

November 1, 2024

Stacy Gregston
Bitterroot Pet Crematorium
827 S. Shoshone Loop
Hamilton, MT 59840

Sent via email: gregston2@gmail.com

RE: Final Permit Issuance for MAQP #3117-03

Dear Stacy Gregston:

Montana Air Quality Permit (MAQP) #3117-03 is deemed final as of November 1, 2024, by DEQ. This permit is for Bitterroot Pet Crematorium, a crematorium. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,



Eric Merchant
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626



Emily Hultin
Air Quality Engineering Scientist
Air Quality Bureau
(406) 444-2049

Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau

Montana Air Quality Permit #3117-03

Bitterroot Pet Crematorium
Section 17, Township 5 North, Range 20 West, Ravalli County, Montana
827 S. Shoshone Loop
Hamilton, Montana 59840

November 1, 2024



MONTANA AIR QUALITY PERMIT

Issued To: Bitterroot Pet Crematorium, Inc. MAQP: #3117-03
827 S. Shoshone Loop Application Complete: 10/07/2024
Hamilton, MT 59840 Administrative Amendment (AA) Request
Received: 10/07/2024
DEQ's Decision on AA: 10/16/2024
Permit Final: 11/01/2024

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Bitterroot Pet Crematorium, Inc. (Bitterroot), 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

Bitterroot is located in Hamilton, MT. The legal location is the East¹/₂ of the East¹/₂ of the Northeast¹/₄ of the Northeast¹/₄ of Section 17, Township 5 North, Range 20 West, Ravalli County, Montana. A complete list of the permitted equipment can be found in Section I.A of the permit analysis.

B. Current Permit Action

On October 7, 2024, DEQ received an administrative amendment request to correct the address in the permit from 728 S. Shoshone Loop to 827 S. Shoshone Loop, in Hamilton, Montana.

Section II: Conditions and Limitations

A. Emission Limitations

1. Bitterroot shall not cause or authorize to be discharged into the atmosphere from either of the 2000 Therm-Tec S-18 Incinerators any visible emissions that exhibit an opacity of 10% or greater averaged over six consecutive minutes (ARM 17.8.752).
2. Bitterroot shall not cause or authorize to be discharged into the atmosphere from either of the 2000 Therm-Tec S-18 Incinerators any particulate emissions in excess of 0.10 gr/dscf corrected to 12% CO₂ (ARM 17.8.752).
3. Bitterroot shall not incinerate/cremate any material other than animal remains and any corresponding containers (ARM 17.8.749).
4. The design capacity of the new Therm-Tec S-18 incinerator shall not exceed 50 pounds per hour (lb/hr) (ARM 17.8.749).

5. Bitterroot shall provide written notice to the DEQ and obtain approval from DEQ if material other than what would normally be termed animal remains, or its container, is to be incinerated (ARM 17.8.749).
6. The secondary chamber operating temperature of the 2000 Therm- Tec S-18 Incinerators shall be maintained above 1600 °F with no single reading less than 1,550 °F. The operating temperature shall be maintained during operation and for ½ hour after the feed has stopped (ARM 17.8.749).
7. Bitterroot 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. Bitterroot 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. Bitterroot shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.7 (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. DEQ may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Bitterroot 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).

2. Bitterroot 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 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 Bitterroot 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).
4. Bitterroot shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Continuous Emissions Monitoring Systems

1. Bitterroot shall install, calibrate, maintain, and operate continuous monitoring and recording equipment on the 2000 Therm-Tec S-18 Incinerator for the secondary chamber temperature, or another monitoring/recording method as may be approved by DEQ (ARM 17.8.749).
2. Bitterroot shall record the daily quantity of material incinerated/cremated and daily hours of operation for the 2000 Therm-Tec S-18 Incinerator (17.8.749).

E. Notification

1. Bitterroot shall provide written notification of the actual start-up date of the second incinerator postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Bitterroot 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 Bitterroot fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bitterroot 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 the 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 Bitterroot 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
Bitterroot Pet Crematorium, Inc.
MAQP #3117-03

I. Introduction/Process Description

Bitterroot Pet Crematorium, Inc. (Bitterroot) owns and operates a pet crematorium. The facility is located at 827 S. Shoshone Loop, in Hamilton, MT.

A. Permitted Equipment

Bitterroot owns and operates one 2000 Therm-Tec S-18 Incinerator, with a capacity of 60 pounds per hour (lb/hr) of animal remains.

Bitterroot will install and operate a second 2000 Therm-Tec S-18 Incinerator with a capacity of 50 pounds per hour (lb/hr) of animal remains.

B. Source Description

The Bitterroot facility consists of a pathological incinerator used for the incineration/cremation of animal remains. The facility is located in the East ½ of the East ½ of the Northeast ¼ of the Northeast ¼ of Section 17, Township 5 North, Range 20 West, Ravalli County, Montana.

C. Permit History

On May 30, 2000, DEQ received an application from Bitterroot requesting a permit for the operation of an incinerator/crematorium in the above location. Bitterroot proposed to construct a pathological incinerator to be used as an animal crematorium. The incinerator/crematorium has a capacity of 60 lb/hr of animal remains. Bitterroot was issued **Permit #3117-00** on July 26, 2000.

On September 9, 2003, DEQ received a letter from Bitterroot. Bitterroot requested an administrative amendment to Permit #3117-00 to allow operational flexibility pertaining to the monitoring/recording requirements contained in Section II.C. Bitterroot requested that Section II.C.1 be modified to allow for the consideration of another acceptable method of monitoring temperature.

This permit action modified Section II.C.1 of the permit to allow for the consideration of other temperature monitoring methods. In addition, Permit# 3117-00 was updated to reflect current Department permit format and permit language. **Permit #3117-01** replaced Permit #3117-00.

On June 10, 2024, DEQ received an application from Bitterroot requesting a permit modification for the addition of a second incinerator/crematorium, a ThermTec S-18 Incinerator, along with modifications to the building and adding propane tanks. The address of the facility was also updated. DEQ updated the format of the permit to match current permit standards. **MAQP #3117-02** replaced MAQP #3117-01.

D. Current Permit Action

On October 7, 2024, DEQ received an administrative amendment request to fix the address in the permit from 728 to 827 S. Shoshone Loop, in Hamilton, Montana. **MAQP #3117-03** replaces MAQP #3117-02.

E. Additional Information

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. Upon request, DEQ will provide references for 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).

Bitterroot 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

Bitterroot 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, Bitterroot 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). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.

Bitterroot is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

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.

This facility is not a NESHAP affected source, therefore it is not an affected facility under this subpart.

10. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

This facility is not a NESHAP affected source, therefore it is not an affected facility under this subpart.

- D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:
1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.402 Requirements. Bitterroot must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or modified stack for Bitterroot is below the allowable 65-meter GEP stack height.
- E. 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. A permit application is incomplete until the proper application fee is paid to DEQ. A permit fee is not required for the current permit action because the permit action is considered 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.
- F. 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. Bitterroot does not have a PTE greater than 25 tons per year, however, in accordance with MCA 75-2-2215, an air permit must be obtained prior to the construction and operation of an incinerator, regardless of potential incinerator emissions. Since Bitterroot must obtain an air quality permit, all normally applicable requirements apply.

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 because the permit change is considered an administrative permit change. 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 permit change.
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. The required BACT analysis is included in Section III of this permit analysis.
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 Bitterroot 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.
- G. 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).

H. 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 #3117-02 for Bitterroot, 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 not subject to any current NSPS.
 - e. This facility is not subject to any current NESHAP standards.
 - f. This source is not a Title IV affected source, or a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, DEQ determined that Bitterroot will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Bitterroot will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. Bitterroot 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 for the current permit action because the current permit action is considered an administrative permit action.

IV. Emission Inventory

Criteria Pollutants:

Emissions from Animal Remains Combustion

Pollutant	EF	lb/hr	TPY
SO _x	2.17	0.0651	0.28514
NO _x	3.56	0.1068	0.46778
VOC	0.299	0.00897	0.03929
PM/PM10	4.67	0.1401	0.61364
CO	2.95	0.0885	0.38763

Equation for determining pounds/hr:

$$\frac{lb}{hr} = \text{feed rate} \left(\frac{lb}{hr} \right) * \text{Emissions Factor} \left(\frac{lb}{ton} \right) * \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

Example Calculation for determining SO_x lb/hr:

$$0.05425 \frac{lb}{hr} = 50 \frac{lb}{hr} * 2.17 \left(\frac{lb}{ton} \right) * \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

Equation for determining the Potential to Emit (PTE):

$$TPY = \frac{lb}{hr} * 8760 \frac{hr}{yr} * \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

Example calculation for determining the PTE for SO_x:

$$0.23762 \text{ TPY} = 0.05425 * 8760 \frac{hr}{yr} * \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

Notes:

1. Incinerator emissions based on EPA emissions from Table 2.3-1 and 2.3-2 of AP-42 (5th Edition)
2. All conversion factors from AP-42 Appendix A

Emissions from Natural Gas Combustion

Pollutant	Emission Factor (lb/MMscf)	Annual Emissions (lb/hr)	Annual Emissions (ton/year)
SO _x	0.6	0.0003	0.0
NO _x	170	0.0816	0.36
VOC	5.5	0.00264	0.01

PM/PM10	7.6	0.00365	0.02
CO	24	0.01152	0.05

Hazardous Air Pollutant (HAPs) Emissions

HAP Category / Pollutant Name	Emission Factor	lb/yr	TPY
	(lb/150 lb body) - or - (lb/MMscf natural gas from AP-42 where not tested/reported in crematory emissions)		
<u>Heavy Metals</u>			
Antimony (less than)	1.51E-05	5.29E-03	2.645E-06
Arsenic (less than)	1.50E-05	0.05256	2.628E-05
Beryllium	1.37E-06	0.0048	2.4E-06
Cadmium	1.10E-05	0.03854	1.927E-05
Chromium	2.99E-05	0.10477	5.238E-05
Chromium, hx	1.35E-05	0.0473	2.365E-05
Cobalt (less than)	8.75E-07	0.00307	1.533E-06
Lead	6.62E-05	0.23196	0.000116
Nickel	3.82E-05	0.13385	6.693E-05
Selenium	4.36E-05	0.15277	7.639E-05
Zinc	3.53E-04	1.23691	0.0006185
<u>Polycyclic Organic Matter (POM)</u>			
2-methylnaphthalene	2.40E-05	0.00025	1.237E-07
3-methylchloranthrene (less than)	9.00E-07	9.3E-06	4.638E-09
7,12 Dibenz(a)anthracene (less than)	8.00E-06	8.2E-05	4.122E-08
Anthracene (less than)	1.20E-06	1.2E-05	6.184E-09
Benzene	2.10E-03	0.02164	1.082E-05
Dichlorobenzene	1.20E-03	0.01237	6.184E-06
Hexane	1.80E+00	18.5506	0.0092753
Napthalene	6.10E-04	0.00629	3.143E-06
Phenanathrene	1.70E-05	0.00018	8.76E-08
Toluene	3.40E-03	0.03504	1.752E-05
Acenaphthene	1.11E-07	0.00039	1.945E-07
Acenaphthylene	1.22E-07	0.00043	2.137E-07
Benzo(a)anthracene (less than)	4.88E-09	1.7E-05	8.55E-09
Benzo(a)pyrene (less than)	1.46E-08	5.1E-05	2.549E-08

Benzo(b)fluoranthene (less than)	7.95E-09	2.8E-05	1.393E-08
Benzo(g,h,i)perylene (less than)	1.46E-08	5.1E-05	2.549E-08
Benzo(k)fluoranthene (less than)	7.10E-09	2.5E-05	1.244E-08
Chrysene (less than)	2.70E-08	9.5E-05	4.73E-08
Dibenzo(a,h)anthracene (less than)	6.35E-09	2.2E-05	1.113E-08
Fluorene	4.17E-07	0.00146	7.306E-07
Fluoranthene	2.05E-07	0.00072	3.592E-07
Indeno(1,2,3-cd)pyrene (less than)	7.70E-09	2.7E-05	1.349E-08
Phenanthrene	2.29E-06	0.00802	4.012E-06
Pyrene	1.62E-07	0.00057	2.838E-07
<u>Dibenzofurans</u>			
1,2,3,4,6,7,8-Heptachlorodibenzofuran (less than)	2.29E-09	8E-06	4.003E-09
1,2,3,4,7,8,9-Heptachlorodibenzofuran (less than)	1.39E-10	4.9E-07	2.435E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	9.53E-10	3.3E-06	1.67E-09
1,2,3,6,7,8-Hexachlorodibenzofuran	8.52E-10	3E-06	1.493E-09
1,2,3,7,8,9-Hexachlorodibenzofuran	1.67E-09	5.9E-06	2.926E-09
2,3,4,6,7,8-Hexachlorodibenzofuran	3.44E-10	1.2E-06	6.027E-10
1,2,3,7,8-Pentachlorodibenzofuran (less than)	1.47E-10	5.2E-07	2.575E-10
2,3,4,7,8-Pentachlorodibenzofuran (less than)	4.43E-10	1.6E-06	7.753E-10
2,3,7,8-Tetrachlorodibenzofuran	5.19E-10	1.8E-06	9.093E-10
<u>Listed Non-POM Organic HAPs</u>			
Acetaldehyde	1.30E-04	0.45552	0.0002278
Formaldehyde	3.40E-05	0.11914	5.957E-05
<u>Listed Acids</u>			
Hydrogen chloride	7.20E-02	252.288	0.126144
Hydrogen fluoride	6.60E-04	2.31264	0.0011563

Dioxins			
2,3,7,8-tetrachlorodibenzo-p-dioxin	7.94E-11	2.8E-07	1.391E-10
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3.79E-09	1.3E-05	6.64E-09
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.75E-10	9.6E-07	4.818E-10
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	3.97E-10	1.4E-06	6.955E-10
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	4.92E-10	1.7E-06	8.62E-10
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	2.33E-10	8.2E-07	4.082E-10
Total		275.8255	0.1379128

$$\frac{lb}{hr} HAP = Emissions\ Factor * Maximum\ Annual\ Bodies\ Cremated\ (3.5E3\ body/year)$$

$$Tons\ per\ Year\ (TPY) = \frac{lb/hr}{2000\ lb}$$

V. Existing Air Quality

Bitterroot is located in Hamilton, MT. The legal location is the East½ of the East½ of the Northeast ¼ of the Northeast ¼ of Section 17, Township 5 North, Range 20 West, Ravalli County, Montana. The air quality of the area is classified as either Better than National Standards or unclassified/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Effects to air quality will be minor, therefore, DEQ believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #3117-03, DEQ determined, based on the impacts from this permitting action will be negligible as this is an administrative amendment. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Human Health Risk Assessment

A health risk assessment was not conducted for this permit action as it is considered an administrative permit action.

Based on the information provided and the conditions established in MAQP #3117-03, DEQ determined that the impact from this permitting action will be minor. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

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

An environmental assessment, required by the Montana Environmental Policy Act, was not completed for this project, as it is an administrative amendment.

Analysis Prepared by: Emily Hultin

Date: October 8, 2024