Statement of Basis

Permit to Construct P-2011.0054
Project No. 60771

Milner Butte Landfill
Burley, Idaho

Facility ID No. 031-00046

Final

CZ

April 10, 2012
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Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
CAA	Clean Air Act
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
lb/MMBtu	pounds per million British thermal unit
lb/qtr	pound per quarter
m^3/Mg	cubic meters per megagram
MACT	Maximum Achievable Control Technology
MBL	Milner Butte Landfill
Mg/yr	megagrams per year
NAAQS	National Ambient Air Quality Standard
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
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmv	parts per million by volume
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
SCL	significant contribution limits
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO_2	sulfur dioxide
T/yr	tons per consecutive 12-calendar month period
TAP	toxic air pollutants
U.S.C.	United States Code
UTM	Universal Transverse Mercator
VOC	volatile organic compounds

FACILITY INFORMATION

Description

The Milner Butte Landfill (MBL), owned and operated by Southern Idaho Regional Solid Waste District (SISW), is located in Burley, Idaho. The MBL is located in Western Cassia approximately 13 miles west of Burley, Idaho, and 25 miles east of Twin Falls, Idaho. The site lies near the East slope of Milner Butte and occupies 640 acres. The site began accepting waste in 1994 and currently consists of four existing contiguous solid waste disposal units (cells) occupying approximately 58 acres. The landfill has a current overall permitted capacity of 140 acres and accepts mixed municipal solid waste from seven counties in southern Idaho.

Based upon an estimated annual increase of 1.5 percent in waste acceptance rates for the landfill for year 2011 and onward, and the total maximum permitted waste capacity of the landfill (19,400,000 cubic yards), it is estimated that the final maximum permitted capacity will be reached by 2060.

The existing Gas Collection and Control System (GCCS) was constructed during 2009 and is currently being evaluated for system performance and well coverage. To increase coverage, five (5) vertical extraction wells were installed in May 2010 and connected to the system on June 5, 2010. The GCCS consists of a header piping network, vertical gas extraction wells, horizontal gas collectors, condensate collection, connections to the existing Leachate Collection and Recovery System (LCRS), and a blower/flare station.

The blower/flare station is equipped with two blowers and a single enclosed flare. A second blower is used in the event of a breakdown or subsequent maintenance to the primary blower. The blowers are manufactured by Houston Service Industries (HSI) and are rated at 30 horsepower (HP) each. The flare was manufactured by Perennial Energy and has a maximum rating of 1,500 standard cubic feet per minute (scfm) at 50 % methane. The flare is equipped with:

- Continuous temperature and flow recorder
- Flow meter
- UV flame scanner to monitor for flame failure
- Automated shut-off (isolation valve) to close off the gas supply to the flare and avoid venting to atmosphere
- Flame arrestor

Permitting History

This is the initial permit for the facility.

Application Scope

This permit is the initial PTC for this facility.

The applicant has proposed to install and operate a flare to treat emissions from the landfill.

Application Chronology

January 7, 2009	DEQ sent a letter to the facility, which included notification that permits were required.
January 14, 2011	DEQ received an application
February 4, 2011	DEQ received an application fee.
February 9, 2012	DEQ received the permit processing fee.
March 4, 2011	DEQ determined that the application was incomplete.

May 10, 2011	DEQ received supplemental information from the applicant.
October 14, 2011	DEQ determined that the application was complete.
December 7, 2011	DEQ made available the draft permit and statement of basis for peer and regional office review.
December 13, 2011	DEQ made available the draft permit and statement of basis for applicant review.
March 9-April 9, 2012	DEQ provided a public comment period on the proposed action.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

Source Description	Control Equipment Description
Landfill Max. Capacity: 19,400,000 cubic yards Date of Construction: 1993	Flare Manufacturer: Perennial Energy, Inc. Model No.: FL114-32-E

Emissions Inventories

The emissions were estimated using LandGEM, AP-42, manufacturer's specifications for the flare, and from a publication titled, "Waste Industry Air Coalition Comparison of Recent Landfill Gas Analyses with Historic AP-42 Values."

From the application: "*The landfill characteristics entered into LandGEM include the opening and closing year of the landfill, the design capacity of the landfill and an option for the model to calculate the closure year. The MBL opened and started receiving waste in 1994. The closure year was input as 2073, providing an 80-year life of the landfill, which is the limit the LandGEM model can accept for waste input. No design capacity was entered, and it was requested that the model not calculate the closure year for the landfill. This was done to project the landfill emissions out to the model year limit.*

The model parameters required for input into LandGEM include the methane generation rate or decay rate (k), the potential methane generation capacity (L_o), the non-methane organic compound (NMOC) concentration expressed as hexane, and the methane content. A methane generation rate (k) value of 0.02 year^{-1} was used since it is the value for an arid site (defined by EPA as sites that have 25 inches of rain or less annually) under the Clean Air Act (CAA). On average, the MBL receives approximately 10 inches of precipitation annually. The potential methane generation capacity (L_o) was input as 170 cubic meters per megagram (m^3/Mg) because it is the value used for New Source Performance Standards (NSPS) regulatory modeling purposes. All other CAA purposes utilize a L_o value of 100 m^3/Mg. However, the 170 m^3/Mg value was used in this effort for conservativeness. An NMOC concentration of 1,200 parts per million by volume (ppmv) as hexane was input into LandGEM as it was the value obtained from the most recent NSPS Tier 2 study, which was completed in October 2008. The methane content was input as 50 percent based on the CAA default value.

The selected gases/pollutants were total landfill gas, methane, carbon dioxide, and NMOC. These are the typical gases/pollutants required for completion of an emission estimate under the model.

Annual waste acceptance rates are required to be input into the model in either short tons or Mg. The values from 1994 through 2009 were based upon actual tonnages disposed of at the MBL as recorded by site scales. The 2010 value was based on assuming an 8 percent decrease from the 2009 tonnages as this was the trend MBL was observing in 2010 at the time of the application submittal. A conservative growth rate of 1 percent was assumed for annual waste disposal rates in 2011 through 2073."

The waste design capacity is 19,400,000 cubic yards = 14,832,364 cubic meters (Not input into model).

An emission inventory was developed for the landfill flare and fugitive emissions at the facility (see Appendix A) associated with this project.

Derivation of Emissions:

Calculations were based on the capacity of the flare of 1500 cfm.

PM_{10}

The emissions estimates were based on AP-42, Chapter 2.4, Table 2.4-5, converted to lb/hr/scfm per footnote "a" in table, for PM. There is no factor for PM_{10}. All PM was estimated to be PM_{10}.

SO_2

It was estimated in the application that the concentration of sulfur is 150 ppmv and that the combustion results in complete conversion of sulfur to SO_2. Based on this and the capacity of the flare of 1500 cfm, the emissions of SO_2 are estimated to be 2.25 lb/hr. The annual emissions are 9.84 tons based on 8,760 hours of operation per year.

According to AP-42, Chapter 2, Page 3, H_2S concentrations can vary between landfills. H_2S is normally present in LFG at levels ranging from 0 to 90 ppm, with an average concentration of 33 ppm. H_2S levels have been detected up to 12,000 ppmv at a Florida landfill. High levels are attributed to using C&D waste as cover. The level used in the estimates for this application was 150 ppmv.

At 150 ppmv, the 1-hr NAAQS standard for SO_2 is modeled to not be exceeded. According to DEQ calculations, the 1-hour SO_2 NAAQS standard will not be exceeded, according to DEQ modeling, if the H_2S concentration is as much as 785 ppmv, so the limit set in this permit is 785 ppmv for H_2S. This results in an estimated emission rate of SO_2 of 11.8 lb/hr and 51.5 tons per year.

NO_x

These emissions were estimated using the manufacturer's guarantee for the flare of 0.06 lb/MMBtu NO_x and the 1500 cfm of landfill gas produced that goes to the flare.

NO_2

It was conservatively estimated that all NO_x is NO_2.

CO

CO emissions were based on the manufacturer's guarantee for the flare of 0.200 lb/MMBtu.

VOC

VOC emission concentrations were estimated as follows:

NMOC = 1200 ppmv as hexane (based on the value obtained from the most recent NSPS 40 CFR 60.754(a)(2) Tier 2 study in October 2008) assuming the capacity of the flare of 1500 scfm and a 98% destruction efficiency as required by the NSPS rule.

39% of NMOC is VOC per AP-42 Chapter 2.4 Table 2.4-2 footnote "c"

VOC = 0.83 T/yr

TAP

In the application, it is stated that because the toxic air pollutants from the source are regulated by the Department under 40 Code of Federal Regulation (CFR) Part 60, 40 CFR Part 61, and 40 CFR Part 63, 58.01.01.210.20.a, that no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process.

The rule states, "*IDAPA 210.20. NSPS and NESHAP Sources. (6-30-95)*

a. *If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the Department at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process. (6-30-95)*

b. *If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the EPA at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63 and the permit to construct issued by the Department contains adequate provisions implementing the federal standard, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process."*

None of the 40 CFR rules regulate any specific TAP. They regulate NMOC. 40 CFR 63 Subpart AAAA regulates HAP as evidenced in the preamble, FR Volume 68 No. 11, dated January 16, 2003, as follows:

The final rule is applicable to both major and area sources and contains the same requirements as the Emission Guidelines and New Source Performance Standards (EG/NSPS). The final rule adds startup, shutdown, and malfunction (SSM) requirements, adds operating condition deviations for out-of- bounds monitoring parameters, requires timely control of bioreactor landfills, and changes the reporting frequency for one type of report.

The final rule fulfills the requirements of section 112(d) of the Clean Air Act (CAA), which requires the Administrator to regulate emissions of hazardous air pollutants (HAP) listed in section 112(b), and helps implement the Urban Air Toxics Strategy developed under section 112(k) of the CAA. The intent of the standards is to protect the public health by requiring new and existing sources to control emissions of HAP to the level reflecting the maximum achievable control technology (MACT).

The HAP emitted by MSW landfills include, but are not limited to, vinyl chloride, ethyl benzene, toluene, and benzene. Each of the HAP emitted from MSW landfills can cause adverse health effects provided sufficient exposure. For example, vinyl chloride can adversely affect the central nervous system and has been shown to increase the risk of liver cancer in humans, while benzene is known to cause leukemia in humans.

IDAPA TAPs which are not HAPs are not addressed in this preamble.

The approach used for the TAP/HAP emissions estimation is to use the latest final version of AP-42 to select the initial list of HAPs/TAPs to be evaluated. Then, the HAPs are removed from the list because those are regulated by Subpart AAAA.

The emissions of some of the TAPs were estimated in the permit application using emission factors a publication titled, "Waste Industry Air Coalition Comparison of Recent Landfill Gas Analyses with Historic AP-42 Values." Many of those values are lower than the values in AP-42. If no value was given for the TAP in the article, then the AP-42 value was used.

Some of the TAPs were not evaluated in the application. For example, dichlorofluoromethane is in the final version of AP-42, and in IDAPA 58.01.01.585, but is not in the draft version of AP-42, and it is not a HAP. None of the new TAPs in the draft AP-42 were evaluated in the application because the draft AP-42 section on landfills is still undergoing major changes and is currently not citable or quotable.

The H_2S concentration value used is less than the 150 ppmv used when calculating SO_2 emissions. It was estimated in the application that 100% of the H_2S was converted to SO_2 in the flare, so the emissions of H_2S from the flare was zero. Hydrogen sulfide is not a HAP.

DEQ evaluated the TAPs that are not HAPs from the AP-42 final version that were not addressed in the application, including dichlorofluoromethane and hydrogen sulfide. None of those TAPs exceed the screening emissions rate (EL) in IDAPA 58.01.01.585 before being combusted in the flare. After combustion, the levels are well below the EL's.

TAPs compliance is required because none of the CFR requirements limit individual TAPs.

DEQ compiled a list of TAPs from AP-42 Chapter 2.4, 11/98. Because 40 CFR 63 AAAA regulates HAPs (see preamble in federal register), the HAPs were eliminated from the list. Next, any compound for which there is not a listing in IDAPA 58.01.01.585 or 586 was eliminated. The emission factors in AP-42 are for total emissions from the landfill. Not all of the emissions are collected. Some are fugitive. But, to be conservative about the emission estimates from the flare, it was estimated that 100% of the landfill gas was collected and sent to the flare, and that the flare has 90% destruction efficiency of the TAPs burned, which is the minimum efficiency estimated in AP-42. With this procedure, it was shown that the total TAPs (pre-flare) were below the screening level for the eight TAPs evaluated, and that the post-flare emissions for those eight TAPs were also below the screening levels.

HAP

The HAP list and emissions estimates were done the same way as the TAPs were.

Summaries of the estimated emissions of criteria pollutants, TAPs, and HAPs from the facility are provided in the following tables.

Emission Estimates:

The following table presents the emission estimates for criteria pollutants as submitted by the Applicant (except SO_2) and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 2 EMISSIONS FOR CRITERIA POLLUTANTS

Emissions Unit	PM_{10}	SO_2	NO_X	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Flare	**3.29**	**51.5**	**11.83**	**39.42**	**0.83**	**0.00**

This is an existing facility. However, since this is the first time the facility is receiving a permit, pre-project emissions are set to zero for all criteria pollutants.

TAP Emissions

A summary of the estimated emissions toxic air pollutants (TAP) which are not hazardous air pollutants (HAP) is provided in the following table. The estimated emissions increases of TAP were below applicable emissions screening levels (EL). Estimated controlled TAP emissions were below the annual major source threshold.

TAP emissions are presented in the following table:

Table 3 TAP EMISSIONS SUMMARY
POTENTIAL TO EMIT

Non-Carcinogenic Toxic Air Pollutants	Uncontrolled 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Controlled 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level?
2-Propanol (Isopropyl alcohol)	0.69	0.07	65.3	**No**
Acetone	0.09	0.01	119	**No**
Dichlorofluoromethane	0.06	0.01	2.67	**No**
Ethyl mercaptan (ethanethiol)	0.03	0.00	0.067	**No**
Hydrogen sulfide	0.28	0.03	0.933	**No**
Methyl mercaptan	0.03	0.00	0.033	**No**
Pentane	0.05	0.01	118	**No**

t-1,2-Dichloroethene	0.06	0.01	52.7	No

The TAP which are also HAP regulated in the MACT and are therefore not subject to evaluation under IDAPA 58.01.01.586.

HAP Emissions

The following table presents the potential to emit for HAP pollutants from the landfill. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit. The application has factors from a Waste Industry Air Coalition Comparison (WIAC) publication, dated January 2001. These values were compared to estimates based on AP-42 factors. The WIAC factors result in lower estimated emissions. Both sets of factors estimate the emissions at less than one ton per year.

Table 4 HAP EMISSIONS SUMMARY POTENTIAL TO EMIT

HAP Pollutants	AP-42 PTE (T/yr)	WIAC PTE (T/yr)
1, 1, 1-Trichloroethane (methyl chloroform)	0.0013	4.59E-04
1,1,2,2-Tetrachloroethane	0.0038	2.41E-04
1,1-Dichloroethane (ethylidene dichloride)	0.0047	1.50E-03
1,1-Dichloroethene (vinylidene chloride)	0.0004	1.83E-04
1,2-Dichloroethane (ethylene dichloride)	0.0008	2.43E-04
1,2-Dichloropropane (propylene dichloride)	0.0004	5.32E-05
Acrylonitrile	0.0010	5.87E-06
Carbon disulfide	0.0001	0.00
Carbon tetrachloride	0.0000	2.2E-05
Carbonyl sulfide	0.0001	0.00
Chlorobenzene	0.0001	5.23E-04
Chloroethane (ethyl chloride)	0.0016	3.16E-04
Chloroform	0.0001	5.13E-05
Dichlorobenzene	0.0006	4.84E-03
Dichloromethane (methylene chloride)	0.0244	5.90E-05
Ethylbenzene	0.0015	2.21E-03
Ethylene dibromide	0.0000	1.77E-04
Hexane	0.0017	6.15E-04
Mercury (total)	0.0001	6.00E-05
Methyl ethyl ketone	0.0015	2.34E-03
Methyl isobutyl ketone	0.0006	2.31E-04
Perchloroethylene (tetrachloroethylene)	0.0124	4.05E-03
Trichloroethylene (trichloroethene)	0.0075	1.83E-03
Vinyl chloride	0.0092	1.38E-03
Xylenes	0.0039	5.41E-03
Total HAPs	0.0778	0.0268

Ambient Air Quality Impact Analyses

As presented in the Modeling Memo in Appendix B, the estimated emission rates of PM_{10}, SO_2, NO_X, CO, VOC, HAP, and TAPs from this project were below/exceeded applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline[1]. Refer to the Emissions Inventories section for additional information concerning the emission inventories.

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of the Ambient Air Impact Analysis for TAPs is provided in Appendix B.

An ambient air quality impact analyses document has been crafted by DEQ based on a review of the modeling analysis submitted in the application. That document is part of the final permit package for this permitting action (see Appendix B).

Facility Classification

Table 5 UNCONTROLLED PTE AND PTE FOR REGULATED AIR POLLUTANTS COMPARED TO THE MAJOR SOURCE THRESHOLDS

Pollutant	Uncontrolled PTE (T/yr)	PTE (T/yr)	Major Source Thresholds (T/yr)	Uncontrolled PTE Exceeds the Major Source Threshold and PTE Exceeds the Major Source Threshold?
$PM_{10}/PM_{2.5}$	NE	3.29	100	No
SO_2	NE	51.5	100	No
NO_x	NE	11.83	100	No
CO	NE	39.42	100	No
VOC	NE	0.83	100	No

Table 6 UNCONTROLLED PTE AND PTE FOR HAZARDOUS AIR POLLUTANTS COMPARED TO THE MAJOR SOURCE THRESHOLDS

HAP Pollutant	Uncontrolled PTE (T/yr)	PTE (T/yr)	Major Source Thresholds (T/yr)	Uncontrolled PTE Exceeds the Major Source Threshold and PTE Exceeds the Major Source Threshold?
1, 1, 1-Trichloroethane (methyl chloroform)	NE	0.0013	10	No
1,1,2,2-Tetrachloroethane	NE	0.0038	10	No
1,1-Dichloroethane (ethylidene dichloride)	NE	0.0047	10	No
1,1-Dichloroethene (vinylidene chloride)	NE	0.0004	10	No
1,2-Dichloroethane (ethylene dichloride)	NE	0.0008	10	No

[1] Criteria pollutant thresholds in Table 1, State of Idaho Air Quality Modeling Guideline, Doc ID AQ-011, rev. 1, December 31, 2002.

1,2-Dichloropropane (propylene dichloride)	NE	0.0004	10	No
Acrylonitrile	NE	0.0010	10	No
Carbon disulfide	NE	0.0001	10	No
Carbon tetrachloride	NE	0.0000	10	No
Carbonyl sulfide	NE	0.0001	10	No
Chlorobenzene	NE	0.0001	10	No
Chloroethane (ethyl chloride)	NE	0.0016	10	No
Chloroform	NE	0.0001	10	No
Dichlorobenzene	NE	0.0006	10	No
Dichloromethane (methylene chloride)	NE	0.0244	10	No
Ethylbenzene	NE	0.0015	10	No
Ethylene dibromide	NE	0.0000	10	No
Hexane	NE	0.0017	10	No
Mercury (total)	NE	0.0001	10	No
Methyl ethyl ketone	NE	0.0015	10	No
Methyl isobutyl ketone	NE	0.0006	10	No
Perchloroethylene (tetrachloroethylene)	NE	0.0124	10	No
Trichloroethylene (trichloroethene)	NE	0.0075	10	No
Vinyl chloride	NE	0.0092	10	No
Xylenes	NE	0.0039	10	No
Total	NE	0.0778	**25**	No

As demonstrated in Table 5, the facility has a potential to emit for PM_{10}, $PM_{2.5}$, SO_2, NO_x, CO, and VOC emissions are less than the Major Source thresholds of 100 T/yr for each pollutant. The uncontrolled emissions would be less because most of the volume of all of the pollutants are products of combustion in the flare. In addition, as demonstrated in Table 6, the facility has potential HAP emissions of less than the Major Source threshold of 10 T/yr and for all HAP combined less than the Major Source threshold of 25 T/yr. Therefore, this facility is not designated as a Synthetic Minor facility.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Cassia County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the new emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 — Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Municipal Solid Waste Landfills (IDAPA 58.01.01.859)

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.

01. ***Applicability.*** *All owners or operators of each small or large municipal solid waste landfills in any one (1) of the following categories are subject to Section 859:*

a. *Landfills constructed after May 30, 1991;*

This facility was constructed in 1994, so this regulation applies.

b. *Existing landfills with modifications after May 30, 1991; or*

c. *Landfills that closed after November 8, 1987 with modifications after May 30, 1991.*

02. ***Definitions.*** *Unless specifically provided otherwise immediately below, the definitions for all terms set forth in Section 859 shall be the definitions set forth in 40 CFR Part 60. The following definitions apply to this Section:*

d. *"Large municipal solid waste landfill" (large landfill) means a municipal solid waste landfill with a design capacity greater than or equal to two point five (2.5) million megagrams or two point five (2.5) million cubic meters.*

The design capacity of the landfill is 19,400,000 cubic yards, which is 14,832,364 cubic meters, or 14.8 million cubic meters. Therefore, this is a large municipal solid waste landfill.

g. *"New municipal solid waste landfill" (new landfill) means a municipal solid waste landfill that began construction, reconstruction or modification or began accepting waste on or after May 30, 1991.*

This landfill began construction in 1994, so it is a new municipal solid waste landfill.

03. ***General Requirements.*** *All owners or operators of landfills subject to Section 859 must comply with 40 CFR Part 60, Subpart WWW, as amended by 63 Fed. Reg. 32,743-53 (June 16, 1998) and 64 Fed. Reg. 9,257- 62 (February 24, 1999) and incorporated by reference into these rules at Section 107. Where "Administrator" or "EPA" appears in 40 CFR Part 60, "Department" shall be substituted, except in any section of 40 CFR Part 60 for which a federal rule or delegation specifically indicates that authority will not be delegated to the state.*

Compliance with this requirement is detailed in the Subpart WWW section of the SOB.

04. ***Permitting Requirements.*** *All owners or operators of landfills subject to Section 859 must comply with Federal Operating Permit Requirements (Title V) as specified in Sections 300 through 399 of these rules:*

a. *All owners or operators of existing large landfills with modifications after May 30, 1991 must submit a complete Federal Operating Permit application by June 1, 2000.*

b. *All owners or operators of existing large landfills with modifications after March 12, 1996 must submit a complete Federal Operating Permit application the earliest of one (1) year from the date EPA approves the Clean Air Act Section 111(d) State Plan for Section 859, or within one (1) year of the modification.*

This facility is not existing, it is new, in accordance with the definitions in this section.

c. All owners or operators of new large landfills, which includes newly constructed large landfills after March 12, 1996 and existing small landfills that become large landfills after March 12, 1996 must submit a complete Federal Operating Permit application within one (1) year of becoming subject to this requirement.

The operating permit application was submitted on January 4, 2011.

d. All owners or operators of new and modified existing small landfills that are major sources as defined in 40 CFR Part 60, Subpart WWW, as amended by 63 Fed. Reg. 32,743-53 (June 16, 1998) and 64 Fed. Reg. 9,257-62 (February 24, 1999), must submit a complete Federal Operating Permit application within one (1) year of becoming a major source.

This facility is not a small landfill.

*05. **Reporting Requirements**. All owners or operators of landfills subject to Section 859 must comply with the following:*

a. All owners or operators of large landfills must:

i. Submit an Initial Design Capacity Report and an Initial Nonmethane Organic Compound Report within thirty (30) days of the effective date of Section 859; and

ii. Submit an annual Nonmethane Organic Compound Report until nonmethane emissions are less than fifty (50) Mg/yr.

These are required to be done. The effective date of Section 859 is April 5, 2000, so the deadline is passed for Section 05.a.i. The requirement of Section 05.a.ii is an ongoing annual requirement and is included as a permit condition.

b. All owners or operators of small landfills of Section 859 must submit an Initial Design Capacity Report and an Initial Nonmethane Organic Compound Report within thirty (30) days of the effective date of Section 859.

This section is not applicable to large landfills.

c. All owners or operators of landfills subject to Section 859 after the effective date of Section 859 must submit an Initial Design Capacity Report and an Initial Nonmethane Organic Compound Report within thirty (30) days of becoming subject to Section 859.

The facility was subject to Section 859 before the effective date of Section 859, so Section 05.c does not apply.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM_{10} emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. The flare is the only identified source that would have visible emissions. Landfill flares do not have the potential to emit visible emissions greater than 20% opacity due to the type of gas that is being burned, so no permit requirement has been written into the permit.

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

IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

In accordance with IDAPA 58.01.01.859.04.c, the facility must submit a complete Federal Operating Permit application within one year of becoming subject to this requirement. The facility became subject to this requirement with the promulgation of the NSPS Subpart WWW on March 16, 1996 and subsequent design capacity report submittal required by June 10, 1996. The application was required to be submitted within one year of this date (June 10, 1997). The application was submitted on January 4, 2011.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

This facility is not one of the designated facilities and does not have facility-wide emissions for any criteria pollutant, including NMOC emissions, that exceed 250 T/yr. In addition, the facility is not undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore, in accordance with 40 CFR 52.21(a)(2), the PSD requirements do not apply.

NSPS Applicability (40 CFR 60)

The facility is not subject to the requirements of 40 CFR 60 Subpart Cc – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.

The facility is subject to the requirements of 40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

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

§ 60.30c Scope.

This subpart contains emission guidelines and compliance times for the control of certain designated pollutants from certain designated municipal solid waste landfills in accordance with section 111(d) of the Act and subpart B.

Break in section

§ 60.32c Designated facilities.

(a) The designated facility to which the guidelines apply is each existing MSW landfill for which construction, reconstruction or modification was commenced before May 30, 1991.

This facility was constructed in 1993, which is after May 30, 1991, so this subpart does not apply.

40 CFR 60, Subpart WWW — Standards of Performance for Municipal Solid Waste Landfills

§ 60.750 Applicability, designation of affected facility, and delegation of authority.

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

This landfill commenced construction in 1993, which is after May 30, 1991, so this subpart applies.

(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.

§ 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.

§ 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.

The facility is complying with paragraph (b)(2) of this section.

The facility has applied for a Title V 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).

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

The calculated uncontrolled NMOC emission rate is 58 megagrams per year, which is greater than 50 megagrams.

(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.

The facility has submitted a collection and control system design plan prepared by a professional engineer to the Administrator on August 19, 2010.

(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).

The Milner Butte Landfill has installed a collection and control system as required by paragraphs (b)(2)(ii)(A) of this section within 30 months after the NMOC emission rate exceeded 50 megagrams per year.

(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.

MBL has installed an active collection system.

(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).

The Milner Butte Landfill routes all collected gas to a control system that complies with (b)(2)(iii)(B). An initial performance test will be performed within 180 days from initial startup of the approved control system. The system is currently in an evaluation and optimization period.

(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;

The Milner Butte Landfill will operate the control device in accordance with the parameter ranges established during the initial or most recent performance test. An initial performance test will be performed within 180 days from initial startup of the approved control system. The system is currently in an evaluation and optimization period.

(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.

The Milner Butte Landfill will operate the collection and control device to comply with this subpart in accordance with the provisions of Sec. 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.

The Milner Butte Landfill acknowledges when the control system may be capped or removed and does not anticipate capping or removal of the collection and control system for many years.

(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;

The facility was constructed in 1993, so this compliance date is applicable. The application was received on January 4, 2011.

(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.

§ 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:

This applies to the MBL facility.

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

(1) 5 years or more if active; or

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

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

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

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

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

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator

may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

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

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

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

(ii) A data recorder is not required;

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

(iv) A calibration error check is not required;

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

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

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

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

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

§ 60.754 Test methods and procedures.

(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

Mi=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 Miif 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−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.

(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.

The Milner Butte Landfill has already exceeded the NMOC emission rate of 50 megagrams per year and installed an active collection and control system. Thus the above test methods and procedures are not applicable at this time.

(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, QLFG, 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.

This procedure must be used to determine when the collection and control equipment may be removed.

(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.

These are instructions for calculating emissions for PSD purposes.

(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).

Part (d) is for passive systems, and MBL has an active system.

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§ 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:

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

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*

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.

These are instructions on determining the maximum expected gas generation flow rate for design purposes when designing the collection and control system. This was required to be done prior to installation. Because the system has already been designed and installed, this does not need to be included as a permit condition. A review of the existing plans would include this information.

(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.

See explanation for (1). This is similar.

(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.

A permit condition was written to incorporate this requirement. MBL has submitted an alternative timeline for correcting exceedances to the Administrator for approval. At this time, the approval has not yet been issued.

(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.

This gas collection system has been operating for more than 180 days, so this provision no longer applies.

(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.

Permit Condition 11 was written to incorporate this requirement. MBL has submitted an alternative timeline for correcting exceedances to the Administrator for approval. At this time, the approval has not yet been issued.

(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.

MBL has installed a collection system conforming to the specifications provided in Sec. 60.759.

(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.

It appears in the permit application that the wells have not yet been installed, so this is written as Permit Condition 12.

(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.

40 CFR 60.755 (c) and (d) apply and were incorporated into the permit.

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§ 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.

This section applies. The Milner Butte Landfill is using an enclosed combustor and will calibrate, maintain and operate a flow monitoring device equipped with a continuous recorder (at least every 15 minutes) according to the manufacturer's specifications, but has not triggered this requirement as the system is currently in an evaluation and optimization period and has not gone through initial startup. There are no bypass lines installed on the collection and control system.

(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.

The MBL does not use an open flare.

(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.

The MBL is not using a different method.

(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.

The Milner Butte Landfill has installed a collection system meeting the specifications in Sec. 60.759. The Milner Butte Landfill has submitted alternative monitoring parameters to the Administrator for approval.

(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.

This applies and was incorporated into Permit Condition 17.

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§ 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.

The initial design capacity report should have been submitted already and is not included in this permit. The Milner Butte Landfill believes the May 1993 Design Report meets the requirements of an initial design capacity report. The Design Report has not been directly submitted to the Administrator by the Milner Butte Landfill and it is unclear if it has been indirectly submitted through IDEQ.

(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).

The design capacity of the landfill is already over this level, so this is not applicable.

(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.

The Tier 1 emission rate calculation was prepared by others and was anticipated to exceed the non-methane organic compound (NMOC) emission rate threshold of 50 Megagrams (approximately 55 tons) per year. The Tier 1 emission rate calculation was based on the United States Environmental Protection Agency (U.S. EPA) default values for LFG generation and NMOC concentration. These default values are not site-specific, and Tier 1 emissions estimates are believed by the landfill industry to be significantly overestimated.

A NSPS Tier 2 testing program allows the determination of a site-specific NMOC concentration through sampling and analysis of LFG). The site-specific value can then be used in the U.S. EPA's emission rate calculation in lieu of the Tier 1 default value, and a new NMOC emission rate can be calculated.

A Tier 2 testing program was completed for the site on September 8, 1998. NMOC concentrations derived from Tier 2 testing are valid for a period of 5 years. A second Tier 2 testing program was completed at the site in August 2003 for the purposes of determining a site-specific NMOC concentration and a third Tier 2 testing program was completed at the site in August 2008 for the purposes of determining a site-specific NMOC concentration.

(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.

The Milner Butte Landfill has installed a collection and control system designed to be in compliance with Sec. 60.752(b)(2). Based on that information, the facility is exempt from this section.

(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.

The Milner Butte Landfill has submitted a collection and control system design plan to the Administrator within the timeframe described above.

(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).

The facility has not requested closure of the landfill.

(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.

The facility has not proposed to remove equipment.

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

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

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

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

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

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

This was included as a permit condition.

(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.

The initial performance test should have already been done, and is a one-time requirement, so it is not included in this permit.

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§ 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.

This applies and Permit Condition 23 was written.

(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.

This applies and has been incorporated into the permit as Permit Condition 24.

(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.

The MBL does not use a boiler or process heater.

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

The MBL does not use an open flare.

(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 °C below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined.

This applies, so it is written into the permit as Permit Condition 24.

(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.

The facility does not have a boiler or process heater.

(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.

This applies and was written as Permit Condition 25.

(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.)

The MBL does not use a boiler or process heater.

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

The MBL does not use an open flare.

(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.

Sections (d) and (e) apply and are included as Permit Condition 26.

(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.

The MBL is over this limit, so this section is not applicable.

§ 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 (sic)*, 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.

The areas of asbestos or nondegradeable material will be excluded from collection through documentation required under Sec. 60.758(d).

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

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

where,

Q_i = *NMOC emission rate from the* 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, LO 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.*

This requirement applies and is included in the permit as Permit Condition 28.

(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).

These are instructions on setting up the collection and control system. The system has been set up already. A review of the set-up should be done outside of the permit. The permit deals mainly with ongoing requirements.

NESHAP Applicability (40 CFR 61)

The facility has proposed to operate as a major source subject to the requirements of 40 CFR 61, National Emission Standards for Asbestos. Although this section is applicable to the landfill, there are no asbestos emissions that go to the flare, so this section is in the Title V permit but not in the flare PTC.

40 CFR 61, Subpart M **National Emission Standards for Asbestos**

§ 61.140 Applicability.

The provisions of this subpart are applicable to those sources specified in §§61.142 through 61.151, 61.154, and 61.155.

The Milner Butte Landfill is an active waste disposal site and is subject to Section 61.154.

§ 61.141 Definitions.

All terms that are used in this subpart and are not defined below are given the same meaning as in the Act and in subpart A of this part.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wet means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos mill means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

Category I nonfriable asbestos-containing material (ACM) means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II nonfriable ACM means any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1,

Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Commercial asbestos means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

Cutting means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

Fabricating means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

Facility component means any part of a facility including equipment.

Friable asbestos material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Fugitive source means any source of emissions not controlled by an air pollution control device.

Glove bag means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation, equipment and supplies, and work practices is contained in the Occupational Safety and Health Administration's (OSHA's) final rule on occupational exposure to asbestos (appendix G to 29 CFR 1926.58).

Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

In poor condition means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Leak-tight means that solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing means the combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Natural barrier means a natural object that effectively precludes or deters access. Natural barriers include physical obstacles such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

Nonfriable asbestos-containing material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

Outside air means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material means finely divided particles of asbestos or material containing asbestos.

Planned renovation operations means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Remove means to take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

Resilient floor covering means asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than 1 percent asbestos as determined using polarized light microscopy according to the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy.

Roadways means surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

Strip means to take off RACM from any part of a facility or facility components.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions means any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Waste generator means any owner or operator of a source covered by this subpart whose act or process produces asbestos-containing waste material.

Waste shipment record means the shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Working day means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

§ 61.142 Standard for asbestos mills.

(a) Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill, including fugitive sources, or use the methods specified by §61.152 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

MBL is not as asbestos mill.

§ 61.143 Standard for roadways.

No person may construct or maintain a roadway with asbestos tailings or asbestos-containing waste material on that roadway, unless, for asbestos tailings.

MBL does not have any asbestos roadways.

§ 61.144 Standard for manufacturing.

(a) Applicability. This section applies to the following manufacturing operations using commercial asbestos.

MBL is not a manufacturing facility.

§ 61.145 Standard for demolition and renovation.

(a) Applicability. To determine which requirements of paragraphs (a), (b), and (c) of this section apply to the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM. The requirements of paragraphs (b) and (c) of this section apply to each owner or operator of a demolition or renovation activity, including the removal of RACM as follows:

MBL is not an owner or operator of a demolition or renovation activity.

§ 61.146 Standard for spraying.

The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

MBL is not an owner or operator of an operation in which asbestos-containing materials are spray applied.

§ 61.147 Standard for fabricating.

MBL does not do any fabrication using commercial asbestos.

§ 61.148 Standard for insulating materials.

No owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this section do not apply to spray-applied insulating materials regulated under §61.146.

MBL does not do any demolition or renovation.

§ 61.149 Standard for waste disposal for asbestos mills.

MBL is not an asbestos mill.

§ 61.150 Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations.

MBL does not manufacture, fabricate, demolish, renovate, or spray asbestos-containing materials.

§ 61.151 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.

Each owner or operator of any inactive waste disposal site that was operated by sources covered under §61.142, 61.144, or 61.147 and received deposits of asbestos-containing waste material generated by the sources, shall:

(a) Comply with one of the following:

(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or

(2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least 8 additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions; or

(3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

(4) For inactive waste disposal sites for asbestos tailings, a resinous or petroleum-based dust suppression agent that effectively binds dust to control surface air emissions may be used instead of the methods in paragraphs (a) (1), (2), and (3) of this section. Use the agent in the manner and frequency recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent to achieve and maintain dust control. Obtain prior written approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

(1) Display warning signs at all entrances and at intervals of 100 m (328 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements for 51 cm×36 cm (20&inch;×14&inch;) upright format signs specified in 29 CF 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend Notation

Asbestos Waste Disposal Site 2.5 cm (1 inch) Sans Serif, Gothic or Block

Do Not Create Dust 1.9 cm (3/4 inch) Sans Serif, Gothic or Block

Breathing Asbestos is Hazardous to Your Health 14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) Fence the perimeter of the site in a manner adequate to deter access by the general public.

(3) When requesting a determination on whether a natural barrier adequately deters public access, supply information enabling the Administrator to determine whether a fence or a natural barrier adequately deters access by the general public.

(c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.

(d) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site under this section, and follow the procedures specified in the notification. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

(e) Within 60 days of a site becoming inactive and after the effective date of this subpart, record, in accordance with State law, a notation on the deed to the facility property and on any other instrument that would normally be examined during a title search; this notation will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used for the disposal of asbestos-containing waste material;

(2) The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in §61.154(f) have been filed with the Administrator; and

(3) The site is subject to 40 CFR part 61, subpart M.

§ 61.152 Air-cleaning.

MBL does not perform air cleaning.

§ 61.153 Reporting.

(a) Any new source to which this subpart applies (with the exception of sources subject to §§61.143, 61.145, 61.146, and 61.148), which has an initial startup date preceding the effective date of this revision, shall provide the following information to the Administrator postmarked or delivered within 90 days of the effective date. In the case of a new source that does not have an initial startup date preceding the effective date, the information shall be provided, postmarked or delivered, within 90 days of the initial startup date. Any owner or operator of an existing source shall provide the following information to the Administrator within 90 days of the effective date of this subpart unless the owner or operator of the existing source has previously provided this information to the Administrator. Any changes in the information provided by any existing source shall be provided to the Administrator, postmarked or delivered, within 30 days after the change.

This information has already been provided to the Administrator.

(1) A description of the emission control equipment used for each process; and

(i) If the fabric device uses a woven fabric, the airflow permeability in m^3 /min/m^2 and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2 , the minimum thickness in inches, and the airflow permeability in m^3 /min/m^2 .

(2) If a fabric filter device is used to control emissions,

(i) The airflow permeability in m^3 /min/m^2 (ft^3 /min/ft^2) if the fabric filter device uses a woven fabric, and, if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2 (oz/yd^2), the minimum thickness in millimeters (inches), and the airflow permeability in m^3 /min/m^2 (ft^3 /min/ft^2).

(3) If a HEPA filter is used to control emissions, the certified efficiency.

(4) For sources subject to §§61.149 and 61.150:

(i) A brief description of each process that generates asbestos-containing waste material; and

(ii) The average volume of asbestos-containing waste material disposed of, measured in m^3 /day (yd^3 /day); and

(iii) The emission control methods used in all stages of waste disposal; and

(iv) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

The Milner Butte Landfill does not perform air cleaning or generate asbestos-containing waste materials.

(5) For sources subject to §§61.151 and 61.154:

(i) A brief description of the site; and

(ii) The method or methods used to comply with the standard, or alternative procedures to be used.

(b) The information required by paragraph (a) of this section must accompany the information required by §61.10. Active waste disposal sites subject to §61.154 shall also comply with this provision. Roadways, demolition and renovation, spraying, and insulating materials are exempted from the requirements of §61.10(a). The information described in this section must be reported using the format of appendix A of this part as a guide.

(Sec. 114. Clean Air Act as amended (42 U.S.C. 7414))

This section applies, and the information has already been provided to the Administrator.

§ 61.154 Standard for active waste disposal sites.

Each owner or operator of an active waste disposal site that receives asbestos-containing waste material from a source covered under §61.149, 61.150, or 61.155 shall meet the requirements of this section:

(a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.

The Milner Butte Landfill is an active waste disposal site that receives asbestos containing waste materials. The Milner Butte Landfill will follow the requirements of paragraph (c) of this section.

(b) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) of this section must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements of 51 cm × 36 cm (20&inch;×14&inch;) upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend Notation

Asbestos Waste Disposal Site 2.5 cm (1 inch) Sans Serif, Gothic or Block.

Do Not Create Dust 1.9 cm (3/4 inch) Sans Serif, Gothic or Block.

Breathing Asbestos is Hazardous to Your Health 14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

The Milner Butte Landfill has a perimeter fence around the disposal site to deter access by the general public and will follow the requirements of paragraph (c) of this section.

(c) Rather than meet the no visible emission requirement of paragraph (a) of this section, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(1) Be covered with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, or

(2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

The Milner Butte Landfill will follow the conditions of (c)(1) in lieu of meeting the no visible emissions requirement of paragraph (a).

(d) Rather than meet the no visible emission requirement of paragraph (a) of this section, use an alternative emissions control method that has received prior written approval by the Administrator according to the procedures described in §61.149(c)(2).

(e) For all asbestos-containing waste material received, the owner or operator of the active waste disposal site shall:

(1) Maintain waste shipment records, using a form similar to that shown in Figure 4, and include the following information:

(i) The name, address, and telephone number of the waste generator.

(ii) The name, address, and telephone number of the transporter(s).

(iii) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).

(iv) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

(v) The date of the receipt.

(e) applies.

(2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(2) applies.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA

Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

This applies.

(4) Retain a copy of all records and reports required by this paragraph for at least 2 years.

This applies.

(f) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

(g) Upon closure, comply with all the provisions of §61.151.

(h) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

(i) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.

(j) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

All of the above applies.

§ 61.155 Standard for operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material.

Each owner or operator of an operation that converts RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material shall:

MBL does not convert RACM and asbestos-containing waste material into non-asbestos material.

§ 61.156 Cross-reference to other asbestos regulations.

At the request of the facility, this section has been removed from this statement of basis. The section is for informational purposes only.

§ 61.157 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities that will not be delegated to States:

(1) Section 61.149(c)(2)

(2) Section 61.150(a)(4)

(3) Section 61.151(c)

(4) Section 61.152(b)(3)

(5) Section 61.154(d)

(6) Section 61.155(a).

[55 FR 48433, Nov. 20, 1990]

Appendix A to Subpart M of Part 61—Interpretive Rule Governing Roof Removal Operations

I. Applicability of the Asbestos NESHAP

1.1. Asbestos-containing material (ACM) is material containing more than one percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy. The NESHAP classifies ACM as either "friable" or "nonfriable". Friable ACM is ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Nonfriable ACM is ACM that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

1.2. Nonfriable ACM is further classified as either Category I ACM or Category II ACM. Category I ACM and Category II ACM are distinguished from each other by their potential to release fibers when damaged. Category I ACM includes asbestos-containing gaskets, packings, resilient floor coverings, resilient floor covering mastic, and asphalt roofing products containing more than one percent asbestos. Asphalt roofing products which may contain asbestos include built-up roofing; asphalt-containing single ply membrane systems; asphalt shingles; asphalt-containing underlayment felts; asphalt-containing roof coatings and mastics; and asphalt-containing base flashings. ACM roofing products that use other bituminous or resinous binders (such as coal tars or pitches) are also considered to be Category I ACM. Category II ACM includes all other nonfriable ACM, for example, asbestos-cement (A/C) shingles, A/C tiles, and transite boards or panels containing more than one percent asbestos. Generally speaking, Category II ACM is more likely to become friable when damaged than is Category I ACM. The applicability of the NESHAP to Category I and II ACM depends on: (1) the condition of the material at the time of demolition or renovation, (2) the nature of the operation to which the material will be subjected, (3) the amount of ACM involved.

1.3. Asbestos-containing material regulated under the NESHAP is referred to as "regulated asbestos-containing material" (RACM). RACM is defined in §61.141 of the NESHAP and includes: (1) friable asbestos-containing material; (2) Category I nonfriable ACM that has become friable; (3) Category I nonfriable ACM that has been or will be sanded, ground, cut, or abraded; or (4) Category II nonfriable ACM that has already been or is likely to become crumbled, pulverized, or reduced to powder. If the coverage threshold for RACM is met or exceeded in a renovation or demolition operation, then all friable ACM in the operation, and in certain situations, nonfriable ACM in the operation, are subject to the NESHAP.

A. Threshold Amounts of Asbestos-Containing Roofing Material

1.A.1. The NESHAP does not cover roofing projects on single family homes or on residential buildings containing four or fewer dwelling units. 40 CFR 61.141. For other roofing renovation projects, if the total asbestos-containing roof area undergoing renovation is less than 160 ft^2 , the NESHAP does not apply, regardless of the removal method to be used, the type of material (Category I or II), or its condition (friable versus nonfriable). 40 CFR 61.145(a)(4). However, EPA would recommend the use of methods that damage asbestos-containing roofing

material as little as possible. EPA has determined that where a rotating blade (RB) roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material, the removal of 5580 ft^2 of that material will create 160 ft^2 of RACM. For the purposes of this interpretive rule, "RB roof cutter" means an engine-powered roof cutting machine with one or more rotating cutting blades the edges of which are blunt. (Equipment with blades having sharp or tapered edges, and/or which does not use a rotating blade, is used for "slicing" rather than "cutting" the roofing material; such equipment is not included in the term "RB roof cutter".) Therefore, it is EPA's interpretation that when an RB roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material, any project that is 5580 ft2 or greater is subject to the NESHAP; conversely, it is EPA's interpretation that when an RB roof cutter or equipment that similarly damages the roofing material is used to remove Category I nonfriable asbestos-containing roofing material in a roof removal project that is less than 5580 ft2 , the project is not subject to the NESHAP, except that notification is always required for demolitions. EPA further construes the NESHAP to mean that if slicing or other methods that do not sand, grind, cut or abrade will be used on Category I nonfriable ACM, the NESHAP does not apply, regardless of the area of roof to be removed.

1.A.2. For asbestos cement (A/C) shingles (or other Category II roofing material), if the area of the roofing material to be removed is at least 160 ft^2 and the removal methods will crumble, pulverize, reduce to powder, or contaminate with RACM (from other ACM that has been crumbled, pulverized or reduced to powder) 160 ft^2 or more of such roofing material, the removal is subject to the NESHAP. Conversely, if the area of the A/C shingles (or other Category II roofing materials) to be removed is less than 160 ft2 , the removal is not subject to the NESHAP regardless of the removal method used, except that notification is always required for demolitions. 40 CFR 61.145(a). However, EPA would recommend the use of methods that damage asbestos-containing roofing material as little as possible. If A/C shingles (or other Category II roofing materials) are removed without 160 ft2 or more of such roofing material being crumbled, pulverized, reduced to powder, or contaminated with RACM (from other ACM that has been crumbled, pulverized or reduced to powder), the operation is not subject to the NESHAP, even where the total area of the roofing material to be removed exceeds 160 ft^2 ; provided, however, that if the renovation includes other operations involving RACM, the roof removal operation is covered if the total area of RACM from all renovation activities exceeds 160 ft2 . See the definition of regulated asbestos-containing material (RACM), 40 CFR 61.141.

1.A.3. Only roofing material that meets the definition of ACM can qualify as RACM subject to the NESHAP. Therefore, to determine if a removal operation that meets or exceeds the coverage threshold is subject to the NESHAP, any suspect roofing material (i.e. roofing material that may be ACM) should be tested for asbestos. If any such roofing material contains more than one percent asbestos and if the removal operation is covered by the NESHAP, then EPA must be notified and the work practices in §61.145(c) must be followed. In EPA's view, if a removal operation involves at least the threshold level of suspect material, a roofing contractor may choose not to test for asbestos if the contractor follows the notification and work practice requirements of the NESHAP.

B. A/C Shingle Removal (Category II ACM Removal)

1.B.1. A/C shingles, which are Category II nonfriable ACM, become regulated ACM if the material has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations. 40 CFR 61.141. However, merely breaking an A/C shingle (or any other category II ACM) that is not friable may not necessarily cause the material to become RACM. A/C shingles are typically nailed to buildings on which they are attached. EPA believes that the extent of breakage that will normally result from carefully removing A/C shingles and lowering the shingles to the ground will not result in crumbling, pulverizing or reducing the shingles to powder. Conversely, the extent of breakage that will normally occur if the A/C shingles are dropped from a building or scraped off of a building with heavy machinery would cause the shingles to become RACM. EPA therefore construes the NESHAP to mean that the removal of A/C shingles that are not friable, using methods that do not crumble, pulverize, or reduce the A/C shingles to powder (such as pry bars, spud bars and shovels to carefully pry the material), is not subject to the NESHAP provided that the A/C shingles are properly handled during and after removal, as discussed in this paragraph and the asbestos NESHAP. This interpretation also applies to other Category II nonfriable asbestos-containing roofing materials.

C. Cutting vs. Slicing and Manual Methods for Removal of Category I ACM

1.C.1. Because of damage to the roofing material, and the potential for fiber release, roof removal operations using rotating blade (RB) roof cutters or other equipment that sand, grind, cut or abrade the roof material are subject to the NESHAP. As EPA interprets the NESHAP, the use of certain manual methods (using equipment such as axes, hatchets, or knives, spud bars, pry bars, and shovels, but not saws) or methods that slice, shear, or punch (using equipment such as a power slicer or power plow) does not constitute "cutting, sanding, grinding or abrading." This is because these methods do not destroy the structural matrix or integrity of the material such that the material is crumbled, pulverized or reduced to powder. Hence, it is EPA's interpretation that when such methods are used, assuming the roof material is not friable, the removal operation is not subject to the regulation.

1.C.2. Power removers or power tear-off machines are typically used to pry the roofing material up from the deck after the roof membrane has been cut. It is EPA's interpretation that when these machines are used to pry roofing material up, their use is not regulated by the NESHAP.

1.C.3. As noted previously, the NESHAP only applies to the removal of asbestos-containing roofing materials. Thus, the NESHAP does not apply to the use of RB cutters to remove non-asbestos built up roofing (BUR). On roofs containing some asbestos-containing and some non-asbestos-containing materials, coverage under the NESHAP depends on the methods used to remove each type of material in addition to other coverage thresholds specified above. For example, it is not uncommon for existing roofs to be made of non-asbestos BUR and base flashings that do contain asbestos. In that situation, EPA construes the NESHAP to be inapplicable to the removal of the non-asbestos BUR using an RB cutter so long as the RB cutter is not used to cut 5580 ft2 or more of the asbestos-containing base flashing or other asbestos-containing material into sections. In addition, the use of methods that slice, shear, punch or pry could then be used to remove the asbestos flashings and not trigger coverage under the NESHAP.

II. Notification

2.1. Notification for a demolition is always required under the NESHAP. However, EPA believes that few roof removal jobs constitute "demolitions" as defined in the NESHAP (§61.141). In particular, it is EPA's view that the removal of roofing systems (i.e., the roof membrane, insulation, surfacing, coatings, flashings, mastic, shingles, and felt underlayment), when such removal is not a part of a demolition project, constitutes a "renovation" under the NESHAP. If the operation is a renovation, and Category I roofing material is being removed using either manual methods or slicing, notification is not required by the NESHAP. If Category II material is not friable and will be removed without crumbling, pulverizing, or reducing it to powder, no notification is required. Also, if the renovation involves less than the threshold area for applicability as discussed above, then no notification is required. However, if a roof removal meets the applicability and threshold requirements under the NESHAP, then EPA (or the delegated agency) must be notified in advance of the removal in accordance with the requirements of §61.145(b), as follows:

- *Notification must be given in writing at least 10 working days in advance and must include the information in §61.145(b)(4), except for emergency renovations as discussed below.*

- *The notice must be updated as necessary, including, for example, when the amount of asbestos-containing roofing material reported changes by 20 percent or more.*

- *EPA must be notified if the start date of the roof removal changes. If the start date of a roof removal project is changed to an earlier date, EPA must be provided with a written notice of the new start date at least 10 working days in advance. If the start date changes to a later date, EPA must be notified by telephone as soon as possible before the original start date and a written notice must be sent as soon as possible.*

- *For emergency renovations (as defined in §61.141), where work must begin immediately to avoid safety or public health hazards, equipment damage, or unreasonable financial burden, the notification must be postmarked or delivered to EPA as soon as possible, but no later than the following work day.*

III. Emission Control Practices

A. Requirements To Adequately Wet and Discharge No Visible Emission

3.A.1. The principal controls contained in the NESHAP for removal operations include requirements that the affected material be adequately wetted, and that asbestos waste be handled, collected, and disposed of properly. The requirements for disposal of waste materials are discussed separately in section IV below. The emission control requirements discussed in this section III apply only to roof removal operations that are covered by the NESHAP as set forth in Section I above.

3.A.2. For any operation subject to the NESHAP, the regulation (§§61.145(c)(2)(i), (3), (6)(i)) requires that RACM be adequately wet (as defined in §61.141) during the operation that damages or disturbs the asbestos material until collected for disposal.

3.A.3. When using an RB roof cutter (or any other method that sands, grinds, cuts or abrades the roofing material) to remove Category I asbestos-containing roofing material, the emission control requirements of §61.145(c) apply as discussed in Section I above. EPA will consider a roof removal project to be in compliance with the "adequately wet" and "discharge no visible emission" requirements of the NESHAP if the RB roof cutter is equipped and operated with the following: (1) a blade guard that completely encloses the blade and extends down close to the roof surface; and (2) a device for spraying a fine mist of water inside the blade guard, and which device is in operation during the cutting of the roof.

B. Exemptions From Wetting Requirements

3.B.1. The NESHAP provides that, in certain instances, wetting may not be required during the cutting of Category I asbestos roofing material with an RB roof cutter. If EPA determines in accordance with §61.145(c)(3)(i), that wetting will unavoidably damage the building, equipment inside the building, or will present a safety hazard while stripping the ACM from a facility component that remains in place, the roof removal operation will be exempted from the requirement to wet during cutting. EPA must have sufficient written information on which to base such a decision. Before proceeding with a dry removal, the contractor must have received EPA's written approval. Such exemptions will be made on a case-by-case basis.

3.B.2. It is EPA's view that, in most instances, exemptions from the wetting requirements are not necessary. Where EPA grants an exemption from wetting because of the potential for damage to the building, damage to equipment within the building or a safety hazard, the NESHAP specifies alternative control methods (§61.145(c)(3)(i)(B)). Alternative control methods include (a) the use of local exhaust ventilation systems that capture the dust, and do not produce visible emissions, or (b) methods that are designed and operated in accordance with the requirements of §61.152, or (c) other methods that have received the written approval of EPA. EPA will consider an alternative emission control method in compliance with the NESHAP if the method has received written approval from EPA and the method is being implemented consistent with the approved procedures (§61.145(c)(3)(ii) or §61.152(b)(3)).

3.B.3. An exemption from wetting is also allowed when the air or roof surface temperature at the point of wetting is below freezing, as specified in §61.145(c)(7). If freezing temperatures are indicated as the reason for not wetting, records must be kept of the temperature at the beginning, middle and end of the day on which wetting is not performed and the records of temperature must be retained for at least 2 years. 42 CFR §61.145(c)(7)(iii). It is EPA's interpretation that in such cases, no written application to, or written approval by the Administrator is needed for using emission control methods listed in §61.145(c)(3)(i)(B), or alternative emission control methods that have been previously approved by the Administrator. However, such written application or approval is required for alternative emission control methods that have not been previously approved. Any dust and debris collected from cutting must still be kept wet and placed in containers. All of the other requirements for notification and waste disposal would continue to apply as described elsewhere in this notice and the Asbestos NESHAP.

C. Waste Collection and Handling

3.C.1. It is EPA's interpretation that waste resulting from slicing and other methods that do not cut, grind, sand or abrade Category I nonfriable asbestos-containing roofing material is not subject to the NESHAP and can be disposed of as nonasbestos waste. EPA further construes the NESHAP to provide that if Category II roofing material (such as A/C shingles) is removed and disposed of without crumbling, pulverizing, or reducing it to powder, the waste from the removal is not subject to the NESHAP waste disposal requirements. EPA also

interprets the NESHAP to be inapplicable to waste resulting from roof removal operations that do not meet or exceed the coverage thresholds described in section I above. Of course, other State, local, or Federal regulations may apply.

3.C.2. It is EPA's interpretation that when an RB roof cutter, or other method that similarly damages the roofing material, is used to cut Category I asbestos containing roofing material, the damaged material from the cut (the sawdust or debris) is considered asbestos containing waste subject to §61.150 of the NESHAP, provided the coverage thresholds discussed above in section 1 are met or exceeded. This sawdust or debris must be disposed of at a disposal site operated in accordance with the NESHAP. It is also EPA's interpretation of the NESHAP that if the remainder of the roof is free of the sawdust and debris generated by the cutting, or if such sawdust or debris is collected as discussed below in paragraphs 3.C.3, 3.C.4, 3.C.5 and 3.C.6, the remainder of the roof can be disposed of as nonasbestos waste because it is considered to be Category I nonfriable material (as long as the remainder of the roof is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material). EPA further believes that if the roof is not cleaned of such sawdust or debris, i.e., it is contaminated, then it must be treated as asbestos-containing waste material and be handled in accordance with §61.150.

3.C.3. In order to be in compliance with the NESHAP while using an RB roof cutter (or device that similarly damages the roofing material) to cut Category I asbestos containing roofing material, the dust and debris resulting from the cutting of the roof should be collected as soon as possible after the cutting operation, and kept wet until collected and placed in leak-tight containers. EPA believes that where the blade guard completely encloses the blade and extends down close to the roof surface and is equipped with a device for spraying a fine mist of water inside the blade guard, and the spraying device is in operation during the cutting, most of the dust and debris from cutting will be confined along the cut. The most efficient methods to collect the dust and debris from cutting are to immediately collect or vacuum up the damaged material where it lies along the cut using a filtered vacuum cleaner or debris collector that meets the requirements of 40 CFR 61.152 to clean up as much of the debris as possible, or to gently sweep up the bulk of the debris, and then use a filtered vacuum cleaner that meets the requirements of 40 CFR 61.152 to clean up as much of the remainder of the debris as possible. On smooth surfaced roofs (nonaggregate roofs), sweeping up the debris and then wet wiping the surface may be done in place of using a filtered vacuum cleaner. It is EPA's view that if these decontamination procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste. Additionally, it is EPA's view that where such decontamination procedures are followed, if the remaining portions of the roof are non-asbestos or Category I nonfriable asbestos material, and if the remaining portions are removed using removal methods that slice, shear, punch or pry, as discussed in section 1.C above, then the remaining portions do not have to be collected and disposed of as asbestos waste and the NESHAP's no visible emissions and adequately wet requirements are not applicable to the removal of the remaining portions. In EPA's interpretation, the failure of a filtered vacuum cleaner or debris collector to collect larger chunks or pieces of damaged roofing material created by the RB roof cutter does not require the remaining roofing material to be handled and disposed of as asbestos waste, provided that such visible chunks or pieces of roofing material are collected (e.g. by gentle sweeping) and disposed of as asbestos waste. Other methods of decontamination may not be adequate, and should be approved by the local delegated agency.

3.C.4. In EPA's interpretation, if the debris from the cutting is not collected immediately, it will be necessary to lightly mist the dust or debris, until it is collected, as discussed above, and placed in containers. The dust or debris should be lightly misted frequently enough to prevent the material from drying, and to prevent airborne emissions, prior to collection as described above. It is EPA's interpretation of the NESHAP that if these procedures are followed, the remaining roofing material does not have to be collected and disposed of as asbestos waste, as long as the remaining roof material is in fact nonasbestos material or if it is Category I asbestos material and the removal methods do not further sand, grind, cut or abrade the roof material.

3.C.5. It is EPA's interpretation that, provided the roofing material is not friable prior to the cutting operation, and provided the roofing material has not been made friable by the cutting operation, the appearance of rough, jagged or damaged edges on the remaining roofing material, due to the use of an RB roof cutter, does not require that such remaining roofing material be handled and disposed of as asbestos waste. In addition, it is also EPA's interpretation that if the sawdust or debris generated by the use of an RB roof cutter has been collected as

discussed in paragraphs 3.C.3, 3.C.4 and 3.C.6, the presence of dust along the edge of the remaining roof material does not render such material "friable" for purposes of this interpretive rule or the NESHAP, provided the roofing material is not friable prior to the cutting operation, and provided that the remaining roofing material near the cutline has not been made friable by the cutting operation. Where roofing material near the cutline has been made friable by the use of the RB cutter (i.e. where such remaining roofing material near the cutline can be crumbled, pulverized or reduced to powder using hand pressure), it is EPA's interpretation that the use of an encapsulant will ensure that such friable material need not be treated or disposed of as asbestos containing waste material. The encapsulant may be applied to the friable material after the roofing material has been collected into stacks for subsequent disposal as nonasbestos waste. It is EPA's view that if the encapsulation procedure set forth in this paragraph is followed in operations where roofing material near the cutline has been rendered friable by the use of an RB roof cutter, and if the decontamination procedures set forth in paragraph 3.C.3 have been followed, the NESHAP's no visible emissions and adequately wet requirements would be met for the removal, handling and disposal of the remaining roofing material.

3.C.6. As one way to comply with the NESHAP, the dust and debris from cutting can be placed in leak-tight containers, such as plastic bags, and the containers labeled using warning labels required by OSHA (29 CFR 1926.58). In addition, the containers must have labels that identify the waste generator (such as the name of the roofing contractor, abatement contractor, and/or building owner or operator) and the location of the site at which the waste was generated.

IV. Waste Disposal

A. Disposal Requirements

4.A.1. Section 61.150(b) requires that, as soon as is practical, all collected dust and debris from cutting as well as any contaminated roofing squares, must be taken to a landfill that is operated in accordance with §61.154 or to an EPA-approved site that converts asbestos waste to nonasbestos material in accordance with §61.155. During the loading and unloading of affected waste, asbestos warning signs must be affixed to the vehicles.

B. Waste Shipment Record

4.B.1. For each load of asbestos waste that is regulated under the NESHAP, a waste shipment record (WSR) must be maintained in accordance with §61.150(d). Information that must be maintained for each waste load includes the following:

- *Name, address, and telephone number of the waste generator*
- *Name and address of the local, State, or EPA regional office responsible for administering the asbestos NESHAP program*
- *Quantity of waste in cubic meters (or cubic yards)*
- *Name and telephone number of the disposal site operator*
- *Name and physical site location of the disposal site*
- *Date transported*
- *Name, address, and telephone number of the transporter(s)*
- *Certification that the contents meet all government regulations for transport by highways.*

4.B.2. The waste generator is responsible for ensuring that a copy of the WSR is delivered to the disposal site along with the waste shipment. If a copy of the WSR signed by the disposal site operator is not returned to the waste generator within 35 days, the waste generator must contact the transporter and/or the disposal site to determine the status of the waste shipment. 40 CFR 61.150(d)(3). If the signed WSR is not received within 45 days, the waste generator must report, in writing, to the responsible NESHAP program agency and send along a copy of the WSR. 40 CFR 61.150(d)(4). Copies of WSRs, including those signed by the disposal site operator, must be retained for at least 2 years. 40 CFR 61.150(d)(5).

V. Training

5.1. For those roof removals that are subject to the NESHAP, at least one on-site supervisor trained in the provisions of the NESHAP must be present during the removal of the asbestos roofing material. 40 CFR 61.145(c)(8). In EPA's view, this person can be a job foreman, a hired consultant, or someone who can represent the building owner or contractor responsible for the removal. In addition to the initial training requirement, a refresher training course is required every 2 years. The NESHAP training requirements became effective on November 20, 1991.

5.2. Asbestos training courses developed specifically to address compliance with the NESHAP in roofing work, as well as courses developed for other purposes can satisfy this requirement of the NESHAP, as long as the course covers the areas specified in the regulation. EPA believes that Asbestos Hazard Emergency Response Act (AHERA) training courses will, for example, satisfy the NESHAP training requirements. However, nothing in this interpretive rule or in the NESHAP shall be deemed to require that roofing contractors or roofing workers performing operations covered by the NESHAP must be trained or accredited under AHERA, as amended by the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). Likewise, state or local authorities may independently impose additional training, licensing, or accreditation requirements on roofing contractors performing operations covered by the NESHAP, but such additional training, licensing or accreditation is not called for by this interpretive rule or the federal NESHAP.

5.3. For removal of Category I asbestos containing roofing material where RB roof cutters or equipment that similarly damages the asbestos-containing roofing material are used, the NESHAP training requirements (§61.145(c)(8)) apply as discussed in Section I above. It is EPA's intention that removal of Category I asbestos-containing roofing material using hatchets, axes, knives, and/or the use of spud bars, pry bars and shovels to lift the roofing material, or similar removal methods that slice, punch, or shear the roof membrane are not subject to the training requirements, since these methods do not cause the roof removal to be subject to the NESHAP. Likewise, it is EPA's intention that roof removal operations involving Category II nonfriable ACM are not subject to the training requirements where such operations are not subject to the NESHAP as discussed in section I above.

The facility does not remove roofing materials, so this appendix does not apply.

MACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor/major source of hazardous air pollutant (HAP) emissions, and is subject to the requirements of 40 CFR 63, Subpart AAAA–National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. Refer to the Title V Classification section for additional information.

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.

40 CFR 63.2 is as follows:

Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

The total potential to emit, considering controls, of HAP are 0.1 T/yr, which is less than the major source threshold.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to §60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.

The Milner Butte Landfill has accepted waste since November 8, 1987 and has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters. Therefore, the facility is subject to this subpart.

(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 m3 and that is not permanently closed as of January 16, 2003.

§ 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.

MBL is an existing affected source.

§ 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.

MLB is an existing affected source and must comply 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.

MBL is not a major source.

(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.

The facility must comply with the requirements of 1955(b) and 1960 – 1980.

§ 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.

MBL does not have a bioreactor, so this section does not apply.

§ 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.

This 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.

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.

The Milner Butte Landfill is subject to, and will comply with, the requirements of 40 CFR Part 60, Subpart WWW.

(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.

The Milner Butte Landfill is required by 40 CFR 60.752(b)(2) of Subpart WWW to install a collection and control system by February 21, 2012 and will comply with the requirements in Sec. 63.1960 through 63.1985 and the general provisions of this part.

(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.

The Milner Butte Landfill will follow the procedures in CFR 60.752(b)(2) of Subpart WWW and/or approved alternatives. Alternative have been submitted within the collection and control system design plan dated August 19, 2010. The Milner Butte Landfill will comply with the SSM requirements in Subpart A of this part and will submit compliance reports every 6 months as specified in Sec. 63.1980(a) and (b).

(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).

MBL 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.

This applies.

§ 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.

§ 63.1975 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.

This 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.

This applies.

(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.

MBL 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.

§ 63.1990 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.

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	
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	

Some of these apply.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

Initial Permit Condition 1

The purpose of this permit to construct is for an initial permit for a landfill flare.

Initial Permit Condition 2

This permit condition lists the sources regulated by this permit.

Initial Permit Condition 3

This is a description of the process.

Initial Permit Condition 4

This permit condition identifies the emission control devices.

Initial Permit Condition 5

The concentration of H_2S in the landfill gas that is being burned in the flare was estimated by the facility to be 150 ppmv in the application, and emissions were estimated and modeled based on that value. Because other landfills have had H_2S concentrations that far exceed 150 ppmv, and that would result in higher-than-anticipated SO_2 emissions, DEQ determined that a higher limit of 785 ppmv would not result in a modeled exceedence of the NAAQS standard, so, in order to avoid possible future violations, DEQ set the SO_2 limit at 785 ppmv.

Initial Permit Condition 6

40 CFR 60.752 (2)(iii)(B)(2) applies and was incorporated.

Initial Permit Condition 7

40 CFR 60.753 applies and was incorporated.

Initial Permit Condition 8

40 CFR 60.755(a)(3) applies and was incorporated.

Initial Permit Condition 9

40 CFR 60.755(a)(5) applies and was incorporated.

Initial Permit Condition 10

40 CFR 60.755(b) applies and was incorporated.

Initial Permit Condition 11

40 CFR 60.755(c) applies and was incorporated.

Initial Permit Condition 12

40 CFR 60.755(d) applies and was incorporated.

Initial Permit Condition 13

40 CFR 60.755(e) applies and was incorporated.

Initial Permit Condition 14

40 CFR 60.756 applies and was incorporated.

Initial Permit Condition 15

40 CFR 60.756(f) applies and was incorporated.

Initial Permit Condition 16

40 CFR 63.1960 applies and was incorporated.

Initial Permit Condition 17

This condition requires testing for H_2S to assess whether the influent to the flare will exceed the limit. It is intended that the permittee use a handheld testing device, such as a Draeger tube, to conduct these tests.

Initial Permit Condition 18

This condition details the testing schedule. If the levels are consistently low, then the testing schedule will be less frequent unless a high sample is taken.

Initial Permit Condition 19

This condition is for recordkeeping and maintenance of the test equipment.

Initial Permit Condition 20

This is to be able to use the actual flow rate of influent gas along with the measured concentration to determine the mass emission rate of SO_2.

Initial Permit Condition 21

40 CFR 60.752(b)(2)(iii)(B) applies and was incorporated.

Initial Permit Condition 22

This is to require a report of the data collected during the previous month. This gives the permittee a month to assemble the data and submit it.

Initial Permit Condition 23

40 CFR 60.757 (f) applies and was incorporated.

Initial Permit Condition 24

40 CFR 60.758(a) applies and was incorporated.

Initial Permit Condition 25

40 CFR 60.758(c) applies and was incorporated.

Initial Permit Condition 26

40 CFR 60.758(c)(2) applies and was incorporated.

Initial Permit Condition 27

40 CFR 60.758(d) applies and was incorporated.

Initial Permit Condition 28

40 CFR 60.759 applies and was incorporated.

Initial Permit Condition 29

40 CFR 60.759(a)(3)(ii) and (iii) applies and was incorporated.

Initial Permit Condition 30

40 CFR 63.1980 applies and was incorporated.

General Provisions

Initial Permit Condition 31

The duty to comply general compliance provision requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Initial Permit Condition 32

The maintenance and operation general compliance provision requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 33

The obligation to comply general compliance provision specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Initial Permit Condition 34

The inspection and entry provision requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Initial Permit Condition 35

The construction and operation notification provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211. Construction of the landfill was initiated prior to the issuance of this permit to construct.

Initial Permit Condition 36

The performance testing notification of intent provision requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Initial Permit Condition 37

The performance test protocol provision requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Initial Permit Condition 38

The performance test report provision requires that the permittee report any performance test results to DEQ within 60 days of completion, in accordance with IDAPA 58.01.01.157.04-05 (an extension was granted from 30 days to 60 days as requested during the facility draft comment period).

Initial Permit Condition 39

The monitoring and recordkeeping provision requires that the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 40

The excess emissions provision requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130.

Initial Permit Condition 41

The certification provision requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Initial Permit Condition 42

The false statement provision requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Initial Permit Condition 43

The tampering provision requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Initial Permit Condition 44

The transferability provision specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Initial Permit Condition 45

The severability provision specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

PUBLIC REVIEW

Public Comment Period

A public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

APPENDIX A – EMISSIONS INVENTORIES

Attachment B

TABLE 1.
SUMMARY OF TOXIC AIR CONTAMINANT DATA
LANDFILL GAS CHARACTERIZATION
MILNER BUTTE LANDFILL
BURLEY, IDAHO

CAS	COMPOUNDS			Compound Concentration Found in LFG [2] (ppmv)
	TOXIC AIR CONTAMINANTS [1]			
71-55-6	1,1,1-Trichloroethane (methyl chloroform)			0.168
79-34-5	1,1,2,2-Tetrachloroethane			0.070
75-34-3	1,1-Dichloroethane			0.741
75-35-4	1,1-Dichloroethene			0.092
107-06-2	1,2-Dichloroethane			0.120
78-87-5	1,2-Dichloropropane			0.023
107-13-1	Acrylonitrile			0.036
71-43-2	Benzene			0.972
75-15-0	Carbon disulfide (3)			0.320
56-23-5	Carbon tetrachloride			0.007
463-58-1	Carbonyl sulfide (3)			0.183
108-90-7	Chlorobenzene			0.227
75-45-6	Chlorodifluoromethane (Freon 22)			0.355
75-00-3	Chloroethane (ethyl chloride)			0.239
67-66-3	Chloroform			0.021
106-46-7	Dichlorobenzene (1,2; 1,3; and 1,4)			1.607
75-09-2	Dichloromethane (Methylene Chloride)			3.395
100-41-4	Ethylbenzene			6.789
106-93-4	Ethylene Dibromide (Dibromoethane)			0.046
110-54-3	Hexane			2.324
7647-01-0	Hydrochloric acid [3]			10.742
7783-06-4	Hydrogen sulfide			23.578
7439-97-6	Mercury [4]			2.92E-04
74-87-3	Methyl Chloride (Chloromethane)			0.249
78-93-3	Methyl ethyl ketone			10.557
108-10-1	Methyl isobutyl ketone			0.750
127-18-4	Perchloroethylene (tetrachloroethylene)			1.193
108-88-3	Toluene			25.405
79-01-6	Trichloroethylene			0.681
75-01-4	Vinyl chloride			1.077
1330-20-7	Xylenes			16.582
TOTALS	TACs			108.549

NOTES:
(1) Regulated toxic compounds include hazardous air pollutants (HAPs) defined by the U.S. EPA (Title III of the Clean Air Act)
(2) Average concentration of compounds found in LFG based on " Waste Industry Air Coalition" (WIAC) Comparison of Recent Landfill Gas Analyses with or AP-42 if WIAC values not available.
(3) Concentration of HCl is based on concentrations of chlorinated compounds in WIAC.
(4) Concentration of Mercury based on the Revised EPA AP-42 Section 2.4 Table 2.4-1 (11/98).

NA = Not Analyzed
ND = Not Detected
CFCs = Chlorofluorohydrocarbons
TACs = Toxic Air Contaminants

TABLE 2.
MAXIMUM POTENTIAL TO EMIT CONTROLLED EMISSIONS FROM LANDFILL GAS (EU 02)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

CAS	COMPOUNDS [1]	Molecular Weight (g/Mol)	Concentration of Compounds Found in LFG [2] (ppmv)	Pollutant Flow Rate to Flare [3] (tons/yr)	Compound-Specific Flare Destruction Efficiency [4]	Controlled LFG Emissions After Flare Destruction (lbs/hr)	Controlled LFG Emissions After Flare Destruction [5] (tons/yr)
	HAZARDOUS AIR POLLUTANTS						
71-55-6	1,1,1-Trichloroethane (methyl chloroform)	133.42	0.1680	0.02	98.00%	1.05E-04	4.59E-04
79-34-5	1,1,2,2-Tetrachloroethane	167.85	0.0700	0.01	98.00%	5.49E-05	2.41E-04
75-34-3	1,1-Dichloroethane	98.95	0.7410	0.08	98.00%	3.43E-04	1.50E-03
75-35-4	1,1-Dichloroethene	96.94	0.0920	0.01	98.00%	4.17E-05	1.83E-04
107-06-2	1,2-Dichloroethane	98.96	0.1200	0.01	98.00%	5.55E-05	2.43E-04
78-87-5	1,2-Dichloropropane	112.98	0.0230	0.00	98.00%	1.21E-05	5.32E-05
107-13-1	Acrylonitrile	53.06	0.0360	0.00	99.70%	1.34E-06	5.87E-06
71-43-2	Benzene	78.11	0.9720	0.08	99.70%	5.32E-05	2.33E-04
75-15-0	Carbon disulfide (7)	76.13	0.3200	0.02	100.00%	0.00E+00	0.00E+00
56-23-5	Carbon tetrachloride	153.84	0.0070	0.00	98.00%	5.03E-06	2.20E-05
463-58-1	Carbonyl sulfide	60.07	0.1830	0.01	100.00%	0.00E+00	0.00E+00
108-90-7	Chlorobenzene	112.56	0.2270	0.03	98.00%	1.19E-04	5.23E-04
75-45-6	Chlorodifluoromethane (Freon 22)	86.47	0.3550	0.03	98.00%	1.43E-04	6.28E-04
75-00-3	Chloroethane (ethyl chloride)	64.52	0.2390	0.02	98.00%	7.21E-05	3.16E-04
67-66-3	Chloroform	119.39	0.0210	0.00	98.00%	1.17E-05	5.13E-05
106-46-7	Dichlorobenzene	147	1.6070	0.24	98.00%	1.10E-03	4.84E-03
75-09-2	Dichloromethane (methylene chloride)	84.94	3.3950	0.30	98.00%	1.35E-03	5.90E-03
100-41-4	Ethylbenzene	106.16	6.7890	0.74	99.70%	5.05E-04	2.21E-03
106-93-4	Ethylene dibromide	187.88	0.0460	0.01	98.00%	4.04E-05	1.77E-04
110-54-3	Hexane	86.17	2.3240	0.20	99.70%	1.40E-04	6.15E-04
7647-01-0	Hydrochloric acid	36.50	10.7420	0.40	98.00%	9.25E-02	4.05E-01
7783-06-4	Hydrogen sulfide	34.08	23.5780	0.82	100.00%	0.00E+00	0.00E+00
7439-97-6	Mercury (total)	200.61	0.0003	0.00	0.00%	1.37E-05	6.00E-05
74-87-3	Methyl chloride (chloromethane)	50.49	0.2490	0.01	98.00%	5.88E-05	2.57E-04
78-93-3	Methyl ethyl ketone	72.11	10.5570	0.78	99.70%	5.34E-04	2.34E-03
108-10-1	Methyl isobutyl ketone	100.16	0.7500	0.08	99.70%	5.27E-05	2.31E-04
127-18-4	Perchloroethylene (tetrachloroethylene)	165.83	1.1930	0.20	98.00%	9.25E-04	4.05E-03
108-88-3	Toluene	92.13	25.4050	2.40	99.70%	1.64E-03	7.19E-03
79-01-6	Trichloroethylene	131.38	0.6810	0.09	98.00%	4.18E-04	1.83E-03
75-01-4	Vinyl chloride	62.50	1.0770	0.07	98.00%	3.15E-04	1.38E-03
1330-20-7	Xylenes	106.16	16.5820	1.80	99.70%	1.23E-03	5.41E-03
TOTALS	HAPs			8.47			4.46E-01
Total Non-Methane Organics (NMOCs) as Hexane		86.18	1200	105.86	98.00%	4.83E-01	2.12
Volatile Organic Compounds (VOCs)		86.18	468	41.29	98.00%	1.89E-01	0.83

Criteria Air Pollutants	Molecular Weight (g/Mol)	Concentration of Compound (ppmv)	Emission Factor (lb/MMBtu) [6]	Emission Factor (lb/hr/scfm methane)	Maximum Emissions from Flare (lbs/hr)	Maximum Emissions from Flare (tons/yr)
Nitrogen oxides (NOx)			0.060		2.70	11.83
Sulfur oxides (as SO2) [7]	64.10	150.00			2.25	9.84
Carbon monoxide (CO)			0.200		9.00	39.42
Particulates (PM10)				0.001	0.75	3.29
TOTAL CRITERIA POLLUTANTS						64.37

NOTES:
(1) List of hazardous air pollutants (HAPs) regulated by U.S. EPA that are anticipated to be found in LFG as determined from a list in AP-42 Section 2.4
(2) Average concentration of compounds found in LFG based on "Waste Industry Air Coalition Comparison of Recent Landfill Gas Analyses with Historic AP-42 Values."
(3) Based on concentrations in Column D and proposed maximum landfill gas flow of flare
(4) Compound-specific flare destruction efficiencies: 98.0% for VOCs and NMOCs, 98% for Halogenated Species, 99.7% for Non-Halogenated Species, 0% for Mercury (per AP-42 Table 2.4-3)
(5) Controlled emissions of HAPs, NMOCs, and VOCs after destruction in flare equals uncontrolled emissions x (1- flare destruction efficiency).
(6) Controlled emissions of NOx, SOx, CO, and PM10 were estimated with the following emission factors: NOx = 0.06 and CO = 0.2 lb/MMBtu (manufacturer's guarantee); PM-10 = 0.001 lb/hr/dscfm (AP-42); and SOx (assume conversion of reduced sulfur @ 150 ppmv to sulfur dioxide).
(7) Destruction efficiency of reduced sulfur compounds assumed to be 100%; i.e., complete conversion to sulfur dioxide

MODEL VARIABLES
Maximum capacity of flare: 1500 cfm

TABLE 3.
ACTUAL CONTROLLED EMISSIONS FROM LANDFILL GAS (EU 02)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

CAS	COMPOUNDS [1]	Molecular Weight (g/Mol)	Concentration of Compounds Found In LFG [2] (ppmv)	Pollutant Flow Rate to Flare [3] (tons/yr)	Compound-Specific Flare Destruction Efficiency [4]	Controlled LFG Emissions After Flare Destruction (lbs/hr)	Controlled LFG Emissions After Flare Destruction [5] (tons/yr)
	HAZARDOUS AIR POLLUTANTS						
71-55-6	1,1,1-Trichloroethane (methyl chloroform)	133.42	0.1680	0.01	98.00%	2.44E-05	1.07E-04
79-34-5	1,1,2,2-Tetrachloroethane	167.85	0.0700	0.00	98.00%	1.28E-05	5.61E-05
75-34-3	1,1-Dichloroethane	98.95	0.7410	0.02	98.00%	8.00E-05	3.50E-04
75-35-4	1,1-Dichloroethene	96.94	0.0920	0.00	98.00%	9.73E-06	4.26E-05
107-06-2	1,2-Dichloroethane	98.96	0.1200	0.00	98.00%	1.30E-05	5.67E-05
78-87-5	1,2-Dichloropropane	112.98	0.0230	0.00	98.00%	2.83E-06	1.24E-05
107-13-1	Acrylonitrile	53.06	0.0360	0.00	99.70%	3.12E-07	1.37E-06
71-43-2	Benzene	78.11	0.9720	0.02	99.70%	1.24E-05	5.44E-05
75-15-0	Carbon disulfide (7)	76.13	0.3200	0.01	100.00%	0.00E+00	0.00E+00
56-23-5	Carbon tetrachloride	153.84	0.0070	0.00	98.00%	1.17E-06	5.14E-06
463-58-1	Carbonyl sulfide	60.07	0.1830	0.00	100.00%	0.00E+00	0.00E+00
108-90-7	Chlorobenzene	112.56	0.2270	0.01	98.00%	2.79E-05	1.22E-04
75-45-6	Chlorodifluoromethane (Freon 22)	86.47	0.3550	0.01	98.00%	3.35E-05	1.47E-04
75-00-3	Chloroethane (ethyl chloride)	64.52	0.2390	0.00	98.00%	1.68E-05	7.37E-05
67-66-3	Chloroform	119.39	0.0210	0.00	98.00%	2.73E-06	1.20E-05
106-46-7	Dichlorobenzene	147	1.6070	0.06	98.00%	2.58E-04	1.13E-03
75-09-2	Dichloromethane (methylene chloride)	84.94	3.3950	0.07	98.00%	3.15E-04	1.38E-03
100-41-4	Ethylbenzene	106.16	6.7890	0.17	99.70%	1.18E-04	5.16E-04
106-93-4	Ethylene dibromide	187.88	0.0460	0.00	98.00%	9.43E-06	4.13E-05
110-54-3	Hexane	86.17	2.3240	0.05	99.70%	3.28E-05	1.43E-04
7647-01-0	Hydrochloric acid	36.50	10.7420	0.09	98.00%	2.16E-02	9.45E-02
7783-06-4	Hydrogen sulfide	34.08	23.5780	0.19	100.00%	0.00E+00	0.00E+00
7439-97-6	Mercury (total)	200.61	0.0003	0.00	0.00%	3.19E-06	1.40E-05
74-87-3	Methyl chloride (chloromethane)	50.49	0.2490	0.00	98.00%	1.37E-05	6.01E-05
78-93-3	Methyl ethyl ketone	72.11	10.5570	0.18	99.70%	1.25E-04	5.45E-04
108-10-1	Methyl isobutyl ketone	100.16	0.7500	0.02	99.70%	1.23E-05	5.38E-05
127-18-4	Perchloroethylene (tetrachloroethylene)	165.83	1.1930	0.05	98.00%	2.16E-04	9.45E-04
108-88-3	Toluene	92.13	25.4050	0.56	99.70%	3.83E-04	1.68E-03
79-01-6	Trichloroethylene	131.38	0.6810	0.02	98.00%	9.76E-05	4.27E-04
75-01-4	Vinyl chloride	62.50	1.0770	0.02	98.00%	7.34E-05	3.22E-04
1330-20-7	Xylenes	106.16	16.5820	0.42	99.70%	2.88E-04	1.26E-03
TOTALS	HAPs			1.98			1.04E-01
	Total Non-Methane Organics (NMOCs) as Hexane	86.18	1200	24.70	98.00%	1.13E-01	0.49
	Volatile Organic Compounds (VOCs)	86.18	468.00	9.63	98.00%	4.40E-02	0.19

Criteria Air Pollutants	Molecular Weight (g/Mol)	Concentration of Compound (ppmv)	Emission Factor (lb/MMBtu) [6]	Emission Factor (lb/hr/scfm methane)	Estimated Emissions from Flare (lbs/hr)	Estimated Emissions from Flare (tons/yr)
Nitrogen oxides (NOx)			0.060		0.63	2.76
Sulfur oxides (as SO2) [7]	64.10	150.00			0.52	2.30
Carbon monoxide (CO)			0.200		2.10	9.20
Particulates (PM10)				0.001	0.18	0.77
TOTAL CRITERIA POLLUTANTS						15.02

NOTES:
(1) List of hazardous air pollutants (HAPs) regulated by U.S. EPA that are anticipated to be found in LFG as determined from a list in AP-42 Section 2.4
(2) Average concentration of compounds found in LFG based on "Waste Industry Air Coalition Comparison ofRecent Landfill Gas Analyses with Historic AP-42 Values."
(3) Based on concentrations in Column D and proposed maximum landfill gas flow of flare
(4) Compound-specific flare destruction efficiencies: 98.0% for VOCs and NMOCs, 98% for Halogenated Species, 99.7% for Non-Halogenated Species, 0% for Mercury (per AP-42 Table2.4-3)
(5) Controlled emissions of HAPs, NMOCs, and VOCs after destruction in flare equals uncontrolled emissions x (1- flare destruction efficiency).
(6) Controlled emissions of NOx, SOx, CO, and PM10 were estimated with the following emission factors: NOx = 0.06 and CO = 0.2 lb/MMBtu (manufacturer's guarantee); PM-10 = 0.001 lb/hr/dscfm (AP-42); and SOx (assume conversion of reduced sulfur @ 150 ppmv to sulfur dioxide).
(7) Destruction efficiency of reduced sulfur compounds assumed to be 100%; i.e., complete conversion to sulfur dioxide

MODEL VARIABLES
Current flare flow rate: 350 cfm
Current methane content of LFG: 50.0%

TABLE 4.
LANDFILL GAS NMOC AND VOC EMISSIONS (EU 01)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

Gas / Pollutant	Total LFG Production [1, 2] (tons/yr)	LFG Collected by the GCCS [3] (tons/yr)	Fugitive LFG [3] (tons/yr)	Non-Fugitive LFG [4] (tons/yr)
NMOC	63.58	47.69	15.90	2.12
VOCs [2]	24.80	18.60	6.20	0.83

Gas / Pollutant	Emission Rate [1]				
	(Mg/year)	(m3/year)	(av ft3/min)	(ft3/year)	(tons/year)
Total landfill gas	16,782	13,438,221	902.9	474,570,781	18,460.16
NMOC	58	16,126	1.1	569,485	63.58

Notes:
(1) These emission rates were calculated based on the U.S. EPA LandGEM v3.02 model for 2010.
(2) VOCs are calculated at 39% of NMOC (by weight) per AP-42 Table 2.4-2. for No or Unknown co-disposal.
(3) Based on assumed GCCS gas collection efficiency of 75% per AP-42 paragraph 2.4.4.2.
(4) Emissions after combustion in the flare and release from flare stack.

TABLE 5.
ACTUAL FUGITIVE DUST EMISSIONS FROM WIND EROSION OF STOCKPLIES (EU 03)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

Pollutant	Particle Size Multiplier k [1]	TSP Emission Factor [2]	Emission Factor [3]	Units	Total Exposed Area (acres)	Emissions Amount (tons/yr)
PM30	0.082	0.380	0.380	tons/acre-year	15.8	6.00
PM10	0.016	0.380	0.074	tons/acre-year	15.8	1.17
PM2.5	0.004	0.380	0.019	tons/acre-year	15.8	0.29

Notes:
(1) k values are from AP-42 Table 13.2-1.1.
(2) TSP (i.e., PM30) emission factor is 0.38 from AP-42 Table 11.9-4.
(3) Per AP-42, the emission factors are calculated as: $E_{PMX} = E_{PM30} \times (k_{PMX}) / (k_{PM30})$

TABLE 6.
ACTUAL FUGITIVE DUST (PM_X) EMISSIONS FROM PAVED ROADS FOR REFUSE VEHICLES (EU 04)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

		Vehicle Miles Traveled [1]					PM2.5			PM10			PM30		
		Annually		Daily Average (5 days/wk)		Vehicle Weight [5]	Emission Factor for Paved Roads [2]	Controlled Emission Factor for Paved Roads [3]	Annual Emissions from Paved Roads	Emission Factor for Paved Roads [2]	Controlled Emission Factor for Paved Roads [3]	Annual Emissions from Paved Roads	Emission Factor for Paved Roads [2]	Controlled Emission Factor for Paved Roads [3]	Annual Emissions from Paved Roads
	Total trips in 2009 [4]	paved	unpaved	paved	unpaved	(tons)	(lb/VMT)	(lb/VMT)	(tpy)	(lb/VMT)	(lb/VMT)	(tpy)	(lb/VMT)	(lb/VMT)	(tpy)
Commercial Refuse Vehicle (full)	6358	1271.6	5086.4	4.9	19.6	23.2	0.202	0.050	0.032	0.806	0.202	0.128	4.133	1.033	0.657
Commercial Refuse Vehicle (empty)	6358	1271.6	5086.4	4.9	19.6	13.5	0.090	0.022	0.014	0.359	0.090	0.057	1.840	0.460	0.293
Refuse Transfer Truck (full)	7300	1460.0	5840.0	5.6	22.5	23.2	0.202	0.050	0.037	0.806	0.202	0.147	4.133	1.033	0.754
Refuse Transfer Truck (empty)	7300	1460.0	5840.0	5.6	22.5	13.5	0.090	0.022	0.016	0.359	0.090	0.066	1.840	0.460	0.336
Self Haul Customer (Small Trucks, other vehicles)	8614	3445.6	0.0	13.3	0.0	2.0	0.005	0.001	0.002	0.020	0.005	0.009	0.104	0.026	0.045
Roll Off	494	197.6	790.4	0.8	3.0	23.2	0.202	0.050	0.005	0.806	0.202	0.020	4.133	1.033	0.102
TOTAL		**9106**	**22643**	**35.0**	**87.1**				**0.107**			**0.427**			**2.187**

Notes:

(1) From the entrance to the public unloading area = 0.4 miles of paved road (roundtrip) based on road miles calculated by using the site map.
From the entrance to the landfill active area = 0.4 mile of paved road and 1.6 mile of unpaved road (roundtrip).

(2) Emission factor E = k*(s/2)^0.65*(W/3)^1.5, whe k = particle size multiplier =
0.004 for PM2.5 (AP-42 Table 13.2-1.1)
0.016 for PM10 (AP-42 Table 13.2-1.1)
0.082 for PM30 (AP-42 Table 13.2-1.1)

s = silt loading factor = 7.4 g/m^2 (AP-42 Table 13.2.1-4)
W = vehicle weight (tons)

(3) Control efficiency is assumed to be 75% based on AP-42 Figure 13.2.2-2.
(4) Number of trips based on 2009 scale records.
(5) Vehicle Weights based on average 2009 Gross and Tare scale data.

TABLE 7.
ACTUAL FUGITIVE DUST (PM_x) EMISSIONS FROM UNPAVED ROADS FOR REFUSE VEHICLES (EU 05)
MILNER BUTTE LANDFILL
BURLEY, IDAHO

		Vehicle Miles Traveled [1]					PM2.5			PM10			PM30		
		Annually		Daily Average (5 days/wk)		Vehicle Weight [5]	Emission Factor for Unpaved Roads [2]	Controlled Emission Factor for Unpaved Roads [3]	Annual Emissions from Unpaved Roads	Emission Factor for Unpaved Roads [2]	Controlled Emission Factor for Unpaved Roads [3]	Annual Emissions from Unpaved Roads	Emission Factor for Unpaved Roads [2]	Controlled Emission Factor for Unpaved Roads [3]	Annual Emissions from Unpaved Roads
	Total trips in 2009 [4]	paved	unpaved	paved	unpaved	(tons)	(lb/VMT)	(lb/VMT)	(tpy)	(lb/VMT)	(lb/VMT)	(tpy)	(lb/VMT)	(lb/VMT)	(tpy)
Commercial Refuse Vehicle (full)	6358	1271.6	5086.4	4.9	19.6	23.2	0.328	0.082	0.209	2.140	0.535	1.360	7.926	1.981	5.039
Commercial Refuse Vehicle (empty)	6358	1271.6	5086.4	4.9	19.6	13.5	0.257	0.064	0.164	1.678	0.420	1.067	6.218	1.554	3.953
Refuse Transfer Truck (full)	7300	1460.0	5840.0	5.6	22.5	23.2	0.328	0.082	0.239	2.140	0.535	1.562	7.926	1.981	5.786
Refuse Transfer Truck (empty)	7300	1460.0	5840.0	5.6	22.5	13.5	0.257	0.064	0.188	1.678	0.420	1.225	6.218	1.554	4.539
Self Haul Customer (Small Trucks, other vehicles)	8614	3445.6	0.0	13.3	0.0	2.0	0.109	0.027	0.000	0.710	0.177	0.000	2.629	0.657	0.000
Roll Off	494	197.6	790.4	0.8	3.0	23.2	0.328	0.082	0.032	2.140	0.535	0.211	7.926	1.981	0.783
TOTAL		**9106**	**22643**	**35.0**	**87.1**				**0.832**			**5.426**			**20.100**

Notes:

(1) From the entrance to the public unloading area = 0.06 miles of paved road (roundtrip) based on road miles calculated by using the site map.
From the entrance to the landfill active area = 0.152 mile of paved road and 0.54 mile of unpaved road (roundtrip).

(2) Emission factor $E = k*(s/12)^a*(W/3)^b$, where

k = particle size multiplier =	0.23 for PM2.5	(AP-42 Table 13.2.2-2)
	1.5 for PM10	(AP-42 Table 13.2.2-2)
	4.9 for PM30	(AP-42 Table 13.2.2-2)
s = surface material silt content (%) =	6.4	(AP-42 Table 13.2.2-1)
W = vehicle weight (tons)		
a =	0.9 for PM2.5	(AP-42 Table 13.2.2-2)
	0.9 for PM10	(AP-42 Table 13.2.2-2)
	0.7 for PM30	(AP-42 Table 13.2.2-2)
b =	0.45 for PM2.5	(AP-42 Table 13.2.2-2)
	0.45 for PM10	(AP-42 Table 13.2.2-2)
	0.45 for PM30	(AP-42 Table 13.2.2-2)

(3) Control efficiency is assumed to be 75% based on AP-42 Figure 13.2.2-2.
(4) Number of trips based on 2009 scale records.
(5) Vehicle Weights based on average 2009 Gross and Tare scale data.

TABLE 8.
SCREENING EMISSIONS LEVELS AND ACCEPTABLE AMBIENT CONCENTRATIONS
NON-CARCINOGENIC AND CARCINOGENIC COMPOUNDS
MILNER BUTTE LANDFILL
BURLEY, IDAHO

CAS	COMPOUNDS	EL (lb/hr)	AAC (24hr avg) (mg/m^3) [3]	AAC (Annual avg) (mg/m^3) [4]	Actual Emissions (lb/hr)	Emissions Over EL	PTE Emissions (lb/hr)	Emissions Over EL
	HAZARDOUS AIR POLLUTANTS							
71-55-6	1,1,1-Trichloroethane (methyl chloroform)	127	95.5	-	2.44E-05	No	1.05E-04	No
79-34-5	1,1,2,2-Tetrachloroethane	1.10E-05	-	1.70E-02	1.28E-05	Yes	5.49E-05	Yes
75-34-3	1,1-Dichloroethane	2.50E-04	-	3.80E-02	8.00E-05	No	3.43E-04	Yes
75-35-4	1,1-Dichloroethene (1,1-Dichloroethylene)	1.30E-04	-	2.00E-02	9.73E-06	No	4.17E-05	No
107-06-2	1,2-Dichloroethane	2.50E-04	-	3.80E-02	1.30E-05	No	5.55E-05	No
78-87-5	1,2-Dichloropropane (Propylene dichloride)	23.133	17.35	-	2.83E-06	No	1.21E-05	No
107-13-1	Acrylonitrile	9.80E-05	-	1.50E-02	3.12E-07	No	1.34E-06	No
71-43-2	Benzene	8.00E-04	-	1.20E-01	1.24E-05	No	5.32E-05	No
75-15-0	Carbon disulfide	2	1.5	-	0.00E+00	No	0.00E+00	No
56-23-5	Carbon tetrachloride	4.40E-04	-	6.70E-02	1.17E-06	No	5.03E-06	No
463-58-1	Carbonyl sulfide	0.027	0.02	-	0.00E+00	No	0.00E+00	No
108-90-7	Chlorobenzene	23.3	17.5	-	2.79E-05	No	1.19E-04	No
75-45-6	Chlorodifluoromethane (Freon 22) [1]	-	-	-	3.35E-05	No	1.43E-04	No
75-00-3	Chloroethane (ethyl chloride)	176	132	-	1.68E-05	No	7.21E-05	No
67-66-3	Chloroform	2.80E-04		4.30E-02	2.73E-06	No	1.17E-05	No
106-46-7	Dichlorobenzene (1,2; 1,3; and 1,4)	30	22.5	-	2.58E-04	No	1.10E-03	No
75-09-2	Dichloromethane (Methylene chloride)	1.60E-03	-	2.40E-01	3.15E-04	No	1.35E-03	No
100-41-4	Ethylbenzene	29	21.75	-	1.18E-04	No	5.05E-04	No
106-93-4	Ethylene Dibromide (Dibromoethane)	3.00E-05	-	4.50E-03	9.43E-06	No	4.04E-05	Yes
110-54-3	Hexane	12	9	-	3.28E-05	No	1.40E-04	No
7647-01-0	Hydrochloric acid (Hydrogen chloride)	5.00E-02	0.375	-	2.16E-02	No	9.25E-02	Yes
7783-06-4	Hydrogen sulfide	0.933	0.7	-	0.00E+00	No	0.00E+00	No
7439-97-6	Mercury [2]	1.00E-03	5.00E-04	-	3.19E-06	No	1.37E-05	No
74-87-3	Methyl Chloride (Chloromethane)	6.867	5.15	-	1.37E-05	No	5.88E-05	No
78-93-3	Methyl ethyl ketone	39.3	29.5	-	1.25E-04	No	5.34E-04	No
108-10-1	Methyl isobutyl ketone	13.7	10.25	-	1.23E-05	No	5.27E-05	No
127-18-4	Perchloroethylene (tetrachloroethylene)	1.30E-02	-	2.1	2.16E-04	No	9.25E-04	No
108-88-3	Toluene	25	18.75	-	3.83E-04	No	1.64E-03	No
79-01-6	Trichloroethylene	17.93	13.45	-	9.76E-05	No	4.18E-04	No
75-01-4	Vinyl chloride	9.40E-04	-	1.40E-01	7.34E-05	No	3.15E-04	No
1330-20-7	Xylenes	29	21.75	-	2.88E-04	No	1.23E-03	No

Notes:
(1) Neither compound nor CAS number listed in IDAPA 58.01.01.585 - 586.
(2) Emissions level and acceptable ambient concentrations for Mercury are lowest concentrations listed per IDAPA 58.01.01.585.
(3) 24-hour average concentrations are for non-carcinogenic substances.
(4) Annual average concentrations are for carcinogenic substances.

TABLE 9.
CRITERIA POLLUTANT, PM, AND NMOC EMISSION SUMMARY
MILNER BUTTE LANDFILL
BURLEY, IDAHO

Criteria Air Pollutants	lbs/hr	tons/year
Volatile Organic Compounds (VOCs)	4.43	7.03
Nitrogen oxides (NO_x)	2.70	11.83
Sulfur oxides (as SO_2)	2.25	9.84
Carbon monoxide (CO)	9.00	39.42
Particulates (PM_{10})	2.35	10.31
TOTAL CRITERIA POLLUTANTS	20.74	78.42

Pollutant	lbs/hr	tons/year
Particulates ($PM_{2.5}$)	0.28	1.23
Particulates (PM_{30})	6.46	28.29
Total Non-Methane Organics (NMOCs) as Hexane	4.11	18.01

Note:
All values are potential to emit (PTE) except for particulate emissions, because PTE emissions for particulates cannot be calculated.

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

MEMORANDUM

DATE: March 21, 2012

TO: Carole Zundel, Permit Writer, Air Quality Division

FROM: Cheryl Robinson, P.E., Air Quality Engineer/Modeling Analyst, Air Quality Division

PROJECT NUMBER: P-2011.0054 PROJ 60771

SUBJECT: Modeling Review for SISW, Milner Butte Landfill Gas Flare, Facility ID 031-00046
Initial PTC for Existing Landfill Gas Flare

1.0 Summary

Southern Idaho Solid Waste (SISW) submitted a Permit to Construct (PTC) application for a landfill gas enclosed flare constructed in 2009 and located at Milner Butte Landfill, 1050 West 400 South, near Burley, Idaho. Emissions include criteria pollutants and several state-regulated toxic air pollutants (TAPs) from combustion of landfill gas in the flare.

Air quality analyses involving atmospheric dispersion modeling of emissions associated with the facility were performed to demonstrate the facility would not cause or significantly contribute to a violation of any ambient air quality standard (IDAPA 58.01.01.203.02 [Idaho Air Rules Section 203.02]) or Toxic Air Pollutant (TAP) increment (Idaho Air Rules Section 203.03). The application and modeling analyses conducted by SCS Engineers on SISW's behalf were received on September 12, 2011.

Air impact analyses are required by Idaho Air Rules to be conducted according to methods outlined in 40 CFR 51, Appendix W (Guideline on Air Quality Models). Appendix W requires that facilities be modeled using emissions and operations representative of design capacity or as limited by a federally enforceable permit condition. The submitted information, combined with DEQ's analyses, demonstrated to the satisfaction of the Department that operation of the proposed facility or modification will not cause or significantly contribute to a violation of any ambient air quality standard, provided the key conditions in Table 1 are representative of facility design capacity or operations as limited by a federally enforceable permit condition.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES

Criteria/Assumption/Result	Explanation/Consideration
The maximum H_2S concentration in the landfill gas was presumed to be 150 ppmv in the submitted analyses.	• Experience at other landfills suggests that H_2S concentrations may routinely exceed 150 ppmv. Routine testing of the LFG for H_2S concentration is recommended.
Based on DEQ verification modeling and using a very conservative 1-hr SO_2 background value of 65 $\mu g/m^3$, DEQ determined that compliance with the 1-hr SO_2 NAAQS was assured for operating the flare at LFG feed rates above about 350 scfm and H_2S concentrations up to 783 ppm.	• Flare emissions at feed rates of 350 scfm LFG and 1500 scfm LFG were estimated based on operating continuously, i.e., for 8,760 hours per year. • NO_2 emissions were presumed equal to 100% of NOx emissions on an hourly and annual basis.

2.0 Background Information

2.1 Applicable Air Quality Impact Limits and Modeling Requirements

This section identifies applicable ambient air quality limits and analyses used to demonstrate compliance for this facility located at 1050 West 400 South, near Burley, Idaho. Approximate UTM coordinates for the facility are 746.6 km Easting and 4,705.7 km Northing, in UTM Zone 11 (Datum WGS84).

2.1.1 Area Classification

The Milner Butte Landfill facility is located within Cassia County which is designated as an attainment or unclassifiable area for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$), and sulfur oxides (SO_x). There are no Class I areas within 10 kilometers of this location.

2.1.2 DEQ Modeling Thresholds

Modeling is typically not required if the changes in estimated criteria pollutant emission rates for a proposed project are below DEQ's modeling thresholds, shown in Table 2. "Case-by-case" thresholds may be used only with prior DEQ approval. "Threshold I" values were used for this project.

Table 2. DEQ CRITERIA POLLUTANT MODELING THRESHOLDS

Criteria Air Pollutants	Averaging Period	DEQ Modeling Threshold			
		Threshold I		Threshold II (Case-by-Case)	
PM_{10}	24-hr	0.22	lb/hr	2.6	lb/hr
$PM_{2.5}$	24-hr	0.054	lb/hr	0.63	lb/hr
	Annual	0.35	T/yr	4.1	T/yr
CO	1-hr, 8-hr	15	lb/hr	175	lb/hr
NO_2	1-hour	0.20	lb/hr	2.4	lb/hr
	Annual	1.2	T/yr	14	T/yr
SO_2	1-hr	0.21	lb/hr	2.5	lb/hr
	24-hr	0.22	lb/hr	2.6	lb/hr
	Annual	1.2	T/yr	14	T/yr
Lead	3-month rolling avg	14	lb/mo		

2.1.3 Significant and Cumulative NAAQS Impact Analyses

If estimated maximum pollutant impacts to ambient air from the emissions sources associated with the existing unpermitted facility exceed the significant contribution levels (SCLs) of Section 006 of IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho (Idaho Air Rules), then a cumulative impact analysis is necessary to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) and Idaho Air Rules Section 203.02 for Permits to Construct and Section 403.02 for Tier II Operating Permits. A cumulative NAAQS impact analysis for attainment area pollutants involves adding ambient impacts from facility-wide emissions, and emissions from any nearby co-contributing sources, to DEQ-approved background concentration values that are appropriate for the criteria pollutant/averaging-time at the facility location and the area of significant impact. The resulting maximum pollutant concentrations in ambient air are then compared to the NAAQS listed in Table 3. The SCLs and the modeled value that must be used for comparison to the NAAQS are also listed in Table 3.

Table 3. APPLICABLE REGULATORY LIMITS				
Pollutant	**Averaging Period**	**Significant Contribution Levels[c] ($\mu g/m^3$)[b]**	**Regulatory Limit[d] ($\mu g/m^3$)[b]**	**Modeled Value Used[g, h]**
PM_{10}[a]	24-hour	5.0	150[f]	Maximum 6th highest[i]
$PM_{2.5}$[a]	Annual	0.3[b]	15[e]	$PM_{2.5}$ –Maximum 1st high[J]
	24-hour	1.2[b]	35	$PM_{2.5}$ –Maximum 1st high[J]
Carbon monoxide (CO)	8-hour	500	10,000[f]	Maximum 2nd highest
	1-hour	2,000	40,000[f]	Maximum 2nd highest
Sulfur Dioxide (SO_2)	Annual	1.0	80[e]	Maximum 1st highest
	24-hour	5	365[f]	Maximum 2nd highest
	3-hour	25	1,300[f]	Maximum 2nd highest
	1-hour[o]	EPA Interim: 3 ppb[m] (~7.8 $\mu g/m^3$)	0.075 ppm[m,n] (196 $\mu g/m^3$)	Maximum 4th highest[m]
Nitrogen Dioxide (NO_2) *NO_2 is the indicator species for NOx*	Annual	1.0	100[f]	Maximum 1st highest
	1-hour[m]	EPA Interim: 4 ppb[l] (7.5 $\mu g/m^3$)	0.100 ppm[l, n] (188 $\mu g/m^3$)	Maximum 8th highest[l]
Lead (Pb)	Rolling 3-month average	NA	0.15[f, k]	Maximum 1st highest

[a] Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) or 2.5 micrometers.

[b] Micrograms per cubic meter.

[c] SCLs are defined in Idaho Air Rules Section 006. $PM_{2.5}$ SCLs (75 FR 64864, October 20, 2010) were adopted as an Idaho temporary rule effective April 26, 2011. The pending rule will become final and effective upon adjournment of the 2012 legislative session if approved by the Idaho Legislature.

[d] Federal NAAQS (see 40 CFR 50) in effect as of July 1 of each year are incorporated by reference during the legislative session the following spring. See Idaho Air Rules Section 107.

[e] Never expected to be exceeded in any calendar year.

[f] Never expected to be exceeded more than once in any calendar year. The 3-hr and 24-hr SO_2 standards were revoked (see 75 FR 35520, June 22, 2010) but will remain in effect until one year after the effective date (~late 2012) of initial area designations for the new 1-hour SO_2 NAAQS (i.e., in effect until ~late 2013).

[g] Concentration at any modeled receptor.

[h] The maximum 1st highest modeled value is always used for significant impact analyses.

[i] PM_{10} concentration at any modeled receptor when using five years of meteorological data. Use the maximum 2nd highest value for analyses with less than five years of meteorological data or one year of site-specific met data.

[j] $PM_{2.5}$ concentration at any modeled receptor when using a single year of site-specific meteorological data or a concatenated file with five years of meteorological data. EPA recommends using the high 8th high 3-year average monitored value for background, and using the highest 24-hr average and highest annual averages across five years of met data for the modeled result (Steven Page memo, Modeling Procedures for Demonstrating Compliance with $PM_{2.5}$ NAAQS, March 23, 2010).

[k] Pb: The EPA's October 15, 2008 standard became effective in Idaho's NSR program when it was incorporated by reference into the Idaho Air Rules, i.e., when the Idaho Legislature adjourned *sine die* on March 29, 2010.

[l] NO_2 concentration at any modeled receptor when using complete year(s) of site-specific met data or five consecutive years of representative meteorological data. Compliance is based on the 3-year average of the 98th percentile of the annual distribution of 1-hour average daily maximum concentrations. EPA Interim SIL, Page memo, dated June 29, 2010.

[m] SO_2 concentration at any modeled receptor when using complete year of site-specific met data or five consecutive years of representative meteorological data. Compliance is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA Interim SIL, Page memo, dated August 23, 2010.

[n] EPA's February 10, 2010 1-hour NO_2 standard (75 FR 6474) and June 22, 2010 1-hour SO_2 standard (75 FR 35520) became effective in Idaho on April 7, 2011.

2.1.4 Toxic Air Pollutant Analyses

Emissions of toxic substances are generally addressed by Idaho Air Rules Section 161:

> *Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation.*

Permit requirements for toxic air pollutants (TAPs) from new or modified sources are specifically addressed by Idaho Air Rules Section 203.03 and require the applicant to demonstrate to the satisfaction of DEQ the following:

Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586.

Per Section 210, if the emissions increase associated with a new source or modification exceeds screening emission levels (ELs) of Idaho Air Rules Section 585 or 586, then the ambient impact of the emissions increase must be estimated. If ambient impacts are less than applicable Acceptable Ambient Concentrations (AACs) for non-carcinogens of Idaho Air Rules Section 585 and Acceptable Ambient Concentrations for Carcinogens (AACCs) of Idaho Air Rules Section 586, then compliance with TAP requirements has been demonstrated.

In accordance with Section 210.20 of the Idaho Air Rules, a demonstration of compliance with state-only TAPs standards is not required for any TAP that is regulated at the time of permit issuance under 40 CFR Part 60 (New Source Performance Standards [NSPS]), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants [NESHAP], or 40 CFR Part 63 (NESHAP for Source Categories / MACT standards).

2.2 Background Concentrations

Background concentrations are used in the cumulative NAAQS impact analyses to account for impacts from sources not explicitly modeled. Background concentrations were revised for all areas of Idaho by DEQ in March 2003[1] and are currently being updated. Background concentrations in areas where no monitoring data are available were based on monitoring data from areas with similar population density, meteorology, and emissions sources. The recommended background levels for this project are shown in Table 4.

Table 4. BACKGROUND CONCENTRATIONS

Pollutant	Averaging Period	Background Concentration (ppb)	Background Concentration ($\mu g/m^3$)	NAAQS	Background Value Reference
PM_{10}	24-hour	---	73	150 $\mu g/m^3$	Default: Rural Agricultural
$PM_{2.5}$	24-hour	---	26.7	35 $\mu g/m^3$	Avg of 98th percentile values plus 1 sigma, 2003-2008 Counties: Bannock, Boundary, Latah (ID), Columbia, Jackson, Lane, Marion (OR)
	Annual	---	6.5	15 $\mu g/m^3$	Avg of annual mean values plus 1 sigma, 2003-2008 Counties: Bannock, Boundary, Latah (ID), Columbia, Jackson, Lane, Marion (OR)

[1] Hardy, Rick and Schilling, Kevin. *Background Concentrations for Use in New Source Review Dispersion Modeling*. Memorandum to Mary Anderson, March 14, 2003.

Table 4. BACKGROUND CONCENTRATIONS					
Pollutant	**Averaging Period**	**Background Concentration (ppb)**	**Background Concentration ($\mu g/m^3$)**	**NAAQS**	**Background Value Reference**
Carbon monoxide (CO)	1-hour	Default 3,000	Default 3,600	9,000 ppb (10,000 $\mu g/m^3$)	Default: Rural Agricultural
	8-hour	Default 2,000	Default 2,300	35,000 ppb (40,000 $\mu g/m^3$)	Default: Rural Agricultural
Nitrogen dioxide (NO_2)	1-hour	22.4	42	100 ppb (188 $\mu g/m^3$)	Avg of high 2nd high 1-hour values plus 1 sigma, 2006-2008 Counties: Burke, Dunn, McKenzie, and Jackson (ND)
	Annual	1.8	3.0	53 ppb (100 $\mu g/m^3$)	Avg of annual mean values plus 1 sigma, 2006-2008 Counties: Burke, Dunn, McKenzie, and Jackson (ND)
Sulfur dioxide (SO_2)	1-hour	24.7	65	75 ppb (196 $\mu g/m^3$)	Avg of 1st high values plus 1 sigma, 2006-2008 Counties: Billings, McLean (ND), Jackson (SD), Uinta (WY)
	Annual	1.0	2.6	30 ppb (80 $\mu g/m^3$)	Average of annual means plus 1 sigma, 2006-2008 Counties: Billings, McLean (ND), Jackson (SD), Uinta (WY)
Lead (Pb)	Rolling 3-month average	---	Default 0.03	0.15 $\mu g/m^3$	Default: Rural Agricultural

ppb = parts per billion by volume (ppbv) $\mu g/m^3$ = micrograms per cubic meter 1 sigma = σ = one standard deviation

"Default" values were taken from Hardy, Rick and Schilling, Kevin. *Background Concentrations for Use in New Source Review Dispersion Modeling.* Idaho DEQ, Memorandum to Mary Anderson, March 14, 2003.

3.0 Modeling Impact Assessment

3.1 Modeling Methodology

This section describes the modeling methods used by the applicant to demonstrate compliance with applicable air quality standards.

3.1.1 Overview of Analyses

SCS Engineers performed air quality analyses using AERMOD in support of the submitted permit application. A brief description of parameters used in the modeling analyses is provided in Table 5.

Table 5. MODELING PARAMETERS		
Parameter	**Description/Values**	**Documentation/Addition Description**
Model	AERMOD	AERMOD with the PRIME downwash algorithm, version 11103
Meteorological data	Twin Falls 2000 - 2004	NWS surface data from Twin Falls/Joslin Field and upper air data collected from 2000 through 2004 at the Boise Airport.
Terrain	NED 1/3 arc-sec	AERMAP v. 11103, using 1/3-arc second NED terrain data files (NAD83/WGS84). *DEQ: 1arc-second for the same domain, with 1/3 arc-second for a smaller area encompassing the butte adjacent to the landfill.*
Building downwash	BPIP-PRIME v. 04274	Building downwash parameters were calculated using the BPIP PRIME algorithm (version 04274).
Receptor Grid	Receptors	Receptor locations were defined in UTM coordinates (NAD83) *DEQ: WGS84*
	Grids	25-meter (m) spacing along the property boundary 50-m spacing centered on the flare out to 2,000 m 250-m spacing centered on the flare from 2,000 m to 10,000 m *DEQ verification, NO_x modeling:* *25-m spacing along the property boundary* *25-m spacing centered on the flare out to 1,000 m* *50-m spacing centered on the flare out to 2,000 m* *250-m spacing centered on the flare out to 4,000 m* *500-m spacing centered on the flare out to 10,000 m*

3.1.2 Modeling Protocol and Methodology

A modeling protocol received by DEQ on April 29, 2011 was approved with comment on June 23, 2011. The modeling protocol approval was delayed awaiting new guidance for the 1-hour NO_x and SO_2 NAAQS. Although EPA had issued guidance with regard to modeling for these new standards, there was still a lot of uncertainty regarding the best (or better) ways to model emissions from intermittent sources, including emergency generators. DEQ's NSR Modeling Coordinator was a member of a joint EPA/State/Local working group assembled in Spring 2011 and tasked with reviewing modeling concerns for these 1-hour NAAQS. The group was scheduled to present its findings during the EPA Modelers Workshop scheduled for June 6-9, 2011 in Atlanta, Georgia. Approval of the modeling protocol for this project was delayed pending additional guidance from this workshop.

The submitted modeling deviated from the approved protocol for criteria pollutant modeling. Rather than modeling the flare as a point source, modeling for PM_{10}, $PM_{2.5}$, and SO_2 was run using the non-regulatory "flare" option within AERMOD, but used the "point source" stack parameters. NO_x modeling was also run using the non-regulatory "flare" option in AERMOD, but used exhaust parameters calculated for an open flare. The landfill gas flare serving the Milner Butte landfill, however, has been described in application materials as an enclosed flare. DEQ's verification analyses modeled the flare as a point source.

Modeling for annual NO_x, and SO_2 was conducted using a single 5-year concatenated meteorology file. EPA and DEQ modeling guidance requires that modeling for these annual standards be conducted by modeling each of the five years as a separate run, which typically produces slightly different results compared to using a 5-year concatenated file. Because the predicted annual impacts are fairly low, however, DEQ did not rerun the analyses for the annual averaging period.

Modeling was otherwise generally conducted using data described in the protocol and methods described in the *State of Idaho Air Quality Modeling Guideline*. Default rural dispersion was used.

3.1.3 Model Selection

Idaho Air Rules Section 202.02 requires that estimates of ambient concentrations be based on air quality models specified in 40 CFR 51, Appendix W (Guideline on Air Quality Models). The refined, steady state, multiple source, Gaussian dispersion model AERMOD was promulgated as the replacement model for ISCST3 in December 2005. EPA provided a one-year transition period during which either ISCST3 or AERMOD could be used at the discretion of the permitting agency. AERMOD must be used for all air impact analyses, performed in support of air quality permitting, conducted after November 2006.

AERMOD retains the single straight line trajectory of ISCST3, but includes more advanced algorithms to assess turbulent mixing processes in the planetary boundary layer for both convective and stable stratified layers.

AERMOD offers the following improvements over ISCST3:

- Improved dispersion in the convective boundary layer and the stable boundary layer.
- Improved plume rise and buoyancy calculations.
- Improved treatment of terrain effects on dispersion.
- New vertical profiles of wind, turbulence, and temperature.

3.1.4 Meteorological Data

DEQ provided AERMOD-ready meteorological data to SCS Engineers on March 16, 2011. National Weather Service (NWS) surface data were collected at Twin Falls/Joslin Field from 2000 through 2004 with upper air meteorology data collected at the Boise Airport (KBOI) for the same period.

3.1.5 Terrain Effects

Terrain effects on dispersion were considered in these analyses. SCS Engineers used AERMAP v. 11103 to extract the actual elevation of each receptor and determine the controlling hill height elevation from a 1/3 arc second (about 10-meter resolution) tiff file downloaded from the Seamless National Elevation Database (NED). The NED file encompassed the area between -114.602 and -113.328 degrees longitude

and 41.860 and 43.095 degrees north latitude. For the verification analyses, DEQ used a 1 arc-second (about 30-meter resolution) for the same domain, supplemented by a 1/3 arc-second file encompassing Milner Butte. The higher resolution NED file encompassed the area between -114.043 and -113.993 degrees longitude and 42.443 and 42.475 degrees latitude.

3.1.6 Facility Layout

The facility layout is shown in Figure 3-1 (taken from the application).

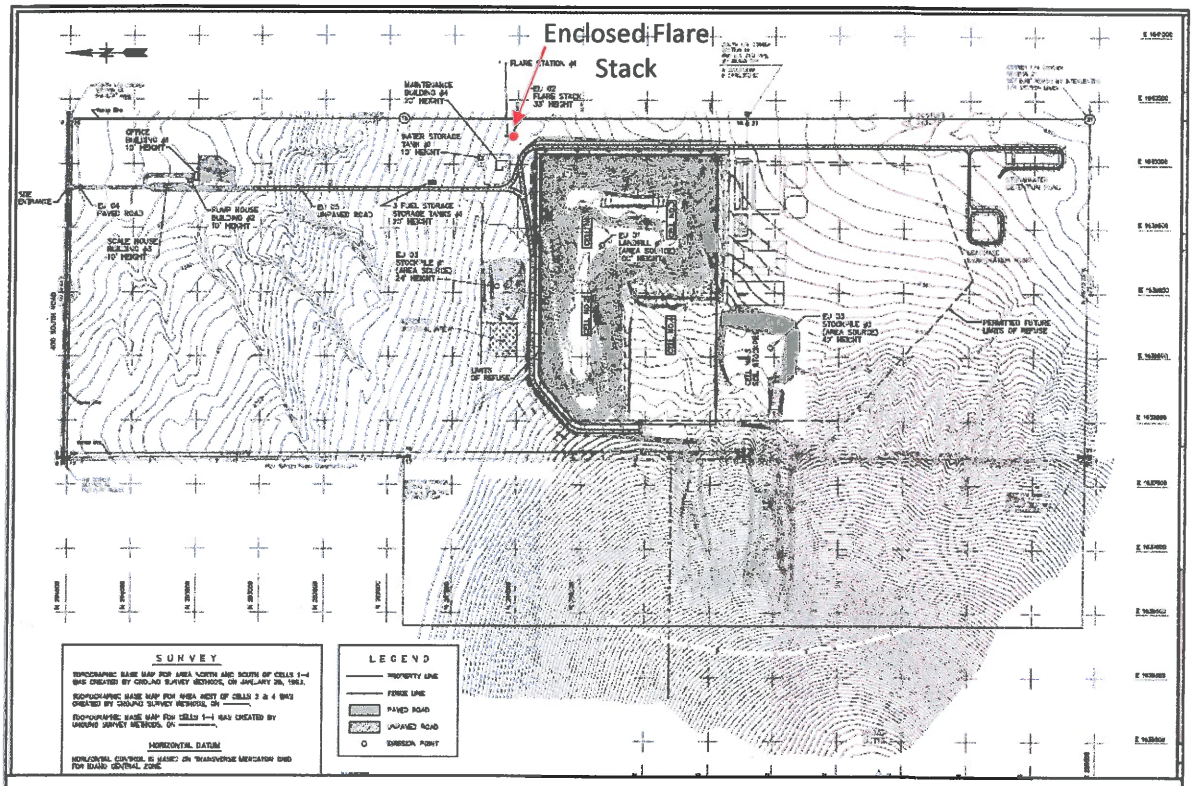

Figure 3-1. LANDFILL GAS FLARE LOCATION

3.1.7 Building Downwash

Plume downwash effects caused by structures present at the facility were accounted for in the submitted modeling analyses. The Building Profile Input Program with Plume RIse Model Enhancements (BPIP-PRIME) was used to calculate direction-specific building dimensions and Good Engineering Practice (GEP) stack height information from building dimensions/configurations and emission release parameters for input to AERMOD. Building parameters used in the modeling are summarized in Table 6.

Table 6. BUILDING PARAMETERS

Building	Building Height	Base Elevation (m)	Submitted Modeling UTM Datum NAD83 (?) Zone 11		DEQ Verification UTM Datum WGS42/NAD83 Zone 11	
			Easting, X (m)	Northing, Y (m)	Easting, X (m)	Northing, Y (m)
Maintenance Building	20 ft (6.10 m)	1339.49 DEQ: 1338.31	746531.0	4705640.0	746522.20	4705841.99
			746550.0	4705640.0	746500.66	4705841.08
			746550.0	4705615.0	746501.04	4705825.75
			746539.0	4705615.0	746507.33	4705825.51
			746539.0	4705625.0	746507.67	4705818.46
			746531.0	4705625.0	746522.86	4705818.84

3.1.8 Ambient Air Boundary

Ambient air is defined in Section 006 of the Idaho Air Rules as "that portion of the atmosphere, external to buildings, to which the general public has access. The ambient air boundary for the Milner Butte Landfill is shown in Figure 3-2. Public access is controlled by fencing around portions of the landfill property (see Figure 3-2). When setting up verification analyses, DEQ noted that the coordinates for the submitted ambient air boundary appeared to have been taken from the plot plan. Horizontal coordinates for the plot plan were recorded based on the Transverse Mercator Grid for the Idaho Central Zone. DEQ used Google Earth (4/18/2010 image) to identify the ambient air boundary in UTM coordinates, and excluded areas that appeared to be accessible to the public. The comparison of the ambient air boundary used in the submitted and verification analyses is shown in Figure 3-2.

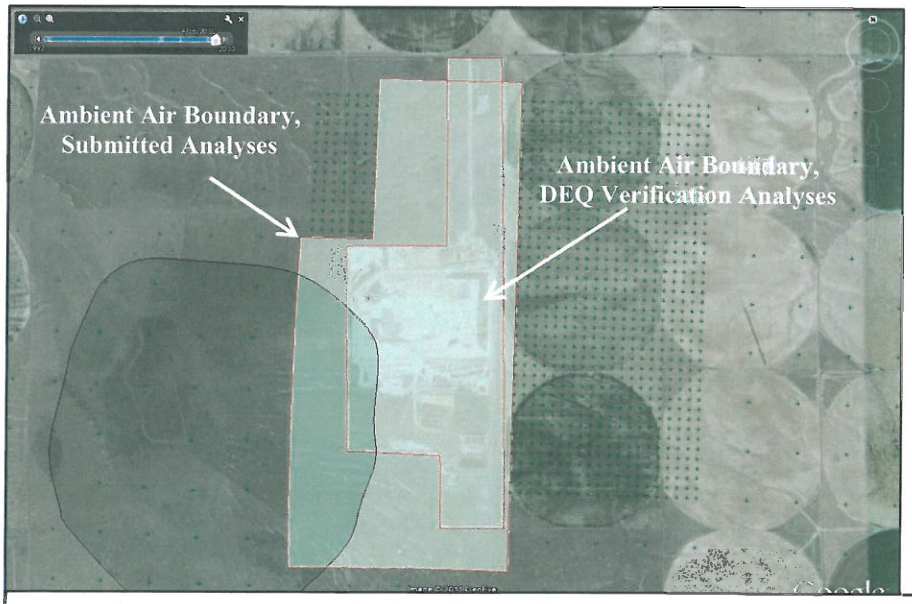

Figure 3-2. SUBMITTED AND DEQ VERIFICATION AMBIENT AIR BOUNDARIES

3.1.9 Receptor Network

The receptor grids used for the submitted and verification modeling analyses are summarized in Table 5 and shown graphically in Figure 3-3.

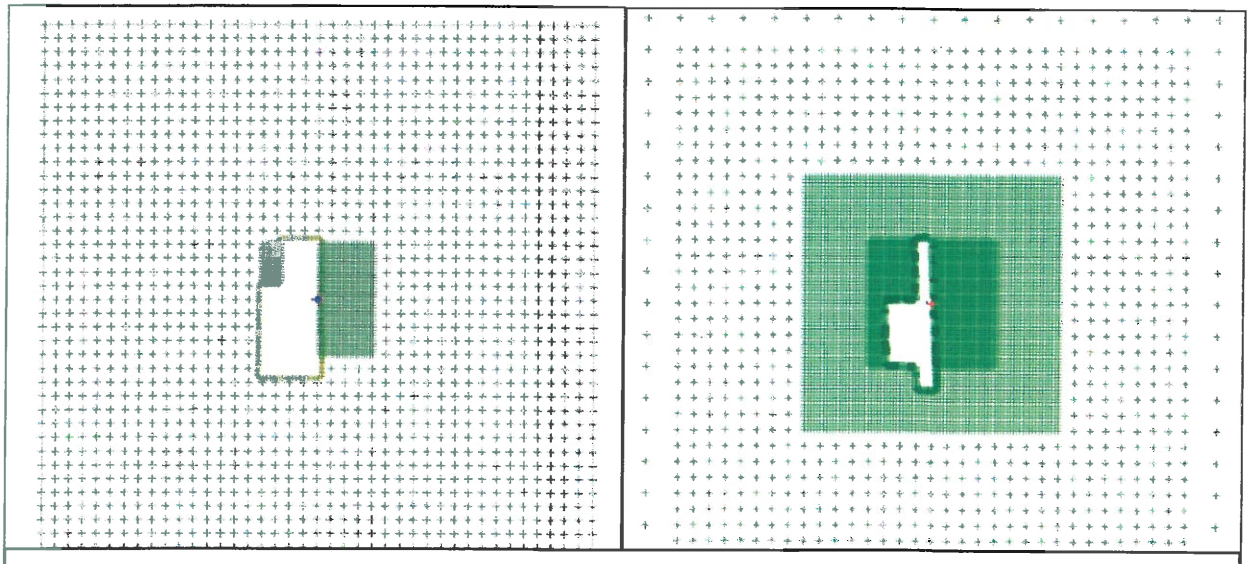

Figure 3-3. SUBMITTED RECEPTOR GRID (LEFT) AND DEQ VERIFICATION GRID (RIGHT)

3.2 Emission Release Parameters

The emission release parameters used in the submitted analysis and DEQ's AERMOD verification analyses are shown in Table 7. Although the approved modeling protocol proposed to model the enclosed flare as a point source and the submitted modeling report describes modeling the flare as a point source using the parameters shown in the first two rows of Table 7, the submitted modeling set the source type to "Flare" with various release heights, stack temperatures, and exit velocities. DEQ's full impact verification analyses modeled the flares as point sources using the stack parameters shown below for the "MBPRELIM" analyses.

Table 7. EMISSION RELEASE PARAMETERS

Source ID	Description	UTM Zone 11 (NAD83) Easting (m)	UTM Zone 11 (NAD83) Northing (m)	Base Elevation (m)	Stack Height	Exit Temp.	Exit Dia.	Exit Velocity	Exhaust Flow Rate (acfm)
SIGNIFICANCE ANALYSES, using 1 g/s emission rate. Modeled Source Type: "Point," using release parameters shown in Table 1 of the submitted modeling report. MBPRELIM									
FLARE1	Flare, 1500 scfm LFG feed rate	746650.49	4705632.54	1337.14	33.0 ft (10.06 m)	1000°F (810.9 K)	8.38 ft (2.54 m)	19.54 fps (5.838 m/s)	63,386
FLARE2	Flare, 350 scfm LFG feed rate	746650.49	4705632.54	1337.14	33.0 ft (10.06 m)	1000°F (949.8 K)	8.38 ft (2.54 m)	4.467 fps (1.362 m/s)	14,790
FULL IMPACT ANALYSES Modeled Source Type: "Flare" MBPM, $PM_{2.5}$ analysis, and MBSOx,									
FLARE1	Flare, 1500 scfm LFG feed rate	746650.49	4705632.54	1337.14	33.0 ft (10.06 m)	1000°F (810.9 K)	8.38 ft (2.54 m)	19.54 fps (5.838 m/s)	63,386
FLARE2	Flare, 350 scfm LFG feed rate	746650.49	4705632.54	1337.14	33.0 ft (10.06 m)	1000°F (949.8 K)	8.38 ft (2.54 m)	4.467 fps (1.362 m/s)	14,782
FULL IMPACT ANALYSES Modeled Source Type: "Flare," using open flare calculated exhaust parameters. MBNOx									
FLARE1	Flare, 1500 scfm LFG feed rate	746650.49	4705632.54	1337.14	51.72 ft (15.76 m)	1831.73°F (1273 K)	3.778 ft (1.151 m)	65.62 fps (20.0 m/s)	44,125
FLARE2	Flare, 350 scfm LFG feed rate	746650.49	4705632.54	1337.14	42.34 ft (12.9 m)	1831.73°F (1273 K)	1.825 ft (0.556 m)	65.62 fps (20.0 m/s)	10,296

m = meters ft = feet
°F = degrees Fahrenheit, K = Kelvin
m/sec = meters per second fpm = feet per minute fps = feet per second

3.3 Emission Rates

As shown in Table 8, emissions of NO_x, SO_x, PM_{10}, and $PM_{2.5}$ exceed DEQ modeling thresholds for criteria pollutants, and emissions of the four TAPs listed in the table exceed the applicable screening emission level (EL) listed in Section 585 or 586 of the Idaho Air Rules. Modeling is required to demonstrate compliance for each pollutant and averaging time that exceeds these thresholds (shown in bold in the table).

Table 8. EMISSION RATES COMPARED TO MODELING THRESHOLDS

	PTE (1500 scfm LFG)		Current Emissions (350 scfm LFG)		DEQ Modeling Thresholds	
Criteria Pollutants	**(TPY)**	**(lb/hr)**	**(TPY)**	**(lb/hr)**	**(TPY)**	**(lb/hr)**
CO	39.42	9.0	9.2	2.1	---	15
NOx	**11.83**	**2.7**	**2.76**	**0.63**	1.2	0.20
SOx	**9.84**	**2.2**	**2.3**	**0.53**	1.2	0.21

Table 8. EMISSION RATES COMPARED TO MODELING THRESHOLDS						
	PTE (1500 scfm LFG)		Current Emissions (350 scfm LFG)		DEQ Modeling Thresholds	
Criteria Pollutants	**(TPY)**	**(lb/hr)**	**(TPY)**	**(lb/hr)**	**(TPY)**	**(lb/hr)**
PM_{10}	3.29	**0.80**	0.77	0.18	---	0.22
$PM_{2.5}$	3.29	**0.80**	0.77	**0.18**	0.35	0.054
Lead	---	---	---	---	---	14 lb/mo
TAPS					**Avg. Period**	**EL (lb/hr)**
1,1,2,2-Tetrachloroethane	---	**5.49E-05**	---	**1.28E-05**	Annual	1.1E-05
1,1-Dichloroethane	---	**3.43E-04**	---	8.00E-05	Annual	2.5E-04
Ethylene Dibromide (Dibromoethane)	---	**4.04E-05**	---	9.43E-06	Annual	3.0E-05
Hydrogen chloride	---	**0.0925**	---	0.0216	24-hr	0.05

3.4 Modeling Results

3.4.1 Significance Analyses

The significance analysis was run using a 1 g/sec emission rate for "Flare 1" and "Flare 2," which were modeled as point sources, and used a concatenated five-year meteorological data file. The maximum ambient impacts (high 1st high) for each pollutant were determined by multiplying the pollutant emission rate by the dispersion coefficient ($\mu g/m^3$ per g/sec emitted) produced from the modeling results.

> Note: Significance analyses for annual NO_x and SO_2 impacts should have been run separately for each of the five years of met data. DEQ's verification analyses conducted full impact modeling for annual NO_2 and SO_2 impacts using a separate run for each of the five years.

The modeling results for the significant analyses are shown in Table 9, with the applicable significant contribution level (SCL) shown in parentheses for comparison. Values shown in bold indicate that the modeled impact exceeded the SCL.

The acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for each TAP is shown in parentheses for comparison with the highest modeled impact. As shown in Table 9, none of the modeled TAP impacts exceeded the applicable AAC/AACC.

Table 9. SIGNIFICANT IMPACT RESULTS (High 1st Highs)						
	Dispersion Coefficient ($\mu g/m^3$ per g/sec)					
	Averaging Period: Source	**1-hr**	**3-hr**	**8-hr**	**24-hr**	**Annual**
	Flare 1	116.9	80.26	44.7	24.45	1.372
	Flare 2	331.1	297.4	262.9	149.8	14.15
Pollutant/Source	**Emission Rate (lb/hr)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**
NO_2 – Flare 1	2.7	**39.8** (7.5)	---	---	---	0.467 (1.0)
NO_2 – Flare 2	0.63	**26.3** (7.5)	---	---	---	**1.1** (1.0)
SO_2 – Flare 1	2.2	**32.4** (7.8)	22.2 (25)			0.4 (1.0)
SO_2 – Flare 2	0.53	**22.1** (7.8)	19.9 (25)			0.9 (1.0)

Table 9. SIGNIFICANT IMPACT RESULTS (High 1st Highs)						
	Dispersion Coefficient ($\mu g/m^3$ per g/sec)					
	Averaging Period: Source	**1-hr**	**3-hr**	**8-hr**	**24-hr**	**Annual**
	Flare 1	116.9	80.26	44.7	24.45	1.372
	Flare 2	331.1	297.4	262.9	149.8	14.15
Pollutant/Source	**Emission Rate (lb/hr)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**	**Impact ($\mu g/m^3$)**
$PM_{2.5}$ – Flare 1	0.80	---	---	---	**2.5** (1.2)	0.1 (0.3)
$PM_{2.5}$ – Flare 2	0.18	---	---	---	**3.4** (1.2)	**0.3** (0.3)
PM_{10} – Flare 1	0.80	---	---	---	2.5 (5.0)	---
PM_{10} – Flare 2	0.18	---	---	---	3.4 (5.0)	---
1,1,2,2-Tetrachloroethane - Flare 1	5.49E-05	---	---	---	---	9.49E-06 (1.7E-02)
1,1,2,2-Tetrachloroethane - Flare 2	1.28E-05	---	---	---	---	2.21E-06 (1.7E-02)
1,1-Dichloroethane – Flare 1	3.43E-04	---	---	---	---	5.93E-05 (3.8E-02)
Ethylene Dibromide – Flare 1	4.04E-05	---	---	---	---	6.98E-06 (4.5E-03)
Hydrogen chloride – Flare 1	0.0925	---	---	---	0.28 (375)	---

Note: 1 g/s = 7.936641 lb/hr

3.4.2 Full Impact Analyses

Full impact analyses were conducted for each pollutant and averaging time with impacts greater than significant. The submitted modeling results are shown in Table 10, with DEQ verification analyses shown in parentheses. As shown in Table 10, the full-impact analyses demonstrated compliance for all criteria pollutants and averaging times.

Table 10. FULL-IMPACT MODELING RESULTS FOR CRITERIA POLLUTANTS									
Pollutant	**Averaging Period**	**Modeled Ambient Impact ($\mu g/m^3$)**		**Background Value ($\mu g/m^3$)**	**Total Ambient Impact ($\mu g/m^3$)**		**NAAQS ($\mu g/m^3$)**	**Percent of NAAQS**	
		Flare 1 (1500scfm)	**Flare 2 (350 scfm)**		**Flare 1 (1500scfm)**	**Flare 2 (350 scfm)**		**Flare 1 (1500scfm)**	**Flare 2 (350 scfm)**
NO_2	1-hour	16.44 (17.0)	21.74 (24.6)	42	58.44 (59.0)	63.74 (66.6)	188	31.1% (31.4%)	33.9% (35.4%)
	Annual	27.96	23.37	3.0	31.0	26.4	100	31.0%	26.4%
SO_2	1-hour	23.8 (17.0)	21.7 (22.6)	65	88.8 (82.0)	86.7 (87.6)	196	45.3% (41.8%)	44.2% (44.7%)
	Annual	0.38	0.95	2.6	2.98	3.55	80	3.73%	4.43%
$PM_{2.5}$	24-hr	1.03	2.07	26.7	27.7	28.8	35	79.0%	82.2%
	Annual	0.14	0.32	6.5	6.64	6.82	15	44.3%	45.5%

3.4.3 Maximum LFG H_2S Concentration

The submitted analyses for SO_2 emissions were based on converting 100 percent of the H_2S in the landfill gas to SO_2 in the flares, and a maximum H_2S concentration in the landfill gas of 150 ppmv. As shown in Table 11, it is reasonable to presume that compliance with the 1-hour SO_2 NAAQS could be demonstrated for H_2S concentrations as high as 783 ppmv, based on the results of DEQ's verification modeling.

Table 11. MILNER BUTTE LFG FLARE – ESTIMATED MAXIMUM H_2S CONCENTRATION

Source	Modeled 1-hr SO_2 Ambient Impacts	Background	Total	NAAQS	Delta = NAAQS minus Background	M = Delta divided by Modeled Impacts	C = M*150	Max = C*90.00% (10% Safety Margin)
Flare "1" (1500 scfm LFG)	23.8 (17.0)	65	88.8 (82.0)	196	131	5.5 (7.7)	826 (1156)	743 (1040)
Flare "2" (350 scfm LFG)	21.7 (22.6)	65	86.7 (87.6)	196	131	6.03 (5.80)	906 (870)	815 **(783)**

4.0 Conclusions

The submitted ambient air impact analyses, combined with DEQ's analyses demonstrated to DEQ's satisfaction that emissions from the landfill gas flare located at Milner Butte Landfill will not cause or significantly contribute to a violation of any air quality standard.

APPENDIX C – FACILITY DRAFT COMMENTS

The following comments were received from the facility on January 9, 2012:

Facility Comment 1: The facility contact and responsible official should be Josh Bartlome.

DEQ Response: The change has been made.

Facility Comment 2: Under general nature of business and kinds of products it should read, "Municipal solid waste landfill."

DEQ Response: The change has been made.

Facility Comment 3: Condition 1 should read, "... to construct a landfill gas flare."

DEQ Response: The change has been made.

Facility Comment 4: The second sentence in the first paragraph of Condition 3 should read, " ... approximately 13 miles west of Burley, Idaho, and 25 miles east of Twin Falls, Idaho."

DEQ Response: The change has been made.

Facility Comment 5: The last sentence in the fourth paragraph of Condition 3 should read, "... a maximum rating of 1,500 standard cubic feet per minute (scfm) at 50 % methane."

DEQ Response: The change has been made.

Facility Comment 6: Request to add the following sentence at the end of Condition 3. The process description is provided for informational purposes only and does not represent an enforceable permit condition.

DEQ Response: This addition has been made.

Facility Comment 7: Condition 5 - Opacity Limit, states that opacity shall be determined by the procedures contained in IDAPA 58.01.01.625. Page 13 (Visible Emissions) of the SOB states the following, "Landfill flares do not have the potential to emit visible emissions greater than 20% opacity due to the type of gas that is being burned, so no permit requirement has been written into the permit." We request that permit requirement within Condition 5 to determine the opacity by the procedures contained in IDAPA 58.01.01.625 be removed. If it cannot be removed, we request the sentence read, "If requested by DEQ, opacity shall be determined, as needed, by the procedures contained in IDAPA 58.01.01.625.

DEQ Response: This permit condition has been removed.

Facility Comment 8: Request to revise Condition 6 to read, "The hydrogen sulfide concentration in the landfill gas being burned in the flare shall not exceed 150 ppmv based on an annual average of any hydrogen sulfide testing conducted during each year."

DEQ Response: H_2S is converted to SO_2 in the flare. Monitoring H_2S is a surrogate for monitoring the SO_2 emissions from the flare. One of the SO_2 NAAQS standards is hourly, so an annual average does not demonstrate compliance with the SO_2 hourly standard.

Because meeting the hourly SO_2 limit of 150 ppmv could be difficult, DEQ has run the air dispersion model to determine that a limit of 785 ppmv would not cause a modeled exceedance of the 1-hour SO_2 NAAQS. Therefore, the concentration limit has been increased to 785 ppmv, and the testing has been changed to a graduated standard, using a Draeger tube test, or equivalent, to determine H_2S concentrations in the gas going to the flare.

Facility Comment 9: Condition 8 provides requirements in accordance with 40 CFR 60.753. However, only (e) and (f) of 40 CFR 60.753 are relevant to the flare. We do not believe the rest of the sub-Conditions of 8 belong in a construction permit for a flare.

DEQ Response: Permit Condition 8 applies to the landfill and regulates the facility portions that generate the emissions that require the use of a flare, so these permit conditions are appropriate in the permit.

Facility Comment 10: Condition 9 has nothing to do with a flare and should be incorporated into the Title V operating permit and not the flare PTC.

DEQ Response: Permit Condition 9 regulates asbestos, which has no association with the flare, so this permit condition has been removed from the PTC.

Facility Comment 11: Conditions 10 through 14 do not apply to the flare and should be incorporated into the Title V operating permit and not the flare PTC.

DEQ Response: Permit Conditions 10 through 14 apply to the landfill and regulate the facility portions that generate the emissions that require the use of a flare, so these permit conditions are appropriate in the permit.

Facility Comment 12: The reference to Permit Condition 6(b) contained in Condition 10 should be change to reference Permit Condition 8(b).

DEQ Response: The change has been made.

Facility Comment 13: The last sentence of Condition 10 should read, "An alternative timeline or remedy for correcting the exceedance..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 14: The reference to Permit Condition 6(c) contained in Condition 11 should be change to reference Permit Condition 8(c).

DEQ Response: The change has been made.

Facility Comment 15: The last sentence of Condition 11 should read, "An alternative timeline or remedy for correcting the exceedance..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 16: Remove additional period at the end of Condition 13(1).

DEQ Response: Done.

Facility Comment 17: Request revision to Condition 15 to read, " ...for collection systems and shall not exceed 1 hour with free venting of landfill gas for treatment or control devices."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 18: Conditions 16 through 18 do not apply to the flare and should be incorporated into the Title V operating permit and not the flare PTC.

DEQ Response: Permit Conditions 16 and 17 apply to the landfill and regulate the facility portions that generate the emissions that require the use of a flare, so these permit conditions are appropriate in the permit. Permit Condition 18 regulates asbestos, which has no association with the flare, so that permit condition has been removed from the PTC.

Facility Comment 19: Condition 16(a)(1) should read, " ... gas collection header at each collector on a monthly basis..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 20: Condition 16(a)(2) should read, " ... in the landfill gas at each collector on a monthly basis ..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 21: Condition 16(a)(3) should read, "Monitor temperature of the landfill gas at each collector on a monthly basis..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 22: The first sentence of Condition 20 should read, "... in the flare for hydrogen sulfide using approved field or laboratory methods."

DEQ Response: This permit condition has been replaced with a sampling schedule to demonstrate compliance with the revised (increased) H_2S limit. A handheld monitoring device, such as a Draeger tube, can be used to conduct the sampling.

Facility Comment 23: Condition 23 should be on a Semi-Annual basis and not an annual basis. NESHAPs (Subpart AAAA) requires this reporting on a semi-annual basis.

DEQ Response: For compliance with Subpart WWW, an annual report is required. For compliance with Subpart AAAA, semi-annual reports are required as specified in the permit condition for Subpart AAAA recordkeeping. The two applicable federal regulations are maintained separately in case there are changes to one or the other or both in the future. If the reporting section changes in the future, having the two regulatory quotes combined in one permit condition makes it more difficult to determine compliance.

Facility Comment 24: Condition 23 should read, " ... submit to the Administrator semi-annual reports ..."

DEQ Response: See response to previous comment.

Facility Comment 25: Condition 25(1)(i) should read, " ... the average combustion temperature, excluding SSM events, was more than 28°C ..."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 26: Condition 26 should read, "... used to seal bypass lines, if applicable, specified under 40 CFR 60.756."

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 27: Conditions 27 through 29 do not apply to the flare and should be incorporated into the Title V operating permit and not the flare PTC.

DEQ Response: Permit Conditions 27 through 29 apply to the landfill and regulate the facility portions that generate the emissions that require the use of a flare, so these permit conditions are appropriate in the permit.

Facility Comment 28: Condition 30 should read, "... described in 40 CFR 60.757(f) and Condition 23 of this permit every 6 months.

DEQ Response: The original wording is an exact quote of the NSPS rule which applies as written regardless of how the permit condition is reworded. The permit is designed to incorporate the rule as it applies to the facility without adding or subtracting from the wording of the rule to prevent any misinterpretations.

Facility Comment 29: The time-line presented in the first bullet under Condition 35 has already passed. We request this bullet be deleted from the permit.

DEQ Response: This is part of the standard General Provisions that are in every PTC. A note has been made in this statement of basis that the construction was initiated prior to the issuance of this PTC.

Facility Comment 30: Condition 38 requires performance test reports be submitted to DEQ within 30 days from testing date. We request this time-line be extended to 60 days to allow time for receipt of analytical results and preparation of test report.

DEQ Response: This extension has been granted in the permit as requested.

Comments on Statement of Basis

Facility Comment 31: The second sentence in the first paragraph on Page 4 of the SOB should read, " ... approximately 13 miles west of Burley, Idaho, and 25 miles east of Twin Falls, Idaho."

DEQ Response: This change has been made.

Facility Comment 32: The last sentence in the fourth paragraph on Page 4 of the SOB should read, "... a maximum rating of 1,500 standard cubic feet per minute (scfm) at 50 % methane."

DEQ Response: This change has been made.

Facility Comment 33: The first sentence in the first paragraph on Page 5 of the SOB should read, "... estimated using LandGEM, AP-42..."

DEQ Response: The spelling correction has been made.

Facility Comment 34: The last sentence in the first paragraph under the $S0_2$ section of Page 6 of the SOB should read, " ... annual emissions are 9.84 tons based on ..."

DEQ Response: The word "tons" was added.

Facility Comment 35: The last sentence in the second paragraph under the $S0_2$ section of Page 6 of the SOB should read, "... for this application was 150 ppmv and should be applied as an annual average.

DEQ Response: See response to Comment No. 8.

Facility Comment 36: The NMOC sentence under the VOC section of Page 6 of the SOB should read, " ... 1200 ppmv as hexane (based on the valued obtained from the most recent NSPS 40 CFR 60.754(a)(2) Tier 2 study in October 2008) assuming the capacity of the flare of 1500 scfm and a 98% destruction efficiency as required by the NSPS rule."

DEQ Response: This has been modified as requested.

Facility Comment 37: The last sentence in the eighth paragraph on Page 7 of the SOB should read, "None of the new TAPs in the draft: AP-42 were evaluated in the application as the draft AP-42 section on landfills is still undergoing major changes and is currently not citable or quotable."

DEQ Response: This change has been made.

Facility Comment 38: Table 10 on Page 8 of the SOB should be updated to Table 3.

DEQ Response: Done.

Facility Comment 39: Table 12 on Page 8 of the SOB should be updated to Table 4.

DEQ Response: Done.

Facility Comment 40: Table 13 on Page 10 of the SOB should be updated to Table 5.

DEQ Response: Done.

Facility Comment 41: Table 14 on Page 10 of the SOB should be updated to Table 6.

DEQ Response: Done.

Facility Comment 42: The second sentence under section Title V Classification on Page 13 of the SOB should read, "The facility became subject to this requirement with the promulgation of the NSPS Subpart WWW on March 16, 1996 and subsequent design capacity report submittal required by June 10, 1996. The earliest a site could become subject to the NSPS regulations was June 10, 1996. Therefore, the MBL was required to apply for a Title V operating permit by June 10, 1997."

DEQ Response: The paragraph has been modified.

Facility Comment 43: The first sentence under section NSPS Applicability on Page 13 of the SOB should read, "The facility is subject to the requirements of40 CFR 60 Subpart WWW- Standards of Performance for Municipal Solid Waste Landfills." If a landfill was constructed after 1991, Milner Butte was constructed in 1993, then it is considered an NSPS site and subject to Subpart WWW but not the EG rules under Subpart Cc, which only apply to landfills constructed before May 1991.

DEQ Response: This correction has been made.

Facility Comment 44: The EPA, OSHA, MSHA and DOT listed on Page 43 of the SOB are not Clean Air Act requirements and should be removed from the SOB.

DEQ Response: This section has been removed. It was for informational purposes only.

Facility Comment 45: Initial Permit Conditions 9 through 14, 16 through 18, 27 through 29 listed on Pages 57 and 58 of the SOB are not relevant to the flare and should not be incorporated into a flare PTC.

DEQ Response: This issue is addressed in the responses to the comments about these permit conditions.

Facility Comment 46: Initial Permit Condition 38 on Page 59 of the SOB requires performance test reports be submitted to DEQ within 30 days from testing date. We request this time-line be extended to 60 days to allow time for receipt of analytical results and preparation of test report.

DEQ Response: This change has been made.

APPENDIX D – PROCESSING FEE

PTC Fee Calculation

Instructions:
Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Milner Butte Landfill
Address: 1050 West 400 South
City: Burley
State: Idaho
Zip Code: 83318
Facility Contact: Josh Bartlome
Title: Executive Director
AIRS No.: 031-00046

N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Did this permit require engineering analysis? Y/N
N	Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	11.8	0	11.8
SO_2	9.8	0	9.8
CO	39.4	0	39.4
PM10	3.3	0	3.3
VOC	0.8	0	0.8
TAPS/HAPS	1.0	0	1.0
Total:	66.2	0	**66.2**
Fee Due	$ 5,000.00		

Comments: