PC 3.13 establishes the minimum operating temperature of Flare No. 1 to be 1500 °F. Flare 1 combustion temp maintained ≥ 1,500 °F, measured per PC 3.43.

PC 3.14 establishes the hourly average operating temperature of Flare No. 2 to be 1500 °F. Flare 2 combustion temp maintained ≥ 1,500 °F, measured per PC 3.43.

PC 3.15 establishes the gas flow rate not to exceed the maximum design capacity of the enclose gas flare (Flare No. 1). Compliance is demonstrated by monitoring per PCs 3.33, 3.34, and 3.37, through 3.39

PC 3.16 establishes the collection system shall capture and collect landfill gas at a sufficient extraction rates. Compliance is demonstrated by monitoring per PCs 3.33, 3.34, and 3.37, through 3.39.

MRRR (Permit Conditions 3.11 through 3.16)

KCFL shall continue to demonstrate compliance with PC 3.11 through 3.16 as these conditions were established when Flare 1 and Flare 2 were permitted. The conditions were incorporated into the Tier I permit without change.

Permit Condition 3.17

Permit Condition 3.17 establishes KCFL having solid waste in place for 5 years and is subject to the gas is collection from each area, cell, or group of cells in the MSW landfill.

MRRR

KCFL has established a collection and control system and provided plans which have been approved by DEQ.

Permit Condition 3.18

PC 3.18 establishes the collection system to operate with a negative pressure at each wellhead except for these conditions.

MRRR

PC 3.18 KCFL has stated "with the landfill gas industry, nitrogen is calculated based on the monitored gas readings of methane, oxygen, and carbon dioxide. KCFL will strive to maintain nitrogen levels will below 20%. The nature of the landfill results in a few wells with calculated nitrogen wellhead levels to exceed the threshold limit, but opposes no future landfill fire. Also older areas of the existing landfill

have declining methane and flow readings, resulting in higher nitrogen levels, but maintain low oxygen and temperature values." Thus KCFL will be maintaining the oxygen and temperature levels below threshold limits to demonstrate compliance with PC 3.18. Equilibrium pressures may be required to reduce air infiltration (oxygen) in the wells.

While the citation states three scenarios each indicate pressure change while the citation is clear that operational pressure is to be negative. At specific times the pressure can change from negative to positive thus going through an equilibrium pressure stage. Thus equilibrium pressures may be allowed for these transitions but negative pressure is the normal operational requirement.

Permit Condition 3.19

PC 3.19 establishes the landfill gas temperature of less than 55°C (131°F) and oxygen level of less than 5%. Other operating values may be used but must have documentation for any elevated values.

MRRR

KCFL chose to demonstrate compliance with PC3.19 by monitoring the oxygen by an oxygen meter, such as a Landtec GEM 500 and /or 2000, envision meter, or equivalent. KCFL stated these monitoring meters are to have a zero to the full span of 21% by volume.

Permit Condition 3.20

PC 3.20 establishes the test methods, span regulatory limit, number of calibration gases, and allowable sample bias, zero drift, and calibration drift as ± 10%.

MRRR

KCFL has in PC 3.19 demonstrated compliance possibilities, but must maintain equivalents.

Permit Condition 3.21

PC 3.21 establishes the methane concentration at the surface of the landfill at less than 500 ppm above background. PC.3.21 establishes the traversing pattern to use in the surface monitoring design plan.

MRRR

KCFL is required to monitor the surface emission of methane concentrations using the traverse pattern established by PC 3.21.

Permit Condition 3.22

PC 3.22 establishes the requirements for all collected gases to vent to a control system designed and operating incompliance with PC 3.5. But in case of the control system becoming inoperable the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of gas to the atmosphere shall be closed within one hour.

MRRR

KCFL has not disclosed any venting system from the collection and control system that would vent to the atmosphere except the stack from the flares. KCFL would be required to shut down the values leading to the flares.

Permit Condition 3.23

PC 3.23 establishes the requirement to operate the control and treatment system at all times when the collected gas is routed to the system.

MRRR

KCFL is required to have a flare in operation whenever gas is vented to either flare. Operation of the flare is verified per PC 3.12.

Permit Condition 3.24

PC 3.24 establishes if monitoring demonstrates the requirements of PC 3.18, 3.19, 3.20, and 3.21 are not met, corrective action shall be taken by permittee as specified in PC 3.33-3.34. If corrective actions are taken as specified in PC 3.29-3.39, the monitoring exceedance is not a violation of the operation requirements.

MRRR

KCFL is required to demonstrate compliance with PC 3.18, 3.19, 3.20, and 3.21 (instrument readings) . If KCLF can not meet these requirements KCFL can use PC 3.33 and PC 3.34 (monthly pressure gauge reading and monthly oxygen and temperature reading) to demonstrate compliance then KCFL may use PC 3.29 through PC 3.39 (the use of calculations, measurements and tests) to demonstrate compliance.

Permit Condition 3.25

PC 3.25 establishes a testing requirement for ~~Flare No. 1~~ Flares No. 1 and No. 2 incorporated from a PTC P-020100 incorporated in to this Tier I operating permit.

MRRR

KCFL was required to test Flare No. 1 ~~but~~ and Flare No. 2 ~~has not been tested~~ however both enclosed combustion devices (flares) are required to meet the emission limit stated in PC 3.6.

Permit Condition 3.26

PC 3.26 establishes procedures to determine compliance with the emission rate of total NMOC through calculations given the known solid waste acceptance rate. (megagrams per year)

MRRR

KCFL is required to determine the emission rate of NMOC to demonstrate compliance with 40CFR 60.572.

Permit Condition 3.27

PC 3.27 establishes the method to calculate the mass emission rate of NMOC (megagrams per year) after the collection and control system is installed. This method can be used to determine compliance with PC 3.29-3.39.

MRRR

KCFL is required after the installation of a collection and control system to use the calculation of PC 3.27 to demonstration compliance with PC 3.29-3.39 and to demonstrate compliance with PC 3.9 to determine is a system can be removed.

Permit Condition 3.28

PC 3.28 establishes the performance test method(s) required to demonstrate compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level of NMOC.

MRRR

KCFL is required to demonstrate compliance with PC 3.6. KCFL is required to choose from a variety of methods from Appendix A of 40 CFR 60 to obtain required information needed to determine compliance with the control efficiency of 98 weight-percent efficiency.

Permit Condition 3.29

PC 3.29 establishes the methods specified in PC 3.32-3.35 to be used to demonstrate compliance with the requirements in 40 CFR 60.752(b)(2)(ii).

MRRR

KCFL is required by PC 2.22 to demonstrate compliance with all applicable 40 CFR 60 subpart WWW requirements. Many of the sections of 40 CFR 60.572(b)(2)ii were mutually agreed by KCFL and DEQ to be obsolete and were not declared directly within the permit. These obsolete requirements included some requirements from prior PTCs. However, KCFL is still required to meet all Federal regulations that is applicable to the facility. This includes requirements located within 40 CFR 60.572(b)(2)ii. This also includes monitoring to determine if the emission rate of NMOC is greater or less then 50 megagrams per year.

Permit Condition 3.30

PC 3.30 establishes the equation to be used to determine the maximum gas generation flow rate for a known year to year solid waste acceptance rate.

MRRR

KCFL is required to monitor the flow rate to determine compliance with PC 3.15, PC 3.16, and PC 3.27.

Permit Condition 3.31

PC 3.31 establishes an installed collection and control system with actual gas flow rates may be used to project the maximum expected gas generation flow rate, instead of the equation established in PC 3.30. But if the landfill is still accepting waste, using the equation of PC 3.30 or other methods, shall be used to predict the maximum gas generation rate over the intended period of use of the gas control system equipment.

MRRR

KCFL is required to determine the maximum gas generation flow rate to determine compliance with PC 3.15 and PC 3.27.

Permit Condition 3.32

PC 3.32 establishes the determining of sufficient density of gas to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(2), in which the system design is capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

MRRR

KCFL has submitted plans and designs that have been approved by DEQ. KCFL expects the operations to meet all operational and performance standards.

Permit Condition 3.33

PC 3.33 establishes the measuring of gauge pressure in the gas collection header at each individual well on a monthly basis. It establishes if the pressure reading is positive corrective action is to be performed within 5 calendar days. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the initial measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure.

MRRR

KCFL to demonstrate compliance with PC 3.33, KCFL will take the appropriate action if equilibrium or negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the initial measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure.

Permit Condition 3.34

PC 3.34 establishes for the purpose of indentifying whether excess air infiltration in to the land fill is occurring KCFL shall monitor each well monthly for temperature and oxygen in accordance with PC 3.19. If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five 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 day of initial exceedance.

MRRR

KCFL shall demonstrate compliance with PC 3.34 in accordance with PC 3.19.

Permit Condition 3.35

PC 3.35 establishes to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provide in PC 3.58-63, KCFL shall provide information satisfactory to DEQ as specified in 40 CFR 60.752(b)(2)(i)(C) (PC 3.34).

MRRR

KCFL shall demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) with gas probe monitoring.

Permit Condition 3.36

PC .3.36 establishes the procedure to compliance with PC 3.17. KCFL shall place each well or design component as specified in the approved design plan. 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 five years or more.

MRRR

KCFL shall demonstrate compliance with PC 3.36 by following the requirements of PC 3.36.

Permit Condition 3.37

PC 3.37 establishes the monitoring surface concentration of methane methods, the determination of background concentrations methods, the exceedance level methods, and the actions if exceedance persist.

MRRR

KCFL shall demonstrate compliance implementing a program to monitor non-closed areas for cover integrity and implementing daily and/or intermediate cover repairs as necessary on a monthly basis.

Permit Condition 3.38

PC 3.38 establishes the instrument specifications to demonstrate compliance with PC 3.37.

MRRR

KCFL shall meet the instrument specifications of PC 3.38 to demonstrate compliance with PC 3.38.

Permit Condition 3.39

PC 3.39 establishes that 40 CFR 60.755 provisions apply at all time, except during periods of start-up, shutdown, and malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection system and shall not exceed 1 hour for treatment or control devices.

MRRR

KCFL shall demonstrate compliance with all provisions except during the time limits for startup, shutdown, and malfunction as stated within PC 3.39.

Permit Conditions 3.40 and 3.41

PC 3.40 and 3.41 remain unchanged since established in the PTC No. P-020100 issued 3/24/03.

MRRR

KCFL shall have performed these permit conditions upon the construction and installation the collection and control system.

Permit Condition 3.42

PC 3.42 establishes the monitoring of the operation with regard to gauge pressure of the gas at header, oxygen or nitrogen concentration in landfill gas, and temperature, each on a monthly basis and the method to do the monitoring.

MRRR

KCFL has submitted to demonstrate compliance with PC 3.42 will be as stated in the permit with the distinction that oxygen would be the component monitored not nitrogen.

Permit Condition 3.43

PC 43 establishes to demonstrate compliance with PC 3.5 using a enclosed combustor. KCFL shall install a recording device that monitors the temperature of gas continuously and to an accuracy of $\pm$ 1 percent of the temperature being measured expressed in degrees Celsius or $\pm$ 0.5 degrees Celsius, whichever is greater. The flow to the control device shall be recorded at least every 15 minutes.

MRRR

KCFL is required to perform the specifications of PC 3.43 with the clarification the temperature will be the internal temperature of the enclosed flares.

Permit Condition 3.44

PC 3.44 establishes monitoring surface concentrations of methane in accordance with the instrument specifications and procedure of PC 3.38.

MRRR

KCFL shall demonstrate compliance with PC 3.44 by following the instrumentation specification and procedures for surface emission monitoring as stated in PC 3.38.

Permit Condition 3.45

PC 3.45 establishes the onsite records of the design capacity report, solid waste in place, and the year to year waste acceptance rate be kept at least five years, up to date and accessible.

MRRR

KCLF shall demonstrate compliance with PC 3.45 by keeping the records described in PC 3.45 up to date, accessible and for at least five years. If records are off-site the records shall be retrievable within four hours.

Permit Condition 3.46

PC 3.46 establishes the time periods that specific records for control system are to kept. PC 3.46 establishes how KCFL shall demonstrate compliance with 40 CFR 60.752(b)(2)(ii) and 40 CFR 60.752(b)(2)(iii).

MRRR

KCFL shall demonstrate compliance with PC 3.46 by keeping the records in accordance with PC 3.46 and shall demonstrate compliance with 40 CFR 60.752(b)(2)(ii) and 40 CFR 60.752(b)(2)(iii). This includes not only the timeline for records as stated in PC 3.46 but the records of how maximum flow rate was calculated, how the collection system complies with 40 CFR 60.759(a)(1), records of the average combustion temperature as measured every 15 minutes, and the percent reduction of NMOC in compliance with PC 3.5.

Permit Condition 3.47

PC 3.47 establishes the timeline of continuous records of the equipment operating parameters and periods of operation during which the parameter boundaries were established during a most recent performance test are exceeded.

MRRR

KCFL shall record all exceedances for enclosed combustors with a 3-hour period during which the average combustion temperature was more than 28°C (82°F) below the average combustion temperature during the most recent performance test in compliance with PC 3.5. KCFL shall keep records of the flow to the control device in compliance with PC 3.42

Permit Condition 3.48

PC 3.48 establishes records kept for the plot map, location label for each collector, installation date and location of collectors, to demonstrate compliance with PC 3.37 and PC 3.61.

MRRR

KCFL shall keep records plot map of existing and planned collector, installation and location of any newly installed collectors (PC 3.37) and documentation regarding asbestos-containing or non-degradable waste as provided in PC 3.61 and nonproductive area as provided in PC 3.61

Permit Condition 3.49

PC 3.49 establishes record timeline of all collection and control system exceedances of the operational standards in PC 3.4.

MRRR
KCFL shall keep for at least 5 years up-to-date of all collection and control system exceedances of the operational standards in PC 3.4 to demonstrate compliance with PC 3.49.

Permit Conditions 3.50-52

PC 3.50-52 requirements were unchanged since they were established in PTC P-020200 issued 3/24/03 and PTC P-990122 issued 12/13/99.

MRRR
KCFL shall continue to demonstrate compliance with PC 3.50-52 in accordance with PC 3.47.

Permit Condition 3.53

PC 3.53 establishes the exemption from PC 3.4, after the installation of an collection and control system in compliance with PC 3.4, during such time as the collection and control system is in operation and in compliance with PC 3.17 and PC 3.29.

MRRR

KCFL shall demonstrate compliance with PC 3.4 unless KCLF has a specific exemption within PC 3.4 when the collection and control system is in operation and in compliance with PC 3.17 and PC 3.29.

Permit Condition 3.54

PC 3.54 establishes the closure report is to be submitted to DEQ within 30 days of waste acceptance cessation.

MRRR

KCFL shall demonstrate compliance by submit the closure report to DEQ within 30 days of waste acceptance cessation. KCFL shall not accept was accept was without filing a notification or modification as described under 40 CFR 60.7(a)(4) after submitting a closure report.

Permit Condition 3.55

PC 3.55 establishes the timeline for reporting removal of the control equipment.

MRRR

KCFL shall demonstrate compliance by submitting an equipment removal report to DEQ 30 days prior to the removal or cessation of operation of the control equipment. The removal report shall at least contain a closure report, initial performance test report, and copies of three NMOC emission rate reports indicating the NMOC emission rate is below 50 megagrams per year.

Permit Conditions 3.56

PC 3.56 establishes an annual report to be submitted to DEQ.

MRRR

KCFL shall demonstrate compliance with PC 3.56 by having the annual report include the initial performance test report (if applicable) and for enclosed combustion devices any reportable exceedances as defined in PC 3.47.

Permit Condition 3.57

PC 3.57 establishes requirements to demonstrate compliance with PC 3.5.

MRRR

KCFL shall demonstrate compliance by submitting the initial performance test report, diagram of the collection system, data upon which the sufficient density was determined, the presence of asbestos or

nondegradable material, sum of the gas generation flow rates, provisions for increasing gas mover equipment capacity, and provisions for the control of off-site migration.

Permit Condition 3.58

PC 3.58 establishes the active sites at which sufficient density throughout all gas producing areas using the procedures of PC 3.4.

MRRR
KCFL shall demonstrate compliance by siting the active collection well, horizontal collectors, surface collectors or other extraction devices at a sufficient density throughout all gas producing areas using the procedures of PC 3.59-3.61 to determine compliance with PC 3.4. KCFL may have accomplished these determinations in the submittal of the plans of the West and East Cells.

Permit Condition 3.59

PC 3.59 establishes the collection devices that shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. PC 3.59 establishes the issues to be addressed in the design.

MRRR

KCFL has already presented and had been approved by DEQ the plans for the site of the present operations and for the East cell expansion. This requirement remains in the permit because the development is based on possible changes if the surface emissions exceed the allowable limit.

Permit Condition 3.60

PC 3.60 establishes the requirement of the gas collection devices.

MRRR

KCFL shall demonstrate compliance by addressing the landfill gas migration issues and augmentation of the collection system throughout the active and passive system at the landfill parameter.

Permit Condition 3.61

PC 3.61 establishes the placement of the gas collection devices to control all gas producing areas.

MRRR

KCFL shall use PC 3.59 to determine compliance of the placement of the gas control devices to control the gas from all gas producing area.

Permit Condition 3.62

PC 3.62 establishes the equipment or procedure that would determine compliance with PC 3.4.

MRRR

KCFL shall use the equipment or procedures within 40 CFR 60.759(b)(1), 40 CFR 60.759(b)(2), and 40 CFR 60.759(b)(3), to determine compliance with PC 3.62. KCFL has already submitted the plan and specification operations for the West Cell and the East Cell and these have been approved by DEQ.

Permit Condition 3.63

PC 3.63 establishes the gas mover equipment to be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment.

MRRR

KCFL shall demonstrate compliance with PC 3.63 by use of the control system established under PC 3.5 that using flow data to project the maximum flow rate for existing collection systems. If no flow data exists, use the procedure in accordance with PC 3.30. For a new collection system, the maximum flow rate shall be determined in accordance with PC 3.30.

Permit condition 3.64

PC 3.64 establishes KCLF is subject to Subpart AAAA and shall meet the requirements of 40 CFR 60 Subpart WWW.

MRRR

KCFL shall demonstrate compliance with PC 3.64 by performing the applicable requirement of this permit regarding Subpart WWW as determine by the federal regulatory analysis submitted by KCFL in Appendix D.

Permit Condition 3.65

PC 3.65 establishes KCFL as an affected source Subpart AAAA. An affected source shall include the entire facility in a contiguous geographical space where household waste is placed in or on land.

MRRR

KCFL shall demonstrate compliance with PC 3.64, because KCFL has accepted house hold waste since 1993.

Permit Condition 3.66

PC 3.65 establishes when compliance applies. In accordance with 40 CFR 63.1945(f) KCFL shall demonstrate compliance as an existing affected source and as an area source by meeting the criteria of PC 3.64, the requirements of PC 3.68, and requirements of 40 CFR 63.1960 through 63.1980 by the date KCLF is required to install a collection and control system by PC 3.4.

MRRR

KCFL has submitted the criteria that triggered KCLF to be subject to Subpart WWW. KCFL shall meet the requirements stated in PC 3.65 to determine compliance with PC 3.65.

Permit Condition 3.67

PC 3.67 establishes when KCFL shall no longer be required to demonstrate compliance with subpart AAAA.

MRRR

KCFL shall demonstrate compliance with subpart AAAA until KCFL is no longer required to apply controls as stated in PC 3.9.

Permit Condition 3.68

PC 3.68 establishes the requirements the KCFL must meet.

MRRR

KCFL shall meet PC 3.4 for the installation of a collection and control system. KCFL shall comply with the requirements of PC 3.69 through PC 3.73 and the general provisions of specified in the table in PC 3.21.

Permit Condition 3.69

PC 3.69 establishes how compliance is determined.

MRRR

KCFL shall demonstrate compliance as determined for the conditions within the permit, including performance testing, monitoring of the collection system, continuous parameter monitoring and other credible evidence. KCFL shall use continuous parameter monitoring data, collected under PC 3.43 to demonstrate compliance with the operating conditions for control systems. KCFL shall develop a written startup, shutdown, and maintenance (SSM) plan according to the provisions in PC 2.21. A copy of the SSM plan shall be maintained on site.

Permit Condition 3.70

PC 3.70 establishes the definition of deviation for subpart AAAA.

MRRR

KCFL shall for the purpose of landfill monitoring and SSM plan requirements, be subject to the stated deviations definitions within PC 3.70.

Permit Condition 3.71

PC 3.71 establishes how to calculate the 3-hour block average used to determine compliance.

MRRR

KCFL shall calculate the 3-block averages in the same way as calculated in 40 CFR 60 subpart WWW, except the data collected during the event listed are not to be included in any average computed under subpart AAAA.

- Monitoring systems breakdowns, repairs, calibration checks, and zero (low level) and high level adjustments
- Startups
- Shutdowns
- Malfunctions

Permit Condition 3.72

PC 7.72 establishes records and reports that must be kept and submitted.

MRRR

KCFL shall keep records and reports as specified in subpart WWW except KCFL must submit the annual report described in PC 356 every 6 months.

Permit Condition 3.73

PC 3.73 establishes addition reports that must be kept and submitted.

MRRR

KCFL shall keep records and reports specified in the general provisions of PC 2.20 and PC 2.21 of the permit. Applicable records in the general provisions include items such as SSM plans, and SSM plan reports.

Permit Condition 3.74

PC 3.74 establishes addition definitions.

MRRR

KCLF shall use the definition of the terms closed landfill when used in subpart WWW, deviation, and municipal solid waste landfill or MSW landfill when used within subpart AAAA.

5.3 General Provisions

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

General Provision 1 – General Compliance, Duty to Comply

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

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

General Provision 2 – 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 Provision 3 – 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)]

General Provision 4 – 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)]

General Provision 5 – Reopening, Permitting Actions

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If KCFL 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)]

General Provision 6 – 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)]

General Provision 7 – 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)]

General Provision 8 – 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)]

General Provision 9 - Severability

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

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

General Provision 10 – 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)]

General Provision 11 – Changes Requiring Permit Revision or Notice.

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)]

General Provisions 12 and 13 – 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) and (2)]

General Provision 14 – Inspection and Entry

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

a. 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;

b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

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

d. 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.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

General Provision 15 – New Requirements During Permit Term

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)]

General Provision 16 - 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)]

General Provision 17 – 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.

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

General Provision 18 – Renewal

a. KCFL 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)]

b. 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)]

General Provision 19 – 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:

a. 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.

b. 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).

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

   i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;

   ii. 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;

   iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and

iv. 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)]

General Provision 20 – Compliance Schedule and Progress Reports.

a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.

b. 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.

c. 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.

d. 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)]

General Provision 21 – Periodic Compliance Certification

KCFL shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as follows:

a. The compliance certifications for all emissions units shall be submitted annually from July 1 to June 30 or more frequently if specified by the underlying applicable requirement or elsewhere in this permit.

b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;

c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

   i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;

   ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under Subsections 322.06, 322.07, and 322.08;

   iii. The status of compliance with the terms and conditions of the Tier I operating permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Subsection 322.11.c.ii. above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

iv. Such information as the Department may require to determine the compliance status of the emissions unit.

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

[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)]

General Provision 22 – False Statements

KCFL 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.

[IDAPA 58.01.01.125, 3/23/98]

General Provision 23 – No Tampering

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

[IDAPA 58.01.01.126, 3/23/98]

General Provision 24 – Semiannual Monitoring Reports.

In addition to all applicable reporting requirements identified in this permit, KCFL shall submit reports of any required monitoring at least every six months. KCFL's semiannual reporting periods shall be from **July 1** to **December 31** and **January 1** to **June 30**. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.

[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)]

General Provision 25 – 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)]

General Provision 26 – 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)]

General Provision 27 - 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)]

6. REGULATORY REVIEW

6.1 Attainment Designation (40 CFR 81.313)

The facility is located in Kootenai County 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.

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

KCFL does not trigger any pollutant threshold for Title V permitting action. Because it is a landfill and applicable to 58.01.01.860, KCFL must comply with Title V (Tier 1) permit requirements.

6.3 PSD Classification (40 CFR 52.21)

The PSD rules found at 40 CFR 52.21 and IDAPA 58.01.01.205 do not apply to KCFL as the regulated pollutants in this section, after controls, do not equal or exceed the major stationary source threshold of 250 tons per year (40 CFR 52.21(b)(1)(i)(b).

6.4 NSPS Applicability (40 CFR 60)

40 CFR 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.

(b) The following authorities shall be retained by the Administrator and not transferred to the State: §60.754(a)(5).

(c) Activities required by or conducted pursuant to a CERCLA, RCRA, or State remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.

KCFL is subject to 40 CFR 60.750(a) because it is a landfill constructed in 1993. KCFL is subject to IDAPA 58.01.01.859 because KCLF is solid waste landfill constructed after 1991 and is an existing landfill with modifications after May 30, 1991. The KCFL consists of an existing active West Cell, and an East Cell that is planned to begin accepting municipal solid waste (MSW) in 2012. This modification was not made to comply with Subpart Cc, CERCLA, RCRA, or a State remedial action. Before the East Cell Expansion project the Kootenai County Farm Landfill had a design capacity of 2.33 million tons, which is equivalent to 2.09 million megagrams. Planned total capacity of the landfill, including the East Cell Expansion, will be 8.72 million tons (7.93 million megagrams), so KCFL will have to get an air operating permit. NMOC emission rate for 2009 is projected to be 293 Mg per year. Kootenai County Farm Landfill has prepared and submitted a plan for a collection and control system that conforms with 40 CFR 60.759. Kootenai County Farm Landfill may chose to modify that plan in accordance with 40 CFR 60.752(b)(2)(i)(B). The collection and control system can be removed after

production of LFG drops off per stated minimums. At that time Kootenai County Farm Landfill can apply to have the Tier 1 Permit rescinded.

The Federal Regulatory Analysis submitted by KCFL can be found in Appendix D.

6.7 CAM Applicability (40 CFR 64)

The flares at the KCFL are not subject to enhanced monitoring as found at IDAPA 58.01.01.314.09(iv), later modified to the "Compliance Assurance Monitoring," (CAM) Rule at 40 CFR Part 64. As per this regulation, emission limitations or standards proposed after November 15, 1990, pursuant to Clean Air Act section 111 or 112 are exempt from CAM (40 CFR §64.2(b)(1)). All applicable monitoring requirements from Subpart WWW have been included in the permit. Since Subpart WWW was promulgated on March 1996 under the authority of Clean Air Act Section 111 for New Source Performance Standards (NSPS), this standard is exempt from CAM requirements and no additional monitoring has been incorporated into the permit application.

6.8 Acid Rain Permit (40 CFR 72-75)

Source not subject to acid rain requirements

7. PUBLIC COMMENT

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from September 21, 2010 to October 21, 2010. During this time, comments were not submitted in response to DEQ's proposed action.

8. 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 November 22, 2010 via e-mail. On December 17, 2010, EPA Region 10 responded to DEQ via e-mail indicating permit is now eligible for issuance.

Appendix A – AIRS Information

AIRS/AFS Facility-wide Classification Form

Facility Name: Kootenai County Farm Landfill

Facility Location: 3650 N. Ramsey Road

Facility ID: 055-00044 **Date:** 9/9/11

Project/Permit No.: T1-2010.0028 **Completed By:** Robert Baldwin

☒ Check if there are no changes to the facilitywide classification resulting from this action. (compare to form with last permit)

☐ Yes, this facility is an SM80 source.

Identify the facility's area classification as A (attainment), N (nonattainment), or U (unclassified) for the following pollutants:

	SO2	PM10	VOC
Area Classification:	U	U	U

DO NOT LEAVE ANY BLANK

Check one of the following:

☐ **SIP** [0] - Yes, this facility is subject to SIP requirements. (do not use if facility is Title V)

OR

☒ **Title V** [V] - Yes, this facility is subject to Title V requirements. (If yes, do not also use SIP listed above.)

For SIP or TV, identify the classification (A, SM, B, C, or ND) for the pollutants listed below. Leave box blank if pollutant is not applicable to facility.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	B	B	B	B	B	B	B

☐ **PSD** [6] - Yes, this facility has a PSD permit.

If yes, identify the pollutant(s) listed below that apply to PSD. Leave box blank if pollutant does not apply to PSD.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NSR - NAA** [7] - Yes, this facility is subject to NSR nonattainment area (IDAPA 58.01.01.204) requirements.

Note: As of 9/12/08, Idaho has no facility in this category.

If yes, identify the pollutant(s) listed below that apply to NSR-NAA. Leave box blank if pollutant does not apply to NSR - NAA.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NESHAP** [8] - Yes, this facility is subject to NESHAP (Part 61) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable?

☒ **NSPS** [9] - Yes, this facility is subject to NSPS (Part 60) requirements.

If yes, what CFR Subpart(s) is applicable? WWW

If yes, identify the pollutant(s) regulated by the subpart(s) listed above. Leave box blank if pollutant does not apply to the NSPS.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☒	☐

☒ **MACT** [M] - Yes, this facility is subject to MACT (Part 63) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable? AAAA

Appendix B – Emissions Inventory

Facility-Wide Emission Rates for Criteria Pollutants – Point Sources

		PM_{10}		SO_2		NO_x		CO		VOC	
Point Source	**Stack ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Flare 1 with evaporator	Flare 1	0.74	3.25			1.93	8.46	2.28	9.97		
Flare 2	Flare 2	1.08	4.73			2.81	12.30	3.31	14.51	0.05	0.20
Generators 10 kw (3)		0.04	0.18	0.04	0.17	0.57	2.51	0.12	0.54	0.11	0.46
Wacker pumps (3) powered by 18-hp gasoline engines		0.01	0.05	0.01	0.04	0.18	0.77	0.11	0.48		
Leachate Evaporator		0.02	0.07			0.24	1.05	0.04	0.17		
Total		1.89	8.28	0.05	0.21	5.73	25.09	5.86	25.67	0.16	0.67

Facility-Wide Emission Rates for Criteria Pollutants – Point Sources

		PM_{10}		SO_2		NO_x		CO		VOC	
Fugitive Source	**Fugitive ID**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
Landfill grading		0.34	1.48	--	--	--	--	--	--	--	--
Landfill dozing		0.66	2.89	--	--	--	--	--	--	--	--
Total		1.00	4.37	--	--	--	--	--	--	--	--

Appendix C – Facility Comments for Draft Permit

No comments were received from the facility concerning the draft permit.

Appendix D – Facility Comments for Federal Regulatory Analysis

Kootenai County Farm Landfill – Tier 1 Permit

Regulatory Analysis for Statement of Basis

Note: Applicable portions of this regulation are shown in black font. Inapplicable portions of the regulation are shown in gray font.

Explanatory text is shown in italicized, colored font.

Subpart WWW—Standards of Performance for Municipal Solid Waste Landfills

Source: 61 FR 9919, Mar. 12, 1996, unless otherwise noted.

§ 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.
(b) The following authorities shall be retained by the Administrator and not transferred to the State: §60.754(a)(5).
(c) Activities required by or conducted pursuant to a CERCLA, RCRA, or State remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.
[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998]

Subpart WWW applies to the Kootenai County Farm Landfill) because modification was commenced after May 30, 1991. The Kootenai County Farm Landfill consists of an existing, active West Cell, and a future East Cell that is planned to begin accepting municipal solid waste (MSW) in 2012. Construction of the new East Cell has already begun. This modification was not made to comply with Subpart Cc, CERCLA, RCRA, or a State remedial action. Before the East Cell Expansion project the Kootenai County Farm Landfill had a design capacity of 2.33 million tons, which is equivalent to 2.09 million megagrams. Planned total capacity of the landfill, including the East Cell Expansion, will be 7.93 million megagrams, so KCFL will have to get an air operating permit. NMOC emission rate for 2009 is projected to be 293 Mg per year. Kootenai County Farm Landfill has prepared and submitted a plan for a collection and control system that conforms with §60.759. Kootenai County Farm Landfill may chose to modify that plan in accordance with §60.752(b)(2)(i)(B). The collection and control system can be removed after production of LFG drops off per stated minimums. At that time Kootenai County Farm Landfill can apply to have the Tier 1 Permit rescinded.

§ 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.
Active collection system means a gas collection system that uses gas mover equipment.
Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.
Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under §60.7(a)(4). Once a

notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.
Closure means that point in time when a landfill becomes a closed landfill.
Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.
Controlled landfill means any landfill at which collection and control systems are required under this subpart as a result of the non-methane organic compounds emission rate. The landfill is considered controlled at the time a collection and control system design plan is submitted in compliance with §60.752(b)(2)(i).
Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site specific density, which must be recalculated annually.
Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.
Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.
Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.
Flare means an open combustor without enclosure or shroud.
Gas mover equipment means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.
Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).
Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.
Interior well means any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well.
Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under §257.2 of this title.
Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.
Modification means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.
Municipal solid waste landfill or *MSW landfill* means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (§257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.
Municipal solid waste landfill emissions or *MSW landfill emissions* means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means non-methane organic compounds, as measured according to the provisions of §60.754.
Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.
Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.
Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.
Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).
Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.
Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.
[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998; 64 FR 9262, Feb. 24, 1999]

All of the definitions in Subpart WWW apply to Kootenai County Farm Landfill.

§ 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.
(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.

§60.752(a) does not apply to Kootenai County Farm Landfill because design capacity is greater than both 2.5 million megagrams and 2.5 million cubic meters.

(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.

Portions of §60.752(b) apply to Kootenai County Farm Landfill because design capacity is greater than both 2.5 million megagrams and 2.5 million cubic meters. This is the paragraph that requires Kootenai County Farm Landfill to apply for a Tier 1 Permit.

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

§60.752(b)(1) does not apply to Kootenai County Farm Landfill because NMOC emission rate is greater than 50 megagrams per year.

(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.

In reviewing successive drafts of the Tier 1 Permit, it appears that the Kootenai County Farm Landfill may request alternatives referred to in §60.752(b)(2)(i)(B). This should be done through a revision to the collection and control system design plan. This section should be left in if DEQ plans to allow any alternatives to operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions.

(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.

§60.752(b)(2)(i) applies to Kootenai County Farm Landfill, but the required plan has already been submitted and approved by Idaho Department of Environmental Quality (DEQ).

(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.

Kootenai County Farm Landfill is installing an active collection system in accordance with §60.752(b)(2)(ii)(A) and the control system design plan.

(B) A passive collection system shall:
(*1*) Comply with the provisions specified in paragraphs (b)(2)(ii)(A)(*1*), (*2*), and (*3*) 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.

§60.752(b)(2)(ii)(B) does not apply to Kootenai County Farm Landfill because a passive collection system is not in the control system design plan.

(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).

§60.752(b)(2)(iii)(B) applies. The enclosed combustion device used for control is actually two control devices, Flare No. 1 and Flare No. 2. These flares are each designed to achieve the required level of control.

(*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;

§60.752(b)(2)(iii)(B)(2) applies.

(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.

§60.752(b)(2)(iii)(C) does not apply because there is no plan to treat landfill gas for sale or use.

(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.

§60.752(b)(2)(iv) applies.

(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.

§60.752(b)(2)(v) will apply sometime in the future, after the landfill have been closed.

(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.

§60.752(c) does not apply because the Kootenai County Farm Landfill has a design capacity in excess of the levels discussed.

(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.

§60.752(d)(2) will apply sometime in the future, after the landfill have been closed.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 71 FR 55127, Sept. 21, 2006]

§ 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;

§60.753(a)(2) is not in the Tier 1 Permit because Kootenai County Farm Landfill has no cells that are 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;

§60.753(b) applies to Kootenai County Farm Landfill.

(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.

§60.753(c) applies to Kootenai County Farm Landfill. Note that the landfill operator is required to maintain either nitrogen or oxygen within the acceptable range, and to verify operation with testing by Method 3A or Method 3C. Kootenai County Farm Landfill chooses to measure oxygen, using a handheld standard oxygen meter, such as a Landtec GEM 500, Landtec GEM 2000, Envision meter, or equivalent, per Method 3A. Note that the §60.753(c)(2)(i) requires that the oxygen meter be calibrated with span gas that contains between 10% and 25% oxygen. Ambient air contains 20.95% oxygen, so ambient air can be used to calibrate the oxygen monitor.

(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.

§§60.753(d) through (g) apply to Kootenai County Farm Landfill.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 61778, Oct. 17, 2000]

§ 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_O, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.
(i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

where,
M_{NMOC}=Total NMOC emission rate from the landfill, 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 solid waste in the i^{th}section, megagrams
t_i=age of the i^{th}section, years
C_{NMOC}=concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}=conversion factor
The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for $M_i$if documentation of the nature and amount of such wastes is maintained.

§60.754(a)(1)(i) applies because the actual year-to-year MSW acceptance rate is known. The specified standard default values will be used for k, L_o, and C_{NMOC}.

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.
$M_{NMOC} = 2L_oR(e^{-kc} - e^{-kt})C_{NMOC}(3.6 \times 10^{-9})$
Where:
M_{NMOC} = mass emission rate of NMOC, megagrams 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 landfill, years
C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
c = time since closure, years; for active landfill c = 0 and $e^{-kc} = 1$
3.6×10^{-9} = conversion factor
The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes

is maintained.

§60.754(a)(1)(ii) does not apply because the actual year-to-year MSW acceptance rate is known.

(2) *Tier 1.* The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.
(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in §60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under §60.752(b)(1).
(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with §60.752(b)(2) or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3) of this section.
(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_{SMOC} 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_{SMOC} as carbon to C_{SMOC} 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 paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.
(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 paragraph (a)(4) of this section.
(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.
(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 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 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 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.

Kootenai County Farm Landfill is using an active landfill gas collection and control system in compliance with §60.752(b)(2), so the Tier 2 and Tier 3 approaches as described in §§60.754(a)(3) and (4) are not applicable.

(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 paragraphs (a)(3) and (a)(1) of this section if the method has been approved by the Administrator.

§50.754(a)(5) is not applicable because Kootenai County Farm Landfill intends to use the standard method to determine NMOC concentration and is not seeking to use an alternative value for the methane generation rate constant k.

(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.

§60.754(b) applies, except for §60.754(b)(3), because Kootenai County Farm Landfill is not seeking to use an alternative method to determine landfill gas flowrate and NMOC concentration.

(c) When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter using AP–42 or other approved measurement procedures.

The Kootenai County Farm Landfill is not a "major source" as defined in the PSD rule (40 CFR 52.21) so PSD, and §60.754(c) does not apply.

(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 = $(NMOC_{in} - NMOC_{out})/(NMOC_{in})$

where,

$NMOC_{in}$= mass of NMOC entering control device

$NMOC_{out}$= mass of NMOC exiting control device

§60.754(d) applies.

(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).

The performance test called for in §60.754(e) is the test required in §60.752(b)(2(iii)(A), which is a test required on open flares. Kootenai County Farm Landfill uses enclosed flares, not open flares, so §60.754(e) does not apply.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 65 FR 61778, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.755 Compliance provisions.

(a) Except as provided in §60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section 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 L_o 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)

§60.755(a)(1)(i) does not apply because all year-to-year solid waste acceptance rates are known.

(ii) For 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 i^{th}section, megagrams
t_i=age of the i^{th}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 paragraphs (a)(1) (i) and (ii) of this section. 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 paragraphs (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 paragraph (a)(3) of this section 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.

All of §60.755(a) applies except for §60.755(a)(1)(i).

(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.

§60.755(b) applies, except for §60.755(b)(2) because there are none of the landfill is closed or at final grade.

(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 paragraph (d) of this section.

(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 paragraphs (c)(4) (i) through (v) of this section 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 paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in paragraph (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 paragraph (c)(4) (ii) or (iii) of this section 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 paragraph (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.

§60.755(c) applies. Kootenai County Farm Landfill intends to use a Landtec GEM 500 or GEM 2000 or a Thermal Environmental TVA 1000B or equivalent instrument that meets the specifications of §60.755(d).

(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.
(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.

§60.755(d) applies.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998]

§ 60.756 Monitoring of operations.

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

Note: This paragraph is saying that §60.756 is to be followed to the letter unless alternatives are spelled out in the collection and control system design plan.

(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).
(b) Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.
(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.
(2) A device that records flow to or bypass of the control device. 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.

§60.756(a) and (b) provides measuring options. Kootenai County Farm Landfill will measure oxygen (not nitrogen) and will measure the flowrate to the control device every 15 minutes. Kootenai County Farm Landfill will not use a boiler or process heater so temperature monitoring is required.

(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.

§60.756(c) does not apply because Kootenai County Farm Landfill will not control emissions with open flares.

(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.

(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.

Kootenai County Farm Landfill in not seeking to install an alternative control system so §60.756(e) does not apply.

(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.

§60.756(f) applies.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 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.
(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).

§60.758(a) is an obsolete requirement because Kootenai County Farm Landfill has submitted an initial design capacity report, and the design capacity of the landfill is already above 2.5 million megagrams and 2.5 million cubic meters.

(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.

According to §60.758(b)(3), Kootenai County Farm Landfill is exempt from §§60.758(b)(1) and (2) because the collection and control system is being operated in compliance with §§60.753 and 60.755.

(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)(1), 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)(1) 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.

§60.758(c) does not apply because Kootenai County Farm Landfill has already submitted the collection and control system design plan, and is not planning to use Tier 2 NMOC sampling and analysis or a site-specific methane generation rate constant.

(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).
(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.
(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.
(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.

§§60.757(d) through (g) apply.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 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.
(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) The following constitute exceedances that shall be recorded and reported under §60.757(f):
(i) All 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined.
(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.
(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.

All of §§60.758 (a) through (e) apply except for references to boilers, process heaters, or open flares used for control, because Kootenai County Farm Landfill will use enclosed flares for control. §60.758(f) does not apply because Kootenai County Farm Landfill has no plans to convert design capacity from volume to mass or vice-versa.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.759 Specifications for active collection systems.

(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 paragraph (a)(1) of this section 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 paragraph (a)(1) of this section shall control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(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:

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

where,

Q_i = NMOC emission rate from the i^{th} 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 i^{th} section, megagram

t_i = age of the solid waste in the i^{th} 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 in paragraph (a)(3)(i) of this section.

(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.
(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 paragraph (c)(2) of this section shall be used.
(2) For new collection systems, the maximum flow rate shall be in accordance with §60.755(a)(1).

All of §60.759 applies.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32753, June 16, 1998; 64 FR 9262, Feb. 24, 1999; 65 FR 18909, Apr. 10, 2000]

Kootenai County Farm Landfill – Tier 1 Permit

Regulatory Analysis for Statement of Basis

Note: Applicable portions of this regulation are shown in black font. Inapplicable portions of the regulation are shown in gray font.

Explanatory text is shown in italicized, colored font.

Subpart AAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Source: 68 FR 2238, Jan. 16, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.1930 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills. This subpart requires all landfills described in §63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires each landfill to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

§63.1930 is not included in the Tier 1 Permit because it is explanatory.

§ 63.1935 Am I subject to this subpart?

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

(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 (m^3) 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.

(b) 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 that includes a bioreactor, as defined in §63.1990, and that meets any one of the criteria in paragraphs (b)(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 Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003.

§63.1935(a) applies because Kootenai County Farm Landfill has accepted MSW since November 8, 1987, has additional capacity for waste deposition, and is an area source that has a design capacity

equal to or greater than 2.5 million Mg and has uncontrolled emissions equal to or greater than 50 Mg/yr NMOC as calculated according to 40 CFR 60.754(a) . §63.1935(b) does not apply because Kootenai County Farm Landfill does not have a bioreactor.

§ 63.1940 What is the affected source of this subpart?

(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.

§63.1940 applies to the entire Kootenai County Farm Landfill. At this late date Subpart AAAA requirements are the same for new or existing affected sources.

§ 63.1945 When do I have to comply with this subpart?

(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.

§63.1945(f) is the only part that applies to Kootenai County Farm Landfill because it is an area source.

§ 63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?

You must comply with this subpart by the dates specified in §63.1945(a) or (b) of this subpart. If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003 and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m3 , then you must install and operate a collection and control system that meets the criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan according to the schedule specified in paragraph (a), (b), or (c) of this section.

(a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.
(b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006 or by the date your bioreactor is required to install a gas collection and control system under 40 CFR part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan or tribal plan that applies to your landfill, whichever is earlier.
(c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section.
(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.
(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

§63.1947 does not apply because Kootenai County Farm Landfill does not have a bioreactor.

§ 63.1950 When am I no longer required to comply with this subpart?

You are no longer required to comply with the requirements of this subpart when you 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 your landfill.

§63.1950 applies. Extraneous words have been grayed out and are not in the Tier 1 Permit.

§ 63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?

If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraphs (a) or (b).
(a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of part 60, subpart WWW.
(b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, subpart WWW, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in 40 CFR 60.757(d) of subpart WWW.
(c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR part 60, subpart WWW or the Federal plan, whichever applies to your bioreactor.

§63.1952 does not apply because Kootenai County Farm Landfill does not have a bioreactor.

Standards

§ 63.1955 What requirements must I meet?

(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.

§63.1955(b) applies, but it has been trimmed down to say that because §60.752(b)(2) applies, Kootenai County Farm Landfill shall comply with the requirements in §§63.1960 through 63.1985 and with the general provisions of Subpart A of 40 CFR 63 that are specified in table 1 of subpart AAAA.

(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.

§63.1955(c) will apply if Kootenai County Farm Landfill requests alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, per the procedures in 40 CFR 60.752(b)(2).

(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).

§63.1955(d) doesn't apply because Kootenai County Farm Landfill does not have a bioreactor.

General and Continuing Compliance Requirements

§ 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.

§63.1960 applies. This section requires compliance with Subpart WWW, and that Kootenai County Farm Landfill must develop and startup, shutdown and malfunction plan per requirements in §63.6(e)(3). The County has an existing gas collection operations and maintenance plan that will be updated in accordance with the Tier 1 conditions.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 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.

§63.1965 applies.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 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.

§63.1975 applies.

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.
(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.
(c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(a)(2) of this subpart.
(d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date specified in §63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.
(e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in §63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance tests results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(c) of this subpart.
(f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semiannual compliance report for the bioreactor according to paragraphs (f)(1) through (3) of this section so that the reports may be submitted on the same schedule.
(1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the

initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.
(2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.
(3) After the delayed semiannual report; all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.
(g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§63.1947, 63.1955(e) and 63.1980(e) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.
(h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under §63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

§§63.1980(a) and (b) apply. §§63.1980(c) through (h) do not apply because Kootenai County Farm Landfill does not have a bioreactor.

Other Requirements and Information

§ 63.1985 Who enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.
(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.
(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in §63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

§63.1985 does not contain emission standards, operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions; therefore it does not go in the Tier 1 Permit.

§ 63.1990 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, and WWW; 40 CFR part 62, subpart GGG; and subpart A of this part, and this section that follows:
Bioreactor means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.
Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;
(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
(3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.
Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.
EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in the Federal Register announcing EPA's approval.
Federal plan means the EPA plan to implement 40 CFR part 60, subpart Cc for existing MSW landfills located in States and Indian country where State plans or tribal plans are not currently in effect. On the effective date of an EPA approved State or tribal plan, the Federal plan no longer applies. The Federal plan is found at 40 CFR part 62, subpart GGG.
Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see §257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.
Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR part 60, subpart Cc.
Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.
As stated in §§63.1955 and 63.1980, you must meet each requirement in the following table that applies to you.

The pertinent definitions from §63.1990 are in the Tier 1 Permit.

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

Part 63 Citation	Description	Explanation
		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	

The sections from Subpart A that are listed in the table above apply to Kootenai County Farm Landfill.

FACILITY REQUEST AND DEQ RESPONSE

Request from Kootenai County Farm Landfill and DEQ Response.

1. FORMATTING

   There are formatting, (i.e., permit condition numbers) from Permit Condition 3.22 to 3.76. As a result, the section numbers between the permit and the Statement of Basis do not correspond, and the PC's referenced within the Permit Condition are out of sequence. See PM 3.22 on page 18 and Pm 3.54 on page 28 for formatting issues.

   RESPONSE

   DEQ agrees there is a permit issue indicating that a page insert was used in the middle of PC 3.22 and PC 3.54. In combination with the auto numbering that generated a new permit condition number for half a paragraph.

   The formatting will be corrected so the permit and the statement of basis will be in sequence.

2. Permit Condition 3.15

   Replace Permit Condition with the following:
   The landfill gas flowrate shall not exceed the maximum design capacity of the enclosed gas flares (Flare No. 1 and 2.)

   RESPONSE

   The citation for this permit condition references the PTC issued on April 6, 1994 for the installation of Flare No. 1 only.
   The PTC issued on December 13, 1999 for the installation of Flare No. 2 does not have this permit condition regarding Flare No. 2.
   A Tier 1 operating permit cannot generate a new permit condition for a particular source (in this case Flare No. 2).
   This is why the permit condition was not directed to Flare No. 2.

3. Permit Condition 3.4

   Under the second bullet, wrong reference, change to 40 CFR 60.575.

   RESPONSE

   In reviewing 40 CFR Part 60, DEQ was unable to find 40 CFR 60.575. The Permit Condition 3.4 has a citation of **40.CFR 60.752(b)(2).** The second bullet states (the collection and control system design plan shall conform to the specifications for active collection systems in 40 CFR 60.759 **(PC 58-63)**) is directly cited from **40 CFR 60.752(b)(2)(i)(C).**

   Unless the citation of 40 CFR 60.575 is a miss print, it is not clear to DEQ what is meant.

STATEMENT OF BASIS

1. 4.1 Process No. 1 – KCFL's Existing Cell and East Expansion Cell

   Section 4.1, page 8 last sentence of the last paragragh. The emissions and destruction numbers do not appear right based upon the percentages listed in the previous sentence.

   RESPONSE

   The entire statement (Nearly all the emissions from the Kootenai County Farm Landfill are landfill gases (LFG) generated by the landfill. LFG is either collected by the collection system and combusted in the flares where it is exhausted as stack emissions, or it seeps out of the landfill in the form of fugitive emissions. The EPA Model LandGEM2 was used to estimate annual emissions of LFG. The collection system is required to have a collection efficiency of at least 75 percent, and the flares are required to have a destruction efficiency of at least 98 percent. This means that for every ton of LFG generated by the landfill, the most conservative estimate is that 0.365 ton of will escape in the form of fugitive emissions, and 0.735 ton will be collected and combusted by the flares) is from the KCFL's application received by DEQ on February 18, 2010 page 9 of 60.

   KCFL is correct if the conditions are correct, it would be assumed for every one ton of LFG produced 0.25 ton of LFG will escape as fugitive emissions and 0.75 ton of LFG will be collected and combusted by the flares.

   DEQ will replace the last sentence with the sentence above.

2. Duplicate Pages

   There are duplicate pages of 8 and 9.

   RESPONSE

   KCFL is correct and DEQ will eliminate this duplication.

3. Permit Condition 3.18 MRRR

   Replace the last sentence of Permit Condition 3.18 MRRR with the following:

   Equilibrium pressures <u>are allowed or</u> may be required to reduce air infiltration (oxygen) in the wells.

   RESPONSE
   Permit Condition 3.18 is stating conditions that could occur and would allow the well heads to operate at pressure scenarios other than a negative pressure scenarios:

   These include for a fire or increase in temperature (possibility of positive pressures be recorded).
   Use of geomembrane or synthetic cover: owner or operator shall develop acceptable pressure limits in the design plan
   For decommissioned well. May experience a static positive pressure after shut down.

These three scenarios each indicate a pressure change while the citation is clear the operational pressure is to be negative. At specific times the pressure can change from negative to positive thus going through an equilibrium pressure stage. Thus equilibrium pressures may be allowed for these transitions but negative pressure is the normal operational requirement.

4. Permit Condition 3.19 MRRR

   Replace the first sentence of Permit Condition 3.19 with the following to remove "not".

   PC 3.19 establishes the landfill gas temperature of less than 55^0 C (131^0F) and oxygen level of less than 5%. Other operating values may be used but must have documentation for any elevated values.

   RESPONSE

   DEQ will make the correction.

5. Permit Condition 3.25 MRRR

   Replace Permit Condition 3.25 with the following:

   PC 3.25 establishes a testing requirement for Flare No. 2 incorporated from a PTC 020100 incorporated into this Tier I operating permit.

   RESPONSE

   DEQ disagrees with the 2, the Flare referred to in PTC 020100 was Flare No. 1 as stated in correspondence from KCFL written on January 2, 2002 asking to have the permit written on April 4, 1994 amended to address the capacity of the landfill. The No. 1 will be inserted to correct this omission in flare identification.

6. Appendix A- AIRS Information
   The AIRS/AFS Facility-Wide Classification Form states the wrong address, facility id, project/permit no., and date.

   RESPONSE

   DEQ agrees the above mentioned data is erroneous and will be corrected.

Appendix F – CD with all files in electronic format