

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

Permitting and Compliance Division  
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Flathead County Solid Waste District  
Flathead County Sanitary Landfill  
Sections 1 and 36, Townships 29 and 30 North, Range 22 West, Flathead County  
4098 Highway 93 North  
Kalispell, MT 59901

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

<b>Facility Compliance Requirements</b>	Yes	No	Comments
Source Tests Required	X		Method 9
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As Required
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
<b>Applicable Air Quality Programs</b>			
ARM Subchapter 7 Preconstruction Permitting		X	
New Source Performance Standards (NSPS)	X		40 CFR 60, Subpart WWW
National Emission Standards for Hazardous Air Pollutants (NESHAPS)	X		40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)		X	
Major New Source Review (NSR)		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
State Implementation Plan (SIP)	X		General SIP

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## SECTION I. GENERAL INFORMATION

### A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the United States Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Flathead County Solid Waste District (Flathead) on September 6, 2005; and supplemental information submitted on December 12, 2005, May 3, 2006, September 23, 2009, and May 26, 2011.

### B. Facility Location

The Flathead County Landfill is located within Section 1 and Section 36, Township 29 North and Township 30 North, Range 22 West, in Flathead County, Montana. The facility is located in an area unclassified for attainment of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), but is adjacent to the Whitefish PM<sub>10</sub> non-attainment area and within a few miles of the Columbia Falls and Kalispell PM<sub>10</sub> non-attainment areas.

### C. Facility Background Information

#### Montana Air Quality Permit (MAQP) ("Preconstruction")

On January 4, 1995, Flathead applied for Permit #2850-00 for the construction and operation of a Landtec Candlestick Flare at Flathead's landfill located 9 miles north of Kalispell on Highway 93. The legal description of the facility's location is the NE<sup>1</sup>/<sub>4</sub> of the NW<sup>1</sup>/<sub>4</sub> of Section 1, Township 29 North, Range 22 West, in Flathead County, Montana.

Flathead proposed to use the landfill flare system to combust landfill gas collected by a gas extraction system. The collected gas is composed mainly of methane, carbon dioxide, and other trace gases. The gas extraction system is being installed to comply with Resource Conservation and Recovery Act (RCRA) Subtitle D regulations, prevent the migration of gas into adjacent soils, and remove excess gas from within the waste mass to prevent vegetative stress, control odors, and maintain ground water quality.

On May 6, 1996, the Department of Environmental Quality (Department) received a request for a permit modification. Flathead requested that their operational requirement to maintain a flare temperature of 1400°F be changed to operate and maintain a flare capable of meeting the requirements of 40 CFR 60.18. Permit #2850-01 replaced Permit #2850-00.

In addition, New Source Performance Standard (NSPS) 40 CFR 60, Subpart WWW – Standards of Performance for Municipal Solid Waste (MSW) Landfills was promulgated on March 12, 1996, and is applicable to Flathead's landfill. A condition was added to Permit #2850-01 to address 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW.

In 1999, the EPA informed the Department that any condition in an air quality preconstruction permit would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding preconstruction permits that they could request deletion of those conditions based on the Administrative Rules of Montana (ARM) 17.8.717 and ARM 17.8.315. Removing either of these conditions did not relieve the facility from complying with the rule upon which the permit condition was based; removal only ensured that enforcement of the condition remained solely with the Department. The condition based on ARM

17.8.717 was removed from Flathead's permit. Permit #2850-02 replaced Permit #2850-01. Furthermore, the rule references and permit format were updated.

On June 27, 2001, Flathead submitted a complete permit application for the addition of a new ground level flare, addition of 16 new wells, and removal of the existing candlestick flare at the facility. Potential emissions from the new flare were less than the de minimis level threshold of 15 tons per year, however, in accordance with the Montana Code Annotated (MCA) 75-2-215(1): all incinerators, including the proposed flare, require an air quality permit prior to construction, installation, or operation. Permit #2850-03 replaced Permit #2850-02.

On December 12, 2002, the Department received a request from Flathead to relax permitted compliance source testing requirements for the Landfill Gas (LFG) flare from semiannual to annual source testing requirements. In accordance with the Department's guidance document titled "Revised Testing Schedule" dated December 4, 1998, sources with the Potential to Emit (PTE) less than 50 tons per year of any regulated pollutant shall conduct additional compliance source testing "as required by the Department" after initially demonstrating compliance with the applicable permit limits. The guidance statement also indicates that the Department may evaluate and apply a specific source-type testing schedule on a case-by-case basis.

The LFG flare at the Flathead landfill has the PTE less than 50 tons per year of all regulated pollutants. Therefore, the Department's guidance indicates that testing shall be applied "as required by the Department." The Department determined that source testing for LFG flares was necessary and should be conducted at least annually. The permit action modified the testing schedule for the LFG flare to annual testing from a semiannual basis. **Permit #2850-04** replaced Permit #2850-03.

On October 21, 2003, the Department received a request from Flathead for the addition of a Tee Mark Super 6PJ-VC can, pail, and aerosol crusher to the Flathead County facility. This permit action added the Tee Mark Super 6PJ-VC crusher to the Flathead facility under the provisions of ARM 17.8.745(1). In addition, Permit #2850-05 was updated to reflect current Department permit format and permit language. **Permit #2850-05** replaced Permit #2850-04.

On May 4, 2006, the Department received a request from Flathead for the modification of the inlet flare testing schedule. Flathead requested to remove the Hydrogen Chloride (HCl) testing requirements, and reduce the mercury testing requirements to once every 5 years. The permit was also clarified to require testing of liquid condensate, which is combusted in the flare, once every 5 years. The Department intends to issue Permit #2850-06 to replace Permit #2850-05.

#### Title V Operating Permit

On March 3, 2001, Flathead was issued final and effective Operating Permit **OP2850-00** for operation of the Class II municipal landfill facility including a flare and associated equipment.

On May 9, 2001, Flathead submitted a permit application for the modification of Title V Operating Permit OP2850-00. The modification included applicable changes made to Flathead's facility since issuance of the facility's Operating Permit OP2850-00.

Flathead added a new ground level flare, 16 new wells, and removed the existing candlestick flare at the facility. Potential emissions from the new flare were less than the de minimis level threshold of 15 tons per year, however, in accordance with the MCA 75-2-215(1), all incinerators, including the proposed flare, require an air quality permit prior to construction, installation, or operation. Air quality Preconstruction Permit #2850-03 was issued final on September 5, 2001. Operating Permit **OP2850-01** was issued final on May 31, 2002, and replaced Permit OP2850-00.

On December 12, 2002, the Department received a complete request for a significant modification of Title V Operating Permit OP2850-01 for proposed changes to Operating Permit OP2850-01. Specifically, Flathead requested the following changes be incorporated into the permit:

- The facility responsible official changed from Steve Johnson, former director, to David Prunty, Director
- Flathead requested a relaxation in the flare inlet concentration compliance monitoring (source testing) schedule from a semiannual to an annual requirement based on Department testing schedule guidance
- Flathead requested that the requirement in Section III.B.13, to conduct a weekly review of the continuous flowrate of landfill gas to the flare, be relaxed to a monthly review schedule, or more frequently as required by the Department. The required continuous flowrate information is digitally stored on a floppy disk, which has the capacity to store 30 days of information at which time Flathead changes the disc for the next monitoring cycle. Flathead requested that the required landfill gas flow rate review be conducted at the time of floppy disc changeover.

Under this permit action, the Department updated the Title V operating permit to incorporate all changes listed above. Title V Operating Permit **OP2850-02** replaced Permit OP2850-01.

On September 26, 2003, the Department received a request for an administrative amendment of OP2850-02 to update Section V.B.3 of the General Conditions incorporating changes to federal Title V rules 40 CFR 70.6(c)(5)(iii)(B) and 70.6(c)(5)(iii)(C) (to be incorporated into Montana's Title V rules at ARM 17.8.1213) regarding Title V annual compliance certifications. Operating Permit **OP2850-03** replaced OP2850-02.

On September 6, 2005, the Department received a request to renew Title V Operating Permit #OP2850-03. Supplemental information on modifying the stack testing frequency was received December 12, 2005, and May 3, 2006. The following changes were made:

- EU004 (Landfill Surface) was added to reflect potential PM<sub>10</sub> emissions of 35.2 tons per year from the landfill surface. This source is considered an "emissions unit" under Title V but is not an "emitting unit" that requires a Montana Air Quality Permit (MAQP) under ARM 17.8 Subchapter 7 since the fugitive emissions are not caused by equipment.
- IEU002 (Paint Can Crusher) & IEU003 (Mineral Spirits Parts Washer) were added.
- Source testing requirements were changed: the requirement to test inlet HCl was eliminated since the previous results showed inlet HCl was essentially non-existent and the requirement to test mercury was reduced to once every 5 years since the results were far below permitted levels. In addition, the permit language was clarified to reflect the requirement to periodically analyze the liquid condensate that is burned in the flare.
- Compliance requirements for meeting 40 CFR 60 Subpart WWW were revised to reflect the options allowed within the regulation. This includes changing the requirement for conducting a NMOC stack test every five years to one of the options for compliance.

The flare was permitted under 75-2-215, MCA, and as such the incinerator requirements in ARM 17.8.316 do not apply to this flare (75-2-215, MCA and ARM 17.8.770 are under SIP review by EPA). Title V Operating Permit **#OP2850-04** replaced Title V Operating Permit #OP2850-03.

On November 24, 2008, the Department received a request for a modification of Title V Operating Permit #OP2850-04. Upon review of the application, the Department determined that a permit modification was not required for the changes being made at the facility. Title V Operating Permit #OP2850-05 was never issued.

**D. Current Permit Action**

On September 23, 2009, the District, the owner of the Flathead County Landfill (FCLF), requested the transfer of equipment associated with the LFG collection and control system (GCCS) (MAQP #2850-06) to the LFGE facility located at District’s existing landfill (MAQP#4245-00). The transferred equipment includes a LFG GCCS consisting of a network of LFG wells, connecting piping, and an enclosed LFG flare. As a result of the transferred equipment, the FCLF no longer requires an MAQP. However, because of the size of the landfill, FCLF is still subject to Subpart WWW, and therefore requires a Title V permit. Title V Operating Permit #OP2850-06 replaces Title V Operating Permit #2850-04.

**E. Compliance Designation**

The last complete inspection of the Flathead facility was conducted on April 11, 2006. Flathead was found to be in compliance with their permit at that time.

**F. Taking and Damaging Analysis**

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment and determined there are no taking or damaging implications.

YES	NO	
XX		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	XX	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	XX	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	XX	4. Does the action deprive the owner of all economically viable uses of the property?
	XX	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	XX	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	XX	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	XX	7a. Is the impact of government action direct, peculiar, and significant?
	XX	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	XX	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	XX	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

## SECTION II. SUMMARY OF EMISSION UNITS

### A. Facility Process Description

Flathead operates a Class II municipal landfill on approximately 80 acres of a 272-acre site. The design capacity of the landfill is over 2.5 million megagrams. The facility consists of a landfill gas (LFG) collection extraction system. The system is routed to an enclosed ground flare permitted under Flathead Electric LFGE Facility's MAQP #4245-01.

The LFG collection system is comprised of approximately 25 vertical extraction wells, which actively collect gas from the waste prism, and headers and lateral piping to convey extracted LFG to the flare system. The LFG collection system will be expanded as the landfill expands.

### B. Emission Units and Pollution Control Device Identification

The emission units regulated by this permit are the following (ARM 17.8.1211):

Emission Unit ID	Description	Pollution Control Device/Practice
EU001	Municipal Solid Waste (MSW) Landfill	Flare (As permitted in MAQP #4245)
EU003	Fugitive Dust from Vehicle Traffic	Reasonable Precautions
EU004	Fugitive Dust from Landfill	Reasonable Precautions

### C. Categorically Insignificant Sources/Activities

The following table of insignificant sources and/or activities was provided by Flathead. Because there are no requirements to update such a list, the emission units and/or activities may change from those specified in the table.

Emission Unit ID	Description
IEU01	Tub Grinder
IEU02	Paint Can Crusher
IEU03	Mineral Spirits Parts Cleaner

## SECTION III. PERMIT CONDITIONS

### A. Emission Limits and Standards

The Department determined that the MSW Landfill (EU001) is only subject to generally applicable emission limits as well as any requirements in 40 CFR 60, Subpart WWW.

Lastly, the Department determined that fugitive dust from the landfill surface (EU004) shall be limited to 20% opacity. As an “emissions source,” applicable requirements are specified for the landfill surface in Operating Permit #OP2850-04.

### B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements be contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emission units. Furthermore, the permit does not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by lack of regular monitoring, and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (i.e., no monitoring) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by Flathead to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

ARM 17.8 Subchapter 15 “Compliance Assurance Monitoring” (CAM) was effective beginning in March 2000. It requires that a facility develop a CAM plan for any emissions unit that is subject to an emissions limitation and uses a control device to achieve compliance with the limitation, if the emitting unit would be major without control. Flathead does not have any emitting units that are applicable to CAM; therefore a CAM plan is not required.

### C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, Flathead may elect to voluntarily conduct compliance testing to confirm its compliance status.

### D. Recordkeeping Requirements

Flathead is required to keep all records, listed in the operating permit, as a permanent business record for at least 5 years following the date of the generation of the record.

## **E. Reporting Requirements**

Reporting requirements are included in the permit for each emission unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, Flathead is required to submit semi-annual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

## **F. Public Notice**

The current permit action is considered an administrative amendment; therefore, a public notice was not required.

#### **SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS**

Pursuant to ARM 17.8.1221, Flathead did not request a permit shield for any regulatory requirements and/or regulatory orders.

## **SECTION V. FUTURE PERMIT CONSIDERATIONS**

### **A. MACT Standards**

The Department determined that this facility is potentially subject to 40 CFR Part 63, Subpart AAAA, Municipal Solid Waste Landfills. However, the Department determined that Flathead is not a major source of HAPs; therefore, 40 CFR 63, Subpart AAAA, is not applicable to this source.

### **B. NESHAP Standards**

As of issuance of this permit, the Department is unaware of any currently applicable or future NESHAP Standards (except for 40 CFR 61, Subpart M, as explained below) that may be promulgated that will affect this facility.

Asbestos abatement projects and building demolition/renovation activities will be conducted in accordance with applicable asbestos regulatory requirements. Those regulatory requirements include, but are not limited to 29 CFR 1926.1101; 40 CFR 763 sections 120, 121, 124, and Subpart E; 40 CFR part 61, Subpart M; State of Montana Asbestos Control Act 75-2-501 through 519 MCA; and State of Montana Occupational Health Rules ARM 17.74.301 through 404. State-accredited asbestos abatement personnel shall conduct the abatement of regulated asbestos-containing materials. Asbestos-containing waste materials shall be transported properly and disposed of in a State-approved landfill.

### **C. NSPS Standards**

The MSW Landfill (EU001) is subject to the applicable requirements of 40 CFR 60, Subpart WWW.

As of issuance of this permit, the Department is unaware of any other currently applicable or future NSPS Standards that may be promulgated that will affect this facility.

### **D. Risk Management Plan**

As of issuance of this permit, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements within 3 years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

### **E. PSD and Title V Greenhouse Gas Tailoring Rule**

On May 7, 2010, EPA published the "light duty vehicle rule" (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG "Tailoring Rule" (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011 would be subject to PSD permitting requirements for

GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO<sub>2</sub>e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.