

November 20th, 2023

Melissa Green
Montana Waste Systems, Inc.
High Plains Sanitary Landfill and Recycling Center
142 Powerline Rd
Floweree, MT 59440

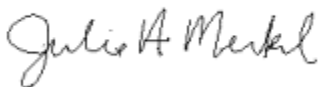
Sent via email: mgreen@wcgrp.com

RE: Final Permit Issuance for MAQP #2981-01

Dear Ms. Green:

Montana Air Quality Permit (MAQP) #2981-01 is deemed final as of November 18th, 2023, by DEQ. This permit is for High Plains Sanitary Landfill and Recycling Center, a municipal solid waste facility. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,



Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626



Tim Gauthier
Air Quality Engineering Scientist
Air Quality Bureau
(406) 444-2467

Montana Air Quality Permit #2981-01

Montana Waste Systems
High Plains Sanitary Landfill and Recycling Center
P.O. Box 2645
Great Falls, MT 59403

November 20, 2023



MONTANA AIR QUALITY PERMIT

Issued To: Montana Waste Systems, Inc. - MAQP: #2981-01
High Plains Sanitary Landfill Administrative Amendment (AA)
and Recycling Center Request Received: 10/23/2023
P.O. Box 2645 Department's Decision Issued: 11/02/2023
Great Falls, MT 59403 Permit Final: 11/18/2023

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Montana Waste Systems, Inc. - High Plains Sanitary Landfill and Recycling Center (High Plains), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

The High Plains flare is located at Section 35, Township 22 North and Range 4 East, Latitude 47.62191, Longitude -111.184161. The physical address of High Plains is 142 Powerline Rd, Floweree, MT 59440.

B. Current Permit Action

On October 23, 2023, the Department of Environmental Quality, Air Quality Bureau (DEQ) received a request to change the Permitted Equipment description under Section A of the Permit Analysis, I. Introduction/Process Description. The current permit action is an administrative amendment pursuant to ARM 17.8.764 that changes the language in the MAQP as requested.

Section II: Conditions and Limitations

A. Emission Limitations

1. High Plains shall install and continuously operate process instrumentation to demonstrate that a minimum temperature of 1500 F (on a 15-minute rolling average) is being maintained whenever waste gas is being combusted in the enclosed flare (ARM 17.8.749 and ARM 17.8.752).
2. High Plains shall use pipeline quality natural gas as supplemental fuel for the enclosed flare and maintain good combustion practices to minimize emissions (ARM 17.8.749 and ARM 17.8.752).
3. High Plains shall install an enclosed flare with design specifications for no less than 98.0 percent destruction efficiency (ARM 17.8.749 and ARM 17.8.752).

4. Emissions from enclosed flare shall not exceed the following based on a 1-hour average (ARM 17.8.749 and ARM 17.8.752):

Oxides of Nitrogen (NO_x) – 0.5 lb/hr

Carbon Monoxide (CO) – 5.46 pounds per hour (lb/hr)

Volatile Organic Compounds (VOC) – 0.05 lb/hr

Sulfur Dioxide (SO₂) – 1.96 lb/hr

Hazardous Air Pollutants (HAPs) – 0.26 lb/hr

Total Particulate Matter (PM_{Total}) – 0.5 lb/hr

Filterable and Condensable PM with an aerodynamic diameter of 10 microns or less (PM₁₀) – 0.5 lb/hr

Filterable and Condensable PM with an aerodynamic diameter of 2.5 microns or less (PM_{2.5}) – 0.5 lb/hr

5. High Plains shall install, calibrate, and continuously operate a flowmeter and hour-meter, or any other equivalent device, on the enclosed flare system to determine the total flow of landfill gas to the enclosed flare. The flow rate measuring device shall record flow at least every 15 minutes (ARM 17.8.749).
6. High Plains shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the enclosed flare that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.316).
7. High Plains shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
8. High Plains shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
9. High Plains shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.8 (Arm 17.8.749).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. High Plains shall conduct initial source testing within 180 days of the initial startup of the enclosed flare to demonstrate the destruction efficiency of the enclosed flare and to demonstrate compliance with the minimum destruction efficiency of either 98.0 percent or an outlet concentration of 20 ppmv of hexane.

High Plains shall utilize EPA Methods 25A, 7E, & 10 and/or equivalent methods to determine/validate VOC, NO_x, & CO destruction performance respectively. Testing for NO_x and CO shall occur concurrently (ARM 17.8.749).

3. High Plains shall conduct weekly observations for visible opacity of the enclosed flare. If visible opacity is observed, High Plains shall conduct an EPA Method 9 Visible Opacity determination to confirm opacity limits in Section II.A.6 (ARM 17.8.749).
4. The Department of Environmental Quality (DEQ) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. High Plains shall supply DEQ with annual production information for all emission points, as required by DEQ in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to DEQ by the date required in the emission inventory request. Information shall be in the units required by DEQ. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). High Plains shall submit the following information annually to DEQ by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

- a. temperature of the enclosed flare
- b. weekly opacity observations
- c. EPA Method 9 Test results

2. High Plains shall notify DEQ of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include the addition of a new emissions unit, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation.

The notice must be submitted to the DEQ, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by High Plains as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by DEQ, and must be submitted to DEQ upon request. These records may be stored at a location other than the plant site upon approval by DEQ (ARM 17.8.749).

D. Notifications

High Plains shall provide DEQ with written notification of the start-up date of the enclosed flare within 15 working days of the start-up date (ARM 17.8.749).

E. Additional Information

Additional information, such as applicable rules and regulations, BACT/RACT determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each permit or change to the permit.

SECTION III: General Conditions

- A. Inspection – High Plains shall allow DEQ’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as Continuous Emission Monitoring Systems (CEMS) or Continuous Emission Rate Monitoring Systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if High Plains fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving High Plains of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by DEQ’s decision may request, within 15 days after DEQ renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act.

The filing of a request for a hearing does not stay DEQ’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of DEQ’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, DEQ’s decision on the application is final 16 days after DEQ’s decision is made.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by DEQ at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by High Plains may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin, or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit Analysis
Montana Waste Systems, Inc.
High Plains Sanitary Landfill and Recycling Center
MAQP #2981-01

I. Introduction/Process Description

Montana Waste Systems, Inc. - High Plains Sanitary Landfill and Recycling Center (High Plains) proposes to install and operate an enclosed flare. The legal address of the facility is Section 35, Township 22 North and Range 4 West, Latitude 47.62191, Longitude -111.184161. The physical address is 142 Powerline Rd, Floweree, MT.

A. Permitted Equipment

High Plains proposes to install and operate an enclosed flare to combust the collected landfill gas, along with associated equipment.

B. Source Description

The High Plains Sanitary Landfill and Recycling Center receives and landfills municipal solid waste (MSW). The facility is permitted under Montana Solid Waste License #225. In addition to MSW, the facility is allowed to receive and landfill asbestos, petroleum-contaminated soils, construction and demolition debris, industrial waste, commercial waste and other non-hazardous waste streams.

C. Permit History

MAQP #2981-00 was issued to Montana Waste Systems, Inc. on September 8th, 2023. The permit proposed the installation and operation of a 1,000 standard cubic foot per minute (scfm) enclosed flare and associated equipment.

D. Current Permit Action

On October 23, 2023, the Department of Environmental Quality, Air Quality Bureau (DEQ) received a request to change the Permitted Equipment description under Section A of the Permit Analysis, I. Introduction/Process Description. The current permit action is an administrative amendment pursuant to ARM 17.8.764 that changes the language in the MAQP as requested. **MAQP #2981-01** replaces MAQP #2981-00

E. Additional Information (Changes to an existing permit)

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from DEQ of Environmental Quality (Department). Upon request, DEQ will provide references for the location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of DEQ, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by DEQ.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by DEQ, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

High Plains shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from DEQ upon request.

4. ARM 17.8.110 Malfunctions. (2) DEQ must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter

8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
11. ARM 17.8.230 Fluoride in Forage

High Plains must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, High Plains shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.316 Incinerators. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any incinerator, particulate matter in excess of 0.10 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used. Further, no person shall cause or authorize to be discharged into the outdoor atmosphere from any incinerator emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes.
6. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
7. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
8. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). High Plains is

considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

- a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
 - b. 40 CFR 60, Subpart Cf – Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills. The designated facility to which this subpart applies is each existing municipal solid waste landfill for which construction, reconstruction or modification commenced before July 17, 2014. Because High Plains first started operation in 1980 and has a capacity greater than 2.5 million megagrams, this subpart is applicable.
9. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.
- a. 40 CFR 61, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below:
 - b. 40 CFR 61, Subpart M – National Emissions Standards for Asbestos. This subpart applies to High Plains because are an active waste disposal that accepts asbestos containing waste material.
 - c. 40 CFR 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. This subpart applies to landfills which are, or are co-located with, a major source of hazardous air pollutant, or, is an area source with a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters and has uncontrolled emissions equal to or greater than 50 megagrams per year of non-methane organic compounds. The High Plains has a capacity greater than 2.5 million megagrams, therefore, this subpart applies.
- D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:
1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. This permit action does not require a fee as it is an administrative amendment.
 2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to DEQ by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by DEQ. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. DEQ may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to

require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. High Plains does not have a PTE greater than 25 tons per year for any criteria pollutant, however, the enclosed flare is considered an incinerator. Therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements.
(1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative amendment.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by DEQ must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis was not required for this permit action because it is an administrative amendment.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by DEQ at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving High Plains of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*

10. ARM 17.8.759 Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
 11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
 12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
 13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
 14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 15. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to DEQ.
 16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to DEQ for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).
 17. ARM 17.8.771 Mercury Emission Standards for Mercury-Emitting Generating Units. This rule identifies mercury emission limitation requirements, mercury control strategy requirements, and application requirements for mercury-emitting generating units.
- F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

- G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as DEQ may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2981-01 for High Plains, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to NSPS (40 CFR 60, Subparts A and Cf).
 - e. This facility is not subject to any current NESHAP standards (40 CFR 61, Subpart M, 40 CFR 62, OOO, and 40 CFR 63, Subpart A and AAAA).
 - f. This source is not a Title IV affected source, or a solid waste combustion unit.
 - g. This source is an EPA designated Title V source.
 - h. As allowed by ARM 17.8.1204(3), DEQ may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's potential to emit.

- i. In applying for an exemption under this section, the owner or operator of the source shall certify to DEQ that the source's potential to emit, does not require the source to obtain an air quality operating permit.
- ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

High Plains is a Title V source and has a current Title V Operating Permit, #OP2981-07.

III. BACT Determination

A BACT determination is required for each new or modified source. High Plains shall install on the new or modified source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was not required because the current permit action is considered an administrative change.

IV. Emission Inventory

CONTROLLED Emission Source	tons/year							
	PM	PM₁₀	PM_{2.5}	NO_x	CO	VOC	SO₂	HAPs
Flare	0.22	0.22	0.22	0.22	23.91	0.22	8.58	1.14
Natural Gas Emissions	7.60E-06	1.48E-05	1.48E-05	4.30E-06	7.82E-05	1.07E-05	1.17E-06	2.15E-05
Haul Roads	34.720	5.395	0.935	--	--	--	--	--
Total Emissions	34.94	5.61	1.15	0.22	23.91	0.22	8.58	1.14

Notes:

1. Values in table reflect "controlled" cells from subsequent worksheets
2. The Flare calculations represent landfill gas emissions with no refinement
3. Vehicle Miles Traveled is based on 2040 hours per year

Enclosed Flare

Hours of Operation = 8,760.00 hours 8760 **hours**
 pounds per ton = 0.000500 lb/ton 0.0005 **lb/ton**

PM Emissions:
 PM Emissions = 0.219 ton/yr (AP-42, Table 2.4-4) 0.22 **ton/yr**

PM-10 Emissions:
 Emission Factor = 0.05 lb/hr BACT 0.05 **lb/hr**
 Calculation: ((8,760.00 hours) * (0.05 lb/hr) * (ton/2000 lb) = 0.219 ton/yr 0.22 **ton/yr**

PM2.5 Emissions
 Emission Factor = 0.05 lb/hr BACT 0.05 **lb/hr**
 Calculation: ((8,760.00 hours) * (0.05 lb/hr) * (ton/2000 lb) = 0.219 ton/yr 0.22 **ton/yr**

NOx Emissions:
 Emission Factor = 0.05 lb/hr BACT 0.05 **lb/hr**
 Calculation: $((0.05 \text{ hours}) * (0.05 \text{ lb/hr}) * (\text{ton}/2000 \text{ lb})) = 0.219 \text{ ton/yr}$ 0.22 **ton/yr**

CO Emissions:
 Emission Factor = 5.46 lb/hr BACT 5.46 **lb/hr**
 Calculation: $((8,760.00 \text{ hours}) * (5.46 \text{ lb/hr}) * (\text{ton}/2000 \text{ lb})) = 23.915 \text{ ton/yr}$ 23.91 **ton/yr**

VOC Emissions:
 Emission Factor = 0.05 lb/hr BACT 0.050 **lb/hr**
 Calculation: $((8,760 \text{ hours}) * (0.05 \text{ lb/hr}) * (\text{ton}/2000 \text{ lb})) = 0.219 \text{ ton/yr}$ 0.22 **ton/yr**

SOx Emissions:
 Emission Factor = 1.96 lb/hr BACT 1.96 **lb/hr**
 Calculation: $((0.05 \text{ hours}) * (0.05 \text{ lb/hr}) * (\text{ton}/2000 \text{ lb})) = 8.585 \text{ ton/yr}$ 8.58 **ton/yr**

HAPs Emissions:
 Emission Factor = 0.26 lb/hr BACT 0.26 **lb/hr**
 Calculation: $((8,760 \text{ hours}) * (0.2600 \text{ lb/hr}) * (\text{ton}/2000 \text{ lb})) = 1.139 \text{ ton/yr}$ 1.14 **ton/yr**

Natural Gas Emissions - Flare

Hours of Operation = 8,760.00 hours 8760
 pounds per ton = 0.000500 lb/ton 0.0005
 British thermal units per hour 455
 British thermal units per scf 0.0010

PM Emissions:
 PM Emissions = 0.000 lb/mmscf (Assume all PM < 1.0 um) 0.0000076

PM-10 Emissions:
 Emission Factor = 0.0000076 lb//scf (AP-42, Table 2.4-4) 0.0000076
 Calculation: $((0.0000076 \text{ lb//scf}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 1.48491E-05

PM2.5 Emissions
 Emission Factor = 0.0000076 lb/hr (AP-42, Table 2.4-4) 0.0000076
 Calculation: $((0.0000076 \text{ lb//scf}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 1.48491E-05

NOx Emissions:
 Emission Factor = 0.0000022 lb/hr Vendor Guarantee 0.0000022
 Calculation: $((0.0000022 \text{ lb/hr}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 4.29841E-06

CO Emissions:
 Emission Factor = 0.00004 lb/hr Vendor Guarantee 0.00004
 Calculation: $((0.000040 \text{ lb/hr}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 7.81529E-05

VOC Emissions:
 Emission Factor = 0.0000055 lb/hr Vendor Guarantee 0.0000055
 Calculation: $((0.0000055 \text{ lb/hr}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 1.0746E-05

SOx Emissions:
 Emission Factor = 0.0000006 lb/hr Mass Balance/process design 0.000001

Calculation: $((0.0000006 \text{ lb/hr}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 1.17229E-06

HAPs Emissions:

Emission Factor = 0.000011 lb/hr Sampling Data 1.10E-05

Calculation: $((0.0000110 \text{ lb/hr}) * (0.0010 \text{ Btu/scf}) * (455 \text{ Btu/hr}) * (8,760 \text{ hours}) * (\text{ton}/2000 \text{ lb})) = 0.000 \text{ ton/yr}$ 2.14921E-05

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 166 VMT/day (Estimate)	166	VMT/day
VMT per hour = $(166 \text{ VMT/day}) * (\text{day}/24 \text{ hrs}) = 6.92 \text{ VMT/hr}$	6.92	VMT/hr
Hours of Operation = 2,080 hrs/yr	2,080	hrs/yr
	0	hrs/yr

PM Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 9.65 \text{ lb/VMT}$ 9.65 lb/VMT

Where: k = constant = 5.42 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06) 5.42 lbs/VMT
s = surface silt content = 4.8 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06) 4.8 %

W = mean vehicle weight = 45 tons (1994 average loaded/unloaded or a 40 ton truck) 45 tons

a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06) 0.7

b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06) 0.45

Control Efficiency = 50% (Water spray or chemical dust suppressant) 50 %

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (9.65 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 69.44 \text{ tons/yr}$ (Uncontrolled Emissions) 69.4 tons/yr

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (9.65 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 34.72 \text{ tons/yr}$ (Apply 50% control efficiency) 34.7 tons/yr

PM10 Emissions:

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 1.50 \text{ lb/VMT}$ 1.50 lb/VMT

Where: k = constant = 1.46 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06) 1.46 lbs/VMT
s = surface silt content = 4.8 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06) 4.8 %

W = mean vehicle weight = 45 tons (1994 average loaded/unloaded or a 40 ton truck) 45 tons

a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06) 0.9

b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06) 0.45

Control Efficiency = 50% (Water spray or chemical dust suppressant) 50 %

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (1.50 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 10.79 \text{ tons/yr}$ (Uncontrolled Emissions) 10.7 tons/yr

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (1.50 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 5.40 \text{ tons/yr}$ (Apply 50% control efficiency) 5.40 tons/yr

PM2.5 Emissions

Predictive equation for emission factor for unpaved roads at industrial sites provided per AP 42, Ch. 13.2.2, 11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 0.26 \text{ lb/VMT}$ 0.26 lb/VMT

Where: k = constant = 0.146 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06) 0.146 lbs/VMT
s = surface silt content = 4.8 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06) 4.8 %

W = mean vehicle weight = 45 tons (1994 average loaded/unloaded or a 40 ton truck) 45 tons

a = constant = 0.7 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06) 0.7

b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06) 0.45

Control Efficiency = 50% (Water spray or chemical dust suppressant) 50 %

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (0.26 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 1.87 \text{ tons/yr}$ (Uncontrolled Emissions) 1.87 tons/yr

Calculation: $(2080 \text{ hrs/yr}) * (6.92 \text{ VMT/hr}) * (0.26 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 0.94 \text{ tons/yr}$ (Apply 50% control efficiency) 0.94 tons/yr

V. Existing Air Quality

The High Plains facility is located within an area of Cascade County that is designated as an Unclassifiable/Attainment area for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

The limitations and conditions in MAQP #2981-01 ensure the facility would not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS).

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area.

VII. Ambient Air Impact Analysis

DEQ determined, based on the information provided by High Plains, and the attached Environmental Assessment, that the impacts from this permitting action will be minor. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Health Risk Assessment

A health risk assessment was conducted using AERSCREEN, an EPA approved screening model using indicated inputs for landfill gas analysis to determine if the proposed enclosed flare complies with the negligible risk requirement of MCA 75-2-215. The emission inventory did not contain sufficient quantities of any pollutant on DEQ's list of pollutants for which non-inhalation impacts must be considered; therefore, DEQ determined that inhalation risk was the only necessary pathway to consider. Only those hazardous air pollutants for which there were established emission factors were considered in the emission inventory.

DEQ determined that the risks estimated in the risk assessment for the enclosed flare are in compliance with the requirement to demonstrate negligible risk to human health and the environment. As documented in the health risk assessment, and in accordance with the negligible risk requirement, no single HAP concentration results in Cancer Risk greater than 1.00E-06 and the sum of all HAPs results in a Cancer Risk of less than 1.00E-05. Further, the sum of Chronic Noncancer Reference Exposure Level (CNCREL) hazard quotient is less than 1.0 as required to demonstrate compliance with the negligible risk requirement.

HUMAN HEALTH RISK ASSESSMENT
HIGH PLAINS SANITARY LANDFILL AND RECYCLING CENTER - CASCADE COUNTY, MONTANA

Speciated LFG Compounds	Enclosed Flare Emissions	Modeled Annual Ambient Concentration	Annual Concentration for Cancer Risk	Below limits?	Annual Concentration for Non Cancer Risk (Chronic)	Below limits?	Annual Concentration for Non Cancer Risk (Acute)	Below limits?	Carcinogenic Risk from Inhalation Exposure	Excess Lifetime Cancer Risk	Reference Concentration for Inhalation Exposure (RFC)	Noncancer Hazard Quotient
	lb/hr	$\mu\text{g}/\text{m}^3$							$(\mu\text{g}/\text{m}^3)^{-1}$		$\mu\text{g}/\text{m}^3$	
1,1,1 - Trichloroethane (methyl chloroform)	1.96E-04	3.91E-05			3.20E+00	Yes	1.90E+03	Yes			9.00E+03	4.34E-09
1,1,2,2 - Tetrachloroethane	5.66E-04	1.13E-04	1.72E-03	Yes								
1,1 - Dichloroethane (ethylidene dichloride)	7.28E-04	1.45E-04										
1,1 - Dichloroethene (vinylidene chloride)	5.94E-05	1.18E-05	2.00E-03	Yes	3.20E-01	Yes					2.00E+02	5.91E-08
1,2 - Dichloroethane (ethylene dichloride)	1.24E-04	2.48E-05	3.85E-03	Yes	9.50E-01	Yes			2.60E-05	6.44E-10		
1,2 - Dichloropropane (propylene dichloride)	6.23E-05	1.24E-05			4.00E-02	Yes					4.00E+00	3.10E-06
Acrylonitrile	1.02E-03	2.04E-04	1.47E-03	Yes	2.00E-02	Yes			6.80E-05	1.39E-08	2.00E+00	1.02E-04
Benzene	4.55E-04	9.06E-05	1.20E-02	Yes	7.10E-01	Yes			7.80E-06	7.06E-10	3.00E+01	3.02E-06
Carbon Disulfide	1.35E-04	2.69E-05			7.00E+00	Yes					7.00E+02	3.85E-08
Carbon Tetrachloride	1.88E-06	3.75E-07	6.67E-03	Yes	2.40E-02	Yes	1.90E+00	Yes	6.00E-06	2.25E-12	1.00E+02	3.75E-09
Carbonyl Sulfide	9.02E-05	1.80E-05										
Chlorobenzene	8.62E-05	1.72E-05			7.00E-01	Yes						
Chloroethane (ethyl chloride)	2.57E-04	5.12E-05			1.00E+02	Yes					1.00E+04	5.12E-09
Chloroform	1.10E-05	2.19E-06	4.35E-03	Yes	3.50E-01	Yes						
Chloromethane (methyl chloride)	1.86E-04	3.70E-05									9.00E+01	4.11E-07
Dichlorodifluoromethane	5.93E-03	1.18E-03										
Dichloromethane (methylene chloride)	3.64E-03	7.26E-04	2.13E-01	Yes	3.00E+01	Yes	3.50E+01	Yes	1.00E-08	7.26E-12	6.00E+02	1.21E-06
Ethylbenzene	1.50E-03	2.98E-04			1.00E+01	Yes					1.00E+03	2.98E-07
Ethylene Dibromide	5.75E-07	1.15E-07	4.55E-04	Yes	4.60E-02	Yes			6.00E-04	6.88E-11	9.00E+00	1.27E-08
Hexane	1.74E-03	3.47E-04			2.00E+00	Yes					7.00E+02	4.96E-07
Mercury (total)	1.78E-07	3.55E-08									3.00E-01	1.18E-07
Methyl Isobutyl Ketone	5.83E-04	1.16E-04									3.00E+03	3.87E-08
Perchloroethylene (tetrachloroethylene)	1.88E-03	3.74E-04	1.69E-02	Yes	3.50E-01	Yes	6.80E+01	Yes	2.60E-07	9.73E-11	4.00E+01	9.36E-06
Toluene	1.10E-02	2.19E-03			4.00E+00	Yes					5.00E+03	4.38E-07
Trichloroethylene (trichloroethene)	1.13E-03	2.24E-04	5.00E-02	Yes	6.40E+00	Yes			4.10E-06	9.20E-10	2.00E+00	1.12E-04
Vinyl Chloride	1.40E-03	2.78E-04	1.28E-03	Yes	2.60E-01	Yes			8.80E-06	2.45E-09	1.00E+02	2.78E-06
Xylenes	3.90E-03	7.77E-04			3.00E+00	Yes	4.40E+01	Yes			1.00E+02	7.77E-06
Hydrogen Chloride (HCl)	2.30E-01	4.58E-02			2.00E-01	Yes	3.00E+01	Yes			2.00E+01	2.29E-03
Aggregate Lifetime Cancer Risk:										1.88E-08	Noncancer Hazard Quotient Sum:	2.53E-03

IX. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, DEQ conducted a private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	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?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	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?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	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?
	X	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)

X. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Analysis Prepared By: Tim Gauthier

Date: November 2, 2023