

September 13, 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 #3117-02**

Dear Stacy Gregston:

Montana Air Quality Permit (MAQP) #3117-02 is deemed final as of September 12, 2024, by DEQ. This permit is for Bitterroot Pet Crematorium, a pet crematorium. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,



Bo Wilkins  
Bureau Chief  
Air Quality Bureau  
(406) 444-6711



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 #3117-02

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

September 12, 2024



## MONTANA AIR QUALITY PERMIT

Issued To: Bitterroot Pet Crematorium, Inc. MAQP: #3117-02  
827 S. Shoshone Loop Application Complete: 07/05/2024  
Hamilton, MT 59840 Preliminary Determination Issued: 07/24/2024  
DEQ's Decision Issued: 08/27/2024  
Permit Final: 09/12/2024

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 East<sup>1</sup>/<sub>2</sub> of the East<sup>1</sup>/<sub>2</sub> of the Northeast<sup>1</sup>/<sub>4</sub> of the Northeast<sup>1</sup>/<sub>4</sub> 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 June 10, 2024, the Department of Environmental Quality (DEQ) received an application from Bitterroot requesting a permit modification for the addition of a second incinerator/crematorium, a ThermTec S-18 Incinerator with a burner rating of 1.2 MMBtu/hr, along with modifications to the building and adding two 1000-gallon propane tanks, with the removal of two existing 500-gallon propane tanks. The address of the facility was also updated. DEQ updated the format of the permit to match current permit standards.

### 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% CO<sub>2</sub> (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 #3117-02

I. Introduction/Process Description

Bitterroot Pet Crematorium, Inc. (Bitterroot) owns and operates a pet crematorium. The facility is located at 728 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.

D. Current Permit Action

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** replaces MAQP #3117-01.

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.

F. Response to Public Comments:

No public comments received.

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 PM<sub>10</sub>
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. Bitterroot submitted the appropriate permit application fee for the current permit action.
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. Bitterroot submitted the required permit application 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. Bitterroot submitted an affidavit of publication of public notice for the June 8, 2024, issue of the *Ravalli Republic*, a newspaper of general circulation in the Town of Hamilton in Ravalli County, as proof of compliance with the public notice requirements.

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 (PM<sub>10</sub>) in a serious PM<sub>10</sub> 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 PM<sub>10</sub> 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.

Bitterroot proposes to install and operate a second crematorium equipped with a secondary chamber designed specifically to reduce the amount of pollutants, including Hazardous Air Pollutants (HAPs) emitted by the incinerator. Previous research done by DEQ, including similar BACT analyses for crematoriums, have not required additional air pollution control equipment beyond the control of the secondary chamber, which maintains a stable temperature and retention of combustion gases within. Any additional controls would be economically infeasible.

BACT for products of combustion/incineration (carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), volatile organic compounds (VOC), and sulfur dioxide (SO<sub>2</sub>) and HAPs) resulting from crematorium operations is proper crematorium design and operation. Proper design includes relying on good turbulence, high temperature and the residence time within the secondary chamber. Turbulence is achieved with proper introduction of air into the combustion chambers. Temperature is achieved by preheating the primary chamber to 1500 degrees Fahrenheit and the secondary chamber to a minimum of 1600 degrees Fahrenheit prior to placing the remains and associated container. The secondary chamber is required to maintain at a minimum operating temperature of 1,600 °F. Residence time is achieved by sizing the secondary chamber large enough to support final combustion within the secondary combustion chamber. This design incorporates no heat recovery from the secondary combustion chamber and therefore, the stack volume operates effectively as an extension of the secondary combustion chamber volume. When the volume of the secondary combustion chamber and stack are combined the average residence time is over 1 second.

Furthermore, natural gas or propane combustion inherently results in low emissions of air pollutants due to characteristics of the fuel fired. Potential NO<sub>x</sub>, CO, particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), particulate matter with an aerodynamic diameter of 2.5 microns or less (PM<sub>2.5</sub>), SO<sub>2</sub>, VOC, and Lead emissions from the combustion of natural gas or propane to operate the crematorium are each less than 1.0 tpy. Since the potential emissions of all regulated pollutants resulting from natural gas or propane combustion are low, incorporation of available pollutant-specific control technologies would result in high cost per ton removed values thereby making pollutant-specific add-on controls for NO<sub>x</sub>, CO, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOC, and Lead economically infeasible in this case.

Based on these conclusions, DEQ determined that proper unit design that includes preheating the primary chamber and the secondary chamber to 1,600 degrees Fahrenheit before inserting the remains and maintaining the secondary chamber at or above 1,600 degrees Fahrenheit, and proper operation and maintenance of the crematorium with no additional control constitutes BACT.

The BACT conclusions prescribed under MAQP #3117-02 provide comparable controls and control cost to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### IV. Emission Inventory

##### Criteria Pollutants:

##### Emissions from Animal Remains Combustion

<b>Pollutant</b>	<b>EF</b>	<b>lb/hr</b>	<b>TPY</b>
SO <sub>x</sub>	2.17	0.0651	0.28514
NO <sub>x</sub>	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<sub>x</sub> lb/hr:

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

Equation for determining the Potential to Emit (PTE):

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

Example calculation for determining the PTE for SO<sub>x</sub>:

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

Notes:

1. Incinerator emissions based on EPA emissions from Table 2.3-1 and 2.3-2 of AP-42 (5<sup>th</sup> 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 <sub>x</sub>	0.6	0.0003	0.0
NO <sub>x</sub>	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-Heptachlorodebenzofuran (less than)	2.29E-09	8E-06	4.003E-09
1,2,3,4,7,8,9-Heptachlofodibenzofuran (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
<u>Dioxins</u>			
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
<b>Total</b>		<b>275.8255</b>	<b>0.1379128</b>

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

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

V. Existing Air Quality

Bitterroot is located in Hamilton, MT. The legal location is the East<sup>1</sup>/<sub>2</sub> of the East<sup>1</sup>/<sub>2</sub> of the Northeast <sup>1</sup>/<sub>4</sub> of the Northeast <sup>1</sup>/<sub>4</sub> 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

As required by ARM 17.8.770, a human health risk analysis of HAP emissions was conducted for the proposed crematory. Ambient air modeling was accomplished using SCREEN3 software; an EPA approved ambient air modeling software used for conservative modeling. Ambient air impacts were modeled using the sum of non-criteria pollutants from the proposed crematorium identified in the emissions inventory. The total combined HAP emission rate for the proposed cremation unit was estimated to be 0.14 pounds per hour (lb/hr). This value was used in the SCREEN3 model to determine the maximum one-hour concentration. The one-hour modeled maximum concentration was then converted to the annual maximum concentration and used to calculate the speciated concentration of each HAP pollutant emitted from the crematories. Speciated concentrations of each HAP were calculated by multiplying the total modeled HAP maximum annual concentration by the mass percentage of each individual HAP making up the total of the HAP emissions. The calculated individual annual HAP concentrations were then used in the risk assessment.

Additional model inputs include a stack height of 18 feet (ft), diameter of 1.0 ft with vertical discharge, a stack exit temperature of 1100 °F, a stack exit velocity of 20 ft/sec, and a flow rate of 2,100 actual cubic feet per minute (ACFM). Results from the SCREEN3 model run are below.

07/10/24  
14:47:36  
\*\*\* SCREEN3 MODEL RUN \*\*\*  
\*\*\* VERSION DATED 13043 \*\*\*

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT  
EMISSION RATE (G/S) = 0.197817E-05

STACK HEIGHT (M) = 5.4864  
 STK INSIDE DIAM (M) = 0.3048  
 STK EXIT VELOCITY (M/S)= 6.0960  
 STK GAS EXIT TEMP (K) = 866.4833  
 AMBIENT AIR TEMP (K) = 293.0000  
 RECEPTOR HEIGHT (M) = 1.0000  
 URBAN/RURAL OPTION = RURAL  
 BUILDING HEIGHT (M) = 0.0000  
 MIN HORIZ BLDG DIM (M) = 0.0000  
 MAX HORIZ BLDG DIM (M) = 0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.  
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 0.919 M\*\*4/S\*\*3; MOM. FLUX = 0.292 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*

\*\*\* SCREEN AUTOMATED DISTANCES \*\*\*

\*\*\*\*\*

\*\*TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*

DIST (M)	CONC (UG/M**3)	U10M STAB	USTK (M/S)	MIX HT (M/S)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
100.	0.6403E-03	3	3.5	3.5	1120.0	11.23	12.57	7.62 NO
200.	0.5810E-03	4	3.0	3.0	960.0	12.19	15.68	8.71 NO
300.	0.5095E-03	4	2.0	2.0	640.0	15.54	22.79	12.43 NO
400.	0.4373E-03	4	1.5	1.5	480.0	18.89	29.70	15.74 NO
500.	0.3707E-03	4	1.5	1.5	480.0	18.89	36.35	18.69 NO
600.	0.3375E-03	4	1.0	1.0	320.0	25.59	43.10	21.98 NO
700.	0.3009E-03	4	1.0	1.0	320.0	25.59	49.52	24.71 NO
800.	0.2659E-03	4	1.0	1.0	320.0	25.59	55.87	27.39 NO
900.	0.2346E-03	4	1.0	1.0	320.0	25.59	62.15	30.02 NO
1000.	0.2075E-03	4	1.0	1.0	320.0	25.59	68.37	32.60 NO
1100.	0.2022E-03	6	1.0	1.0	10000.0	29.47	37.59	16.33 NO
1200.	0.2060E-03	6	1.0	1.0	10000.0	29.47	40.60	17.09 NO
1300.	0.2076E-03	6	1.0	1.0	10000.0	29.47	43.58	17.84 NO
1400.	0.2073E-03	6	1.0	1.0	10000.0	29.47	46.55	18.57 NO
1500.	0.2057E-03	6	1.0	1.0	10000.0	29.47	49.51	19.29 NO
1600.	0.2030E-03	6	1.0	1.0	10000.0	29.47	52.44	19.99 NO
1700.	0.1996E-03	6	1.0	1.0	10000.0	29.47	55.37	20.68 NO
1800.	0.1956E-03	6	1.0	1.0	10000.0	29.47	58.27	21.36 NO
1900.	0.1912E-03	6	1.0	1.0	10000.0	29.47	61.16	22.03 NO
2000.	0.1866E-03	6	1.0	1.0	10000.0	29.47	64.04	22.69 NO
2100.	0.1814E-03	6	1.0	1.0	10000.0	29.47	66.91	23.24 NO
2200.	0.1763E-03	6	1.0	1.0	10000.0	29.47	69.76	23.79 NO
2300.	0.1713E-03	6	1.0	1.0	10000.0	29.47	72.60	24.32 NO
2400.	0.1664E-03	6	1.0	1.0	10000.0	29.47	75.43	24.85 NO
2500.	0.1616E-03	6	1.0	1.0	10000.0	29.47	78.25	25.37 NO
2600.	0.1570E-03	6	1.0	1.0	10000.0	29.47	81.05	25.88 NO
2700.	0.1526E-03	6	1.0	1.0	10000.0	29.47	83.85	26.38 NO
2800.	0.1483E-03	6	1.0	1.0	10000.0	29.47	86.64	26.87 NO
2900.	0.1441E-03	6	1.0	1.0	10000.0	29.47	89.41	27.35 NO

3000.	0.1401E-03	6	1.0	1.0	10000.0	29.47	92.18	27.83	NO
3500.	0.1224E-03	6	1.0	1.0	10000.0	29.47	105.87	29.78	NO
4000.	0.1081E-03	6	1.0	1.0	10000.0	29.47	119.37	31.59	NO
4500.	0.9635E-04	6	1.0	1.0	10000.0	29.47	132.68	33.28	NO
5000.	0.8663E-04	6	1.0	1.0	10000.0	29.47	145.83	34.89	NO
5500.	0.7847E-04	6	1.0	1.0	10000.0	29.47	158.84	36.41	NO
6000.	0.7154E-04	6	1.0	1.0	10000.0	29.47	171.72	37.86	NO
6500.	0.6560E-04	6	1.0	1.0	10000.0	29.47	184.47	39.25	NO
7000.	0.6047E-04	6	1.0	1.0	10000.0	29.47	197.11	40.58	NO
7500.	0.5609E-04	6	1.0	1.0	10000.0	29.47	209.65	41.73	NO
8000.	0.5224E-04	6	1.0	1.0	10000.0	29.47	222.09	42.83	NO
8500.	0.4884E-04	6	1.0	1.0	10000.0	29.47	234.44	43.90	NO
9000.	0.4581E-04	6	1.0	1.0	10000.0	29.47	246.70	44.92	NO
9500.	0.4311E-04	6	1.0	1.0	10000.0	29.47	258.88	45.92	NO
10000.	0.4067E-04	6	1.0	1.0	10000.0	29.47	270.99	46.89	NO
15000.	0.2542E-04	6	1.0	1.0	10000.0	29.47	388.49	55.31	NO
20000.	0.1841E-04	6	1.0	1.0	10000.0	29.47	501.00	60.68	NO
25000.	0.1430E-04	6	1.0	1.0	10000.0	29.47	609.79	65.22	NO
30000.	0.1162E-04	6	1.0	1.0	10000.0	29.47	715.62	69.18	NO
40000.	0.8464E-05	6	1.0	1.0	10000.0	29.47	920.25	74.80	NO
50000.	0.6618E-05	6	1.0	1.0	10000.0	29.47	1117.44	79.49	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 100. M:  
102. 0.6407E-03 3 3.5 3.5 1120.0 11.23 12.68 7.69 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED  
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3\*LB

\*\*\*\*\*  
\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
\*\*\*\*\*

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.6407E-03	102.	0.

\*\*\*\*\*  
\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
\*\*\*\*\*

## VIII. Human Health Risk Assessment

A health risk assessment was conducted to determine if the proposed crematorium complies with the negligible risk requirement of MCA 75-2-215.

The environmental effects unrelated to human health were not considered in determining compliance with the negligible risk standard but were evaluated as required by the Montana

Environmental Policy Act, in determining compliance with all applicable rules or other requirements requiring protection of public health, safety, welfare, and the environment.

Pursuant to ARM 17.8.770(1)(c), pollutants may be excluded from the human health risk assessment if DEQ determines that exposure from inhalation is the only appropriate pathway to consider in the human health risk assessment and if the ambient concentrations of the pollutants (calculated using the potential to emit; enforceable limits or controls) are less than the levels specified in Table 1 or Table 2 of ARM 17.8.770. Even though most of the estimated HAP species calculated in the emission inventory fell below the de minimis levels in Table 1 or Table 2 of ARM 17.8.770, DEQ elected to conduct the human health risk assessment by contemplating all the estimated HAP species. The results of the human health risk assessment pursuant to ARM 17.8.770 are shown in the following table.

HAP Category / Pollutant Name	CAS #	Fraction of all HAPS	Calculated HAP Concentration	ARM 17.8.770 De Minimis Levels		
				Table 1 Cancer Annual	Table 2 Noncancer Chronic Annual	Table 2 Noncancer Acute Annual
<u>Heavy Metals</u>						
Antimony (less than)	7440360	1.92E-04	9.83E-09	N/A	2.00E-03	N/A
Arsenic (less than)	7440382	1.91E-04	9.77E-09	2.33E-05	5.00E-03	N/A
Beryllium	7440417	1.74E-05	8.92E-10	4.17E-05	N/A	N/A
Cadmium	7440439	1.40E-04	7.16E-09	5.56E-05	N/A	N/A
Chromium	7440473	3.80E-04	1.95E-08	8.33E-06	N/A	N/A
Chromium, hx	18540299	1.71E-04	8.79E-09	N/A	N/A	N/A
Cobalt (less than)	7440484	1.11E-05	5.70E-10	N/A	N/A	N/A
Lead	7439921	8.41E-04	4.31E-08	N/A	1.50E-02	N/A
Nickel	7440020	4.85E-04	2.49E-08	3.85E-04	2.40E-03	1.00E-02
Selenium	7782492	5.54E-04	2.84E-08	N/A	5.00E-03	2.00E-02
Zinc	7440666	4.48E-03	2.30E-07	N/A	N/A	N/A
<u>Polycyclic Organic Matter (POM)</u>						
2-methylnaphthalene	91576	8.97E-07	4.60E-11	N/A	N/A	N/A
3-methylchloranthrene (less than)	56495	3.36E-08	1.72E-12	N/A	N/A	N/A
7,12 Dibenz(a)anthracene (less than)		2.99E-07	1.53E-11	N/A	N/A	N/A
Anthracene (less than)	120127	4.48E-08	2.30E-12	N/A	N/A	N/A
Benzene	71432	7.85E-05	4.02E-09	1.20E-02	7.10E-01	N/A
Dichlorobenzene	25321226	4.48E-05	2.30E-09	9.09E-03	8.00E+00	N/A
Hexane	110543	6.72E-02	3.45E-06	N/A	2.00E+00	N/A
Napthalene	91203	2.28E-05	1.17E-09	N/A	1.40E-01	N/A
Phenanathrene	85018	6.35E-07	3.26E-11	N/A	N/A	N/A
Toluene	108883	1.27E-04	6.51E-09	N/A	4.00E+00	N/A
Acenaphthene	83329	1.41E-06	7.23E-11	N/A	N/A	N/A
Acenaphthylene	208968	1.55E-06	7.94E-11	N/A	N/A	N/A

Benzo(a)anthracene (less than)	56553	6.20E-08	3.18E-12	5.88E-05	N/A	N/A
Benzo(a)pyrene (less than)	50328	1.85E-07	9.47E-12	5.88E-05	N/A	N/A
Benzo(b)fluoranthene (less than)	205992	1.01E-07	5.18E-12	5.88E-05	N/A	N/A
Benzo(g,h,i)perylene (less than)	191242	1.85E-07	9.47E-12	N/A	N/A	N/A
Benzo(k)fluoranthene (less than)	207089	9.02E-08	4.62E-12	5.88E-05	N/A	N/A
Chrysene (less than)	218019	3.43E-07	1.76E-11	N/A	N/A	N/A
Dibenzo(a,h)anthracene (less than)	53703	8.07E-08	4.13E-12	5.88E-05	N/A	N/A
Fluorene	86737	5.30E-06	2.71E-10	N/A	N/A	N/A
Fluoranthene	206440	2.60E-06	1.33E-10	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene (less than)	193395	9.78E-08	5.01E-12	5.88E-05	N/A	N/A
Phenanthrene	85018	2.91E-05	1.49E-09	N/A	N/A	N/A
Pyrene	129000	2.06E-06	1.05E-10	N/A	N/A	N/A
<u>Dibenzofurans</u>			4.79E-12	2.63E-09	3.50E-08	N/A
1,2,3,4,6,7,8-Heptachlorodibenzofuran (less than)	67562394	2.90E-08	1.49E-12	N/A	N/A	N/A
1,2,3,4,7,8,9-Heptachlorodibenzofuran (less than)	55673897	1.77E-09	9.05E-14	N/A	N/A	N/A
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	1.21E-08	6.20E-13	N/A	N/A	N/A
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	1.08E-08	5.55E-13	N/A	N/A	N/A
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	2.12E-08	1.09E-12	N/A	N/A	N/A
2,3,4,6,7,8-Hexachlorodibenzofuran	60851345	4.37E-09	2.24E-13	N/A	N/A	N/A
1,2,3,7,8-Pentachlorodibenzofuran (less than)	57117416	1.87E-09	9.57E-14	N/A	N/A	N/A
2,3,4,7,8-Pentachlorodibenzofuran (less than)	57117314	5.62E-09	2.88E-13	N/A	N/A	N/A
2,3,7,8-Tetrachlorodibenzofuran	51207319	6.59E-09	3.38E-13	N/A	N/A	N/A
<u>Listed Non-POM Organic HAPs</u>						
Acetaldehyde	75070	1.65E-03	8.46E-08	4.55E-02	9.00E-02	N/A
Formaldehyde	50000	4.32E-04	2.21E-08	7.69E-03	3.60E-02	3.70E+00
<u>Listed Acids</u>						
Hydrogen chloride (hydrochloric acid)	7647010	9.15E-01	4.69E-05	N/A	2.00E-01	3.00E+01
Hydrogen fluoride	7664393	8.38E-03	4.30E-07	N/A	5.90E-02	5.80E+00

<u>Dioxins</u>						
2,3,7,8-tetrachlorodibenzo-p-dioxin	1746016	1.01E-09	5.17E-14	N/A	N/A	N/A
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	4.81E-08	2.47E-12	N/A	N/A	N/A
SUM of Hexachlorodibenzo-p-dioxin			7.58E-13	N/A	N/A	N/A
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	3.49E-09	1.79E-13	N/A	N/A	N/A
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	5.04E-09	2.58E-13	N/A	N/A	N/A
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	6.25E-09	3.20E-13	N/A	N/A	N/A
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	2.96E-09	1.52E-13	N/A	N/A	N/A

HAP Category / Pollutant Name	Cancer URF (2)	Cancer Risk (3)	CNCREL (4) (ug/m3)	CNCREL Quotient (5)
<u>Heavy Metals</u>				
Antimony (less than)	N/A	N/A	N/A	N/A
Arsenic (less than)	0.0043	4.1991E-11	0.015	6.51028E-07
Beryllium	0.0024	2.1406E-12	0.02	4.45954E-08
Cadmium	0.0018	1.289E-11	0.01	7.1613E-07
Chromium	N/A	N/A	N/A	N/A
Chromium, hx	0.012	1.0547E-10	0.1	8.78887E-08
Cobalt (less than)	N/A	N/A	0.1	5.69649E-09
Lead	N/A	N/A	0.15	2.8732E-07
Nickel	N/A	N/A	0.09	2.76325E-07
Selenium	N/A	N/A	20	1.41924E-09
Zinc	N/A	N/A	N/A	N/A
<u>Polycyclic Organic Matter (POM)</u>				
2-methylnaphthalene	N/A	N/A	N/A	N/A



3-methylchloranthrene (less than)	0.0063	1.0857E-14	N/A	N/A
7,12 Dibenz(a)anthracene (less than)	0.071	1.0876E-12	N/A	N/A
Anthracene (less than)	N/A	N/A	N/A	N/A
Benzene	8E-06	3.1364E-14	30	1.34035E-10
Dichlorobenzene	1E-05	2.5275E-14	800	2.87218E-12
Hexane	N/A	N/A	700	4.92374E-09
Napthalene	3E-05	N/A	3	3.8934E-10
Phenanathrene	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	5000	1.30206E-12
Acenaphthene	N/A	N/A	N/A	N/A
Acenaphthylene	N/A	N/A	N/A	N/A
Benzo(a)anthracene (less than)	N/A	N/A	N/A	N/A
Benzo(a)pyrene (less than)	0.0011	1.042E-14	N/A	N/A
Benzo(b)fluoranthene (less than)	0.0001	5.6932E-16	N/A	N/A
Benzo(g,h,i)perylene (less than)	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene (less than)	0.0001	5.0845E-16	N/A	N/A
Chrysene (less than)	1E-05	1.9336E-16	N/A	N/A
Dibenzo(a,h)anthracene (less than)	0.0001	4.5474E-16	N/A	N/A
Fluorene	N/A	N/A	N/A	N/A
Fluoranthene	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene (less than)	0.0001	5.5142E-16	N/A	N/A
Phenanthrene	N/A	N/A	N/A	N/A
Pyrene	N/A	N/A	N/A	N/A
<u>Dibenzofurans</u>				
1,2,3,4,6,7,8- Heptachlorodibenzofuran (less than)				
1,2,3,4,7,8,9- Heptachlorodibenzofuran (less than)				
1,2,3,4,7,8-Hexachlorodibenzofuran				
1,2,3,6,7,8-Hexachlorodibenzofuran				
1,2,3,7,8,9-Hexachlorodibenzofuran				
2,3,4,6,7,8-Hexachlorodibenzofuran				
1,2,3,7,8-Pentachlorodibenzofuran (less than)				
2,3,4,7,8-Pentachlorodibenzofuran (less than)				
2,3,7,8-Tetrachlorodibenzofuran				
<u>Listed Non-POM Organic HAPs</u>				
Acetaldehyde	N/A	N/A	9	9.40373E-09
Formaldehyde	1E-05	2.8775E-13	9.8	2.25867E-09
<u>Listed Acids</u>				

Hydrogen chloride (hydrochloric acid)	N/A	N/A	20	2.3437E-06
Hydrogen fluoride	N/A	N/A	14	3.06913E-08
<u>Dioxins</u>				
2,3,7,8-tetrachlorodibenzo-p-dioxin	33	1.7058E-12	0.00004	1.29229E-09
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin				
SUM of Hexachlorodibenzo-p-dioxin	1.3	9.8513E-13	N/A	N/A
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin				
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin				
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin				
1,2,3,7,8-Pentachlorodibenzo-p-dioxin				
Sum		1.6664E-10		4.4632E-06

No individual pollutant concentration exceeds the Cancer Risk threshold of 1.00E-06 and the sum of all Cancer Risks concentrations does not exceed 1.00E-05, and further, the sum of the Chronic Non-cancer Reference Exposure Level hazard quotients is less than 1.0. Therefore, compliance with the negligible risk requirement as outlined in ARM 17.8.770 is demonstrated. Further, such determination is made assuming 8,760 hours of operation per year of the crematory and conservative emissions estimations. The presence or absence of this facility in this area would not be expected to cause a discernable change in human health risks in this area.

Based on the information provided and the conditions established in MAQP #3117-02, 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 which is located in the attached environmental assessment and is located in the attached environmental assessment.

#### X. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.



**FINAL ENVIRONMENTAL ASSESSMENT**

**Bitterroot Pet Crematory, Inc.**

**08/27/2024**

**Air Quality Bureau**

**Air, Energy, and Mining Division**

**Montana Department of Environmental Quality**

## Table of Contents

<b>Project Overview</b> .....	3
<b>Location</b> .....	3
<b>Compliance with the Montana Environmental Policy Act</b> .....	3
<b>Proposed Action</b> .....	3
<b>Purpose and Need</b> .....	3
<b>EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE:</b> .....	7
<b>1. Geology and Soil Quality, Stability, and Moisture</b> .....	8
<b>2. Water Quality, Quantity, and Distribution</b> .....	8
<b>3. Air Quality</b> .....	9
<b>4. Vegetation Cover, Quantity, and Quality</b> .....	10
<b>5. Terrestrial, Avian, and Aquatic Life and Habitats</b> .....	10
<b>6. Unique, Endangered, Fragile, or Limited Environmental Resources</b> .....	11
<b>7. Historical and Archaeological Sites</b> .....	12
<b>8. Aesthetics</b> .....	12
<b>9. Demands on Environmental Resources of Land, Water, Air, or Energy</b> .....	13
<b>10. Impacts on Other Environmental Resources</b> .....	14
<b>11. Human Health and Safety</b> .....	14
<b>12. Industrial, Commercial, and Agricultural Activities and Production</b> .....	14
<b>14. Local and State Tax Base and Tax Revenues</b> .....	15
<b>15. Demand for Government Services</b> .....	16
<b>16. Locally-Adopted Environmental Plans and Goals</b> .....	16
<b>17. Access to and Quality of Recreational and Wilderness Activities</b> .....	17
<b>18. Density and Distribution of Population and Housing</b> .....	17
<b>19. Social Structures and Mores</b> .....	18
<b>20. Cultural Uniqueness and Diversity</b> .....	18
<b>21. Private Property Impacts</b> .....	18
<b>22. Other Appropriate Social and Economic Circumstances</b> .....	19
<b>23. Greenhouse Gas Assessment</b> .....	20
<b>PROPOSED ACTION ALTERNATIVES:</b> .....	22
<b>CONSULTATION</b> .....	22
<b>PUBLIC INVOLVEMENT:</b> .....	22
<b>OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:</b> .....	23
<b>NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS</b> .....	23
<b>CONCLUSIONS AND FINDINGS</b> .....	23
<b>ABBREVIATIONS and ACRONYMS</b> .....	27

## Project Overview

COMPANY NAME: Bitterroot Pet Crematorium, Inc.  
EA DATE: August 27, 2024  
SITE NAME: Bitterroot Pet Crematorium  
MAQP#: 3117  
Version #: 02  
Application Received Date: June 10, 2024

## Location

Township 5 North, Range 20 West, Sections 17

County: Ravalli

PROPERTY OWNERSHIP: FEDERAL STATE PRIVATE X

## Compliance with the Montana Environmental Policy Act

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The proposed action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608. DEQ may not withhold, deny, or impose conditions on the Permit based on the information contained in this EA (§ 75-1- 201(4), MCA).

## Proposed Action

Bitterroot Pet Crematorium, Inc. (Bitterroot) has applied for a Montana Air Quality permit modification under the Clean Air Act of Montana to permit this facility. The state law that regulates air quality permitting in Montana is the Clean Air Act of Montana, §§ 75-2-101, et seq., (CAA) Montana Code Annotated (MCA). DEQ may not approve a proposed project contained in an application for an air quality permit unless the project complies with the requirements set forth in the CAA of Montana and the administrative rules adopted thereunder, ARMs 17.8.101 et. seq. The proposed action would be located on privately owned land, in Hamilton, Ravalli County, Montana. All information included in this EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools.

## Purpose and Need

Under MEPA, Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, DEQ must prepare an environmental review. This EA will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for

additional environmental review based on consideration of the criteria set forth in ARM 17.4.608.

**Table 1: Summary of Proposed Action**

Proposed Action	
<b>General Overview</b>	This permitting action is to install and operate a second incinerator/crematorium at the Bitterroot Pet Crematorium in Hamilton, Montana. Along with installing two new 1000-gallon propane tanks and removing the current two, 500-gallon tanks.
<b>Duration &amp; Hours of Operation</b>	<b>Construction:</b> Construction will take place from August 2024 to the end of September 2024. <b>Operation:</b> The facility operates 12 hrs/day, seven days per week.
<b>Estimated Disturbance</b>	Minor disturbance is anticipated for this action, but it is not first time disturbance. The new incinerator will be located within an existing structure, but a new line will be dug to connect the new propane tanks and the building will be opened up to install the new incinerator.
<b>Construction Equipment</b>	Standard construction equipment is anticipated for this project, such as approximately 1-2 cranes, heavy duty trucks, and a skid steer.
<b>Personnel Onsite</b>	<b>Construction:</b> Temporary construction is anticipated for this project, lasting approximately 1-2 days, with approximately three construction personnel onsite. <b>Operation:</b> Approximately 1 employee(s) at the facility.
<b>Location and Analysis Area</b>	<b>Location:</b> Hamilton, Ravalli County, Montana Township 5 N, Range 20 W, Section 17 <b>Analysis Area:</b> The area being analyzed as part of this environmental review includes the immediate project area (Figure 1), as well as neighboring lands surrounding the analysis area, as reasonably appropriate for the impacts being considered.
The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.	
<b>Air Quality</b>	The applicant proposes to modify the existing air quality permit for the facility for the addition and operation of a second incinerator/crematorium, installation of two new propane tanks with the removal of the existing tank, and updating the address.
<b>Water Quality</b>	This permitting action would not affect water quality. Bitterroot is required to comply with the applicable local, county, state and federal requirements pertaining to water quality.
<b>Erosion Control and Sediment Transport</b>	This permitting action would have a minor affect erosion control and sediment transport, as some soil will be displaced during the installation of the two new propane tanks. Bitterroot is required to

	comply with the applicable local, county, state and federal requirements pertaining to erosion control and sediment transport.
<b>Solid Waste</b>	This permitting action would not affect solid waste in the area. Bitterroot is required to comply with the applicable local, county, state and federal requirements pertaining to solid waste.
<b>Cultural Resources</b>	This permitting action would not affect cultural resources. Bitterroot is required to comply with the applicable local, county, state and federal requirements pertaining to cultural resources.
<b>Hazardous Substances</b>	This permitting action would not contribute to any hazardous substances. Bitterroot is required to comply with the applicable local, county, state and federal requirements pertaining to hazardous substances.
<b>Reclamation</b>	This permitting action would not require any reclamation.

<b>Cumulative Impact Considerations</b>	
<b>Past Actions</b>	This facility was originally permitted in 2000, with an administrative amendment in 2003 to allow operational flexibility pertaining to the monitoring/recording requirements previously permitted.
<b>Present Actions</b>	Modifying the existing MAQP for the addition and operation of a second incinerator/crematorium.
<b>Related Future Actions</b>	DEQ is not currently aware of any future projects from Bitterroot. Any future projects would be subject to a new permit application.

See Figure 1 project location of the Bitterroot site.





## EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE:

The impact analysis will identify and evaluate whether the impacts are direct or secondary impacts to the physical environment and human population in the area to be affected by the proposed project. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana that could result from the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future impacts must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The activities identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- **Construction Impacts (short-term):** These are impacts to the environment during the construction period. When analyzing duration, please include a specific range of time.
- **Operation Impacts (long-term):** These are impacts to the environment during the operational period. When analyzing duration, please include a specific range of time.

The intensity of the impacts is measured using the following:

- **No impact:** There would be no change from current conditions.
- **Negligible:** An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** The effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** The effect would alter the resource.

## 1. Geology and Soil Quality, Stability, and Moisture

The Bitterroot Pet Crematorium has been in operation since 2000. Minor new disturbance will occur from this permitting action as it is installing a second incinerator in an already existing structure, with the removal of the old propane tank and installation of the two new propane tanks. This is not considered first time disturbance at this site.

### ***Direct Impacts:***

The information provided above is based on the information provided to DEQ by Bitterroot. Available information includes the permit application, analysis of aerial photography, topographic maps, information provided by Bitterroot and other research tools. There is no impact expected to topography and geology from this permitting action as it is installing a second incinerator in an already existing structure.

### ***Secondary Impacts:***

No secondary impacts to geology, stability, and moisture would be expected because the Bitterroot facility is already in operation and is located within the existing Bitterroot property boundary.

### ***Cumulative Impacts:***

Short-term cumulative impacts to geology, stability, and moisture would be expected because the Bitterroot facility is installing a new incinerator and two new propane tanks which requires a line to be dug, but it is not considered first time disturbance as it is already in operation and is located within the existing Bitterroot property boundary.

## 2. Water Quality, Quantity, and Distribution

Skalkaho Creek is approximately 500 feet north of the facility. Lake Como is approximately 20 miles South of the facility. No wilderness areas in the area.

### ***Direct Impacts:***

The information provided above is based on the information provided by the applicant for the purpose of obtaining the modification to their air quality permit. Bitterroot has not submitted any other permit applications that DEQ is aware of.

No fragile or unique water resources or values are present. No impacts to water quality and quantity, which are resources of significant statewide and societal importance are expected.

### ***Secondary Impacts:***

No secondary impacts to water quality, quantity and distribution would be expected, nor any impacts from stormwater runoff.

**Cumulative Impacts:**

Minor cumulative impacts are anticipated from the proposed permitting action as it is occurring in an already existing structure.

**3. Air Quality**

As of June 24, 2024, Ravalli County is designated as an Unclassifiable/Attainment area for all criteria pollutants according to 40 CFR 81.327.

Applicants are required to comply with all laws relating to air, such as the Federal Clean Air Act, National Ambient Air Quality Standards set by the Environmental Protection Agency (EPA), and the Clean Air Act of Montana.

**Direct Impacts:**

Air quality standards, set by the federal government and DEQ are enforced by the AQB and allow for pollutants at the levels permitted within the MAQP. The Bitterroot Pet Crematorium emissions include particulate matter (PM), PM with an aerodynamic diameter of 10 micros (PM<sub>10</sub>), PM with an aerodynamic diameter of 2.5 microns (PM<sub>2.5</sub>), oxides of nitrogen (NO<sub>x</sub>), carbon dioxide (CO), sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOCs), Hazardous Air Pollutants (HAPs), and Green House Gases (GHG) emissions. These emissions come mainly from fuel combustion and the cremation of remains.

Air pollution control equipment must be operated at the maximum design for which it is intended ARM 17.8.752(2). Limitations would be placed on the allowable emissions for the new emission sources. As part of the air quality permit application, DEQ performed a Best Available Control Technology (BACT) analysis for each new emitting unit. These proposed limits were reviewed by DEQ and incorporated into MAQP #3117-02 as federally enforceable conditions. These permit limits cover NO<sub>x</sub>, CO, SO<sub>2</sub>, VOCs, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and HAPs with associated ongoing compliance demonstrations, as determined by DEQ.

Air quality standards are regulated by the federal Clean Air Act, 42 U.S.C. 7401 *et seq.* and CAA, § 50-40-101 *et seq.* MCA, and are implemented and enforced by DEQ’s AQB. As stated above, Bitterroot is required to comply with all applicable state and federal laws. Minor air quality impacts would be anticipated for the proposed action.

**Secondary Impacts:**

Impacts from the operation of the Bitterroot Pet Crematorium are to be restricted by an MAQP and therefore should have minor secondary air quality impacts.

**Cumulative Impacts:**

Cumulative impacts from the operation of the Bitterroot facility are to be restricted by an MAQP and therefore should have minor air quality impacts. Major impacts were anticipated upon initial startup and operation as a new facility was constructed where there previously was not one before, back in 2000. The Ravalli County area also has other stationary sources,

the Rocky Mountain Laboratories MAQP #2991-07, the Daly-Leach Chapel & Crematory MAQP #5187-00, and the Bitterroot Humane Association MAQP #4175-00 that all contribute to the air quality in Hamilton, Montana.

#### 4. Vegetation Cover, Quantity, and Quality

There are no known rare or sensitive plants or cover types present in the site area. No fragile or unique resources or values, or resources of statewide or societal importance, are present. DEQ conducted research using the Montana Natural Heritage Program (MTNHP) website and ran the query titled “Environmental Summary Report” dated June 26, 2024. The proposed action is located at the existing Bitterroot facility.

No important plant areas are present in the area (NHP Mapviewer).

##### ***Direct Impacts:***

The information provided above is based on the information that DEQ had available to it at the time of completing this EA and provided by the applicant. Available information includes the permit application, analysis of aerial photography, topographic maps, geologic maps, soil maps, and other research tools. Minor impacts to vegetation cover, quantity and quality are expected as the proposed action of installing a second incinerator will occur in an already existing structure and the addition of the two new propane tanks will replace the existing tank. A small amount of vegetation may be removed as the new line is dug for the two new propane tanks.

##### ***Secondary Impacts:***

No secondary impacts to vegetation cover, quantity, and quality are expected. This is not considered first time disturbance.

##### ***Cumulative Impacts:***

Minor cumulative impacts to vegetation cover, quantity, and quality are expected from this permitting action as it will require the digging of the new line for the propane tanks. However, this would not be considered first time disturbance as the facility has been in operation since 2000.

#### 5. Terrestrial, Avian, and Aquatic Life and Habitats

As described earlier in Section 4. Vegetation Cover, the area is represented by residential and industrial operations and DEQ conducted research using the MTNHP website and ran the query titled “Environmental Summary Report” dated June 26, 2024. Which produced the following species of concern (SOC): Bull Trout, Westslope Cutthroat Trout, Great Blue Heron, Western Toad, Long-eared Myotis, Evening Grosbeak, Long-sheath Waterweed, Townsend's Big-eared Bat, Oblique Ambersnail, and Bat Roost (Non-Cave).

The polygon area analyzed using the MTNHP website produces an area inherently larger than the specific disturbance area, so some additional species may be reported that are not necessarily present in this exact area, but nearby.

No important bird areas are present (NHP Mapviewer).

***Direct Impacts:***

The potential impact to terrestrial, avian and aquatic life and habitats would be negligible, due to the long-term industrial nature of the site.

***Secondary Impacts:***

No secondary impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above would be expected.

***Cumulative Impacts:***

Minor cumulative impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above or from the of the Bitterroot Pet Crematorium would be expected due to this facility having been operational since 2000, and this permitting action would cause no new disturbance.

## **6. Unique, Endangered, Fragile, or Limited Environmental Resources**

As described in Sections 4 and 5 above, DEQ conducted a search using the MTNHP webpage. The search used a polygon that overlapped the 4.4-acre site and produced the list of species of concern identified in Sections 4 and 5. The project would not be in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: <http://sagegrouse.mt.gov>.

***Direct Impacts:***

Among the SOC from the MTNHP list, these species would not be displaced by the proposed action as the new incinerator will be located inside and already existing structure. Digging the new line would most likely not displace any species as this is not considered first time disturbance. The potential impact would be negligible.

***Secondary Impacts:***

The proposed action have no secondary impacts to endangered species because the permit conditions are protective of human and animal health and all lands involved in the proposed action are currently used for crematorium operations and would not change the effect to the environment.

***Cumulative Impacts:***

The proposed action would have minor cumulative impacts to endangered species because the permit conditions are protective of human and animal health and all lands involved in

the proposed action are currently used for crematorium operations and would not change the effect to the environment outside of the original construction of the facility prior to operation.

## 7. Historical and Archaeological Sites

The Montana State Historic Preservation Office (SHPO) was contacted to conduct a file search for historical and archaeological sites within Section 17 Township 5 North, Range 20 West. SHPO provided a letter dated June 27, 2024, that indicated there have been two previously recorded sites within the designated search location. Both sites were Historic Irrigation Systems and are classified as Eligible. There previously has been one report run for this area. It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are within the Area of Potential Effect, and are over fifty years old, SHPO recommends that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place.

However, should structures need to be altered, or if cultural materials are inadvertently discovered during this proposed action, SHPO requests their office be contacted for further investigation.

### ***Direct Impacts:***

Although the search by SHPO has identified some sites, the Bitterroot Pet Crematorium project is not expected to impact any new locations, therefore the likelihood of any cultural properties being impacted is low.

### ***Secondary Impacts:***

No secondary impacts to historical and archaeological sites are anticipated since the proposed action site is located on land currently in use by the crematorium and is not considered first time disturbance.

### ***Cumulative Impacts:***

No cumulative impacts to historical and archaeological sites are anticipated since the proposed action site is located on land currently in use and is not considered first time disturbance.

## 8. Aesthetics

The site is located in an area mostly surrounded by other privately owned homes, the closest of which is approximately 120 feet away from the facility. The proposed action would occur on private land. It is not expected that the nearest residences to the proposed site would experience any noticeable change in noise levels. The noise levels at the property boundary would not be expected to change.

The Bitterroot Pet Crematorium is situated on approximately 4.4 acres. There would be temporary construction activity at the site for the installation of the second crematorium. Noise levels are anticipated to increase slightly during the construction phase, but once construction is completed, noise levels would be back at their normal level.

***Direct Impacts:***

There would be temporary construction at the facility, however no increase in noise levels are anticipated from this permitting action once construction is completed. Noise levels are not expected to change beyond the property boundary after the construction is complete and the second crematorium is operational. The Bitterroot facility profile would change with the addition of a second stack. With this permitting action, no new structures are being added.

***Secondary Impacts:***

There would be no secondary impacts on the aesthetics because the property currently is in industrial use and its noise would not be expected to differ from current levels.

***Cumulative Impacts:***

With this permitting action, no cumulative impacts on the aesthetics are anticipated as no changes are happening to the property. The incinerator is being added to an already existing structure.

## **9. Demands on Environmental Resources of Land, Water, Air, or Energy**

The site is located in an area characterized by residential activities. The operation of the Bitterroot Pet Crematorium is to function as a crematorium.

***Direct Impacts:***

During construction of the period of the installation of the second crematorium, there will be a temporary increase on the demands of land, water, air, and energy. Once operational, energy and electric demands would continue for the duration of the facility's lifetime at slightly elevated levels. See the Air Quality and Water Quality sections of the EA to review the potential impacts from the proposed action regarding air and water resources.

***Secondary Impacts:***

No secondary impacts to the demands on environmental resources of land, water, and or energy are anticipated as a result of this permitting action as this permitting action is occurring inside an already existing structure.

***Cumulative Impacts:***

Minor cumulative impacts on environmental resources of land, water, and or energy are anticipated as a result of this permitting action. Minor impacts were anticipated after the initial construction of the facility as it was building structures where there were none

previously, but from this permitting action, minor impacts are anticipated as it is occurring inside an already existing structure.

## 10. Impacts on Other Environmental Resources

The site is surrounded by residential properties.

### ***Direct Impacts:***

No other environmental resources are known to have been identified in the area beyond those discussed above. Hence, there is no impact to other environmental resources.

### ***Secondary Impacts:***

No secondary impacts to other environmental resources are anticipated as a result of the proposed permitting action.

### ***Cumulative Impacts:***

No cumulative impacts to other environmental resources are anticipated as a result of the proposed permitting action.

## 11. Human Health and Safety

The applicant would be required to adhere to all applicable state and federal safety laws. The access to the public would continue to be restricted to this property.

### ***Direct Impacts:***

Negligible changes in impacts to human health and safety are anticipated as a result of this project action. These activities, however, are regulated by other state and federal laws to ensure they are operated safely.

### ***Secondary Impacts:***

No secondary impacts to human health and safety are anticipated as a result of the proposed permitting action.

### ***Cumulative Impacts:***

No cumulative impacts to human health and safety are anticipated as a result of the proposed permitting action.

## 12. Industrial, Commercial, and Agricultural Activities and Production

The site is currently zoned 5-acre zoning in a rural residential area.

### ***Direct Impacts:***

Impacts on the industrial, commercial, and agricultural activities and production in the area



would be negligible from this permitting action as it is not considered first time disturbance and will be occurring within an already existing structure.

***Secondary Impacts:***

No secondary impacts to industrial, commercial, and agricultural activities and production are anticipated as a result of the proposed permitting action.

***Cumulative Impacts:***

Cumulative impacts upon initial startup of construction and operation were major as the land would then have structures were there were none prior. Once the site was operational, the cumulative impacts are negligible as the facility is now used for cremation purposes.

### **13. Quantity and Distribution of Employment**

There currently are approximately 1 permanent job(s) located at the Bitterroot Pet Crematorium.

***Direct Impacts:***

The proposed action would be expected to have no impact on the overall distribution of employment as no new additional employment is resulting from this permitting action.

***Secondary Impacts:***

No secondary impact is expected on long-term employment from the proposed action because it is an already operational facility.

***Cumulative Impacts:***

No cumulative impact is expected on long-term employment from the proposed action because it is already an operational facility and will not be creating any new jobs.

### **14. Local and State Tax Base and Tax Revenues**

The proposed action would be expected to have minor impacts on the local and state tax base and tax revenue.

***Direct Impacts:***

Local, state, and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, from the companies, employees, or landowners benefiting from this operation. A minor impact is expected on the tax base and revenue with the proposed action.

***Secondary Impacts:***

No secondary impacts to local and state tax base and tax revenues are anticipated as a result of the proposed permitting action.

***Cumulative Impacts:***

No cumulative impacts to local and state tax base and tax revenues are anticipated from this permitting action.

**15. Demand for Government Services**

The area surrounding the Bitterroot site consists of other residences and rural farmland.

***Direct Impacts:***

Compliance review and assistance oversight by DEQ AQB would be conducted in concert with other area activity when in the vicinity. The proposed action would have only minor impacts on demand for government services, mainly through oversight by DEQ AQB.

***Secondary Impacts:***

No secondary impacts are anticipated on government services with the proposed action and a minimal increase in impact would occur from the permitting and compliance needs associated with this permitted facility.

***Cumulative Impacts:***

Minor cumulative impacts are anticipated on government services with the proposed action and a minimal increase in impact would occur from the permitting and compliance needs associated with this permitted facility.

**16. Locally-Adopted Environmental Plans and Goals**

A review was also conducted of the City of Hamilton website on June 26, 2024. Review of the City's Living page revealed a Comprehensive Plan was completed in 2022. Other Planning documents were also viewed, one of which was the Comprehensive Plan Land Use Framework and Future Land Use Map (City of Hamilton Website).

***Direct Impacts:***

The Bitterroot Pet Crematorium is on property which is already zoned as 5-acre zoning. No impacts from the proposed action would be expected relative to any locally adopted community planning goals.

***Secondary Impacts:***

No secondary impacts to the locally-adopted environmental plans and goals are anticipated as a result of the proposed permitting action as this permitting action is not considered first time disturbance.

***Cumulative Impacts:***

No cumulative impacts to the locally-adopted environmental plans and goals are anticipated as a result of the proposed permitting action as it is not considered first time disturbance.

**17. Access to and Quality of Recreational and Wilderness Activities**

Skalkaho Creek is approximately 500 feet north of the facility. Lake Como is approximately 20 miles South of the facility. No wilderness areas in the immediate area. The Selway-Bitterroot Wilderness is located approximately 7.5 miles directly west (NHP Mapviewer).

***Direct Impacts:***

There would be no impacts to the access to wilderness activities as none are in the vicinity of the proposed action. Noise levels would not increase with this permitting action and would not affect the surrounding wilderness areas, outside of the minor noise level increase during the construction phase.

***Secondary Impacts:***

No secondary impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed permitting action which is wholly contained within the boundary of the Bitterroot facility.

***Cumulative Impacts:***

No cumulative impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed permitting action which is wholly contained within the boundary of the Bitterroot Pet Crematorium. Even with the construction of installing the second crematorium, noise levels would increase briefly, but once complete would not affect noise levels in the area.

**18. Density and Distribution of Population and Housing**

The proximity of the proposed action to the City of Hamilton would accommodate housing needs for workers.

***Direct Impacts:***

This permitting action would not add to the population or require additional housing, therefore, no impacts to density and distribution of population and housing are anticipated.

***Secondary Impacts:***

No secondary impacts to density and distribution of population and housing are anticipated as a result of the proposed permitting action.

***Cumulative Impacts:***

No cumulative impacts to density and distribution of population and housing are anticipated as a result of the proposed permitting. There are no impacts on the density and distribution of population and housing.

**19. Social Structures and Mores**

Based on the required information provided by Bitterroot, DEQ is not aware of any native cultural concerns that would be affected by the proposed action on this existing facility.

***Direct Impacts:***

The proposed action is located on an existing crematorium site, no disruption of native or traditional lifestyles would be expected, therefore, no impacts to social structure and mores are anticipated.

***Secondary Impacts:***

No secondary impacts to social structures and mores are anticipated as a result of the proposed operations.

***Cumulative Impacts:***

Outside of original construction of the facility, no cumulative impacts to social structures and mores are anticipated. No impacts are anticipated as a result of the proposed permitting action.

**20. Cultural Uniqueness and Diversity**

Based on the required information provided by Bitterroot, DEQ is not aware of any unique qualities of the area that would be affected by the proposed action at this existing facility.

***Direct Impacts:***

No impacts to cultural uniqueness and diversity are anticipated from this project.

***Secondary Impacts:***

No secondary impacts to cultural uniqueness and diversity are anticipated as a result of the proposed permitting action.

***Cumulative Impacts:***

No cumulative impacts to cultural uniqueness and diversity are anticipated as a result of the proposed permitting action or from the operation of the Bitterroot facility.

**21. Private Property Impacts**

The proposed action would take place on privately-owned land. The analysis below in response to the Private Property Assessment Act indicates no impact. DEQ does not plan to

deny the application or impose conditions that would restrict the regulated person’s use of private property so as to constitute a taking. Further, if the application is complete, DEQ must take action on the permit pursuant to § 75-2-218(2), MCA. Therefore, DEQ does not have discretion to take the action in another way that would have less impact on private property—its action is bound by a statute.

There are private residences in the area of the proposed action. The closest residence is located approximately 120 feet from the property.

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)

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

## 22. Other Appropriate Social and Economic Circumstances

Due to the nature of the proposed action, no further direct or secondary impacts are anticipated from this project.

### 23. Greenhouse Gas Assessment

Issuance of this permit would authorize the installation and operation of a second incinerator/crematorium at Bitterroot Pet Crematorium, along with the replacement of two 500-gallon propane tanks to two 1000-gallon propane tanks.

The analysis area for this resource is limited to the activities regulated by the issuance of MAQP #3117-02, which is to permit the installation and operation of a second incinerator/crematorium. The amount propane fuel utilized at this site may be impacted by a number of factors including seasonal weather impediments and equipment malfunctions. To account for these factors DEQ has calculated the maximum amount of emissions using 8760 hours per year of operation.

For the purpose of this analysis, DEQ has defined greenhouse gas emissions as the following gas species: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Other pollutants can have some properties that also are similar to those mentioned above, but the EPA has clearly identified the species above as the primary GHGs. Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The combustion of diesel fuel during the construction phase from the use of heavy equipment and the combustion of propane during operation at the site would release GHGs primarily being carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) and much smaller concentrations of uncombusted fuel components including methane (CH<sub>4</sub>) and other volatile organic compounds (VOCs).

DEQ has calculated GHG emissions using the EPA Simplified GHG Calculator version May 2023, for the purpose of totaling GHG emissions. This tool totals carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and methane (CH<sub>4</sub>) and reports the total as CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in metric tons CO<sub>2</sub>e. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory.

Additionally, there are no compressed gases, fire suppressants or refrigerants/air conditioning associated with this project which would have been considered Scope 1 emissions.

#### ***Direct Impacts:***

Operation of the second incinerator/crematorium throughout the life of the facility would produce exhaust fumes containing GHGs. Using the EPA Simplified GHG Calculator, DEQ estimates that approximately 649 metric tons of CO<sub>2</sub>e will be produced per year. To account for variability due to the factors described above, such as weather and equipment variabilities, DEQ has calculated the maximum amount of emissions using a factor of 8760 hours per year for operation in combination with the maximum heat input value. Using the

Environmental Protection Agency's (EPA) simplified GHG Emissions Calculator for mobile sources, approximately 649 metric tons of CO<sub>2</sub>e would be produced per year. The construction phase would approximately contribute 3 metric tons of CO<sub>2</sub>e.

***Secondary Impacts:***

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2021). The impacts of climate change throughout the Western part of Montana may include changes in flooding and drought, rising temperatures, the spread of invasive species (BLM 2021).

***Cumulative Impacts:***

Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant (CPRG) program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and this relies upon data already collected by the federal government through various agencies. The inventory specifically deals with carbon dioxide, methane, and nitrous oxide and reports the total as CO<sub>2</sub>e. The SIT consists of eleven Excel based modules with pre-populated data that can be used as default settings or in some cases, allows states to input their own data when the state believes their own data provides a higher level of quality and accuracy. Once each of the eleven modules is filled out, the data from each module is exported into a final "synthesis" module which summarizes all of the data into a single file. Within the synthesis file, several worksheets display the output data in a number of formats such as emissions by sector and emissions by type of greenhouse gas.

DEQ has determined the use of the default data provides a reasonable representation of the greenhouse gas inventory for the various sectors of the state, and an estimated annual greenhouse gas inventory by year. The SIT data is currently only updated through the year 2020, as it takes several years to validate and make new data available within revised modules.

Future GHG emissions from operations such as this site would be represented within the module Carbon Dioxide Emissions from Fossil Fuel Combustion, and emissions from the Transportation Sector within the Commercial and Industrial sectors. At present, the state of Montana accounts for 47.77 million metric tons of CO<sub>2</sub>e (MMTCO<sub>2</sub>e<sup>1</sup>). If Bitterroot were to operate the second incinerator/crematorium for 30 years, the total project lifetime emissions would be approximately 19,470 metric tons of CO<sub>2</sub>e. The second incinerator/crematorium accounts for 0.00136% of GHG emissions in Montana per year. The construction and installation of the second incinerator/crematorium and the two new propane tanks would result in GHG emissions of 3 metric tons per year of CO<sub>2</sub>e (Incompleteness Letter Response).

GHG emissions that would be emitted as a result of the proposed activities would add to GHG emissions from other sources. The current private land utilization<sup>1</sup> or No Action Alternative of the site also produces GHGs.

### **Reference**

Bureau of Land Management (BLM) 2021. Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends from Coal, Oil, and Gas Exploration and Development on the Federal Mineral Estate. Available at: <https://www.blm.gov/content/ghg/2021/>. Accessed February 28, 2024.

### **PROPOSED ACTION ALTERNATIVES:**

No Action Alternative:

In addition to the analysis above for the proposed action, DEQ is considering a “no action” alternative. The “no action” alternative would deny the approval of the proposed permitting action. The applicant would lack the authority to conduct the proposed activity. Any potential impacts that would result from the proposed action would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

Other Ways to Accomplish the Action:

In order to meet the project objective to permit the installation and operation of the second incinerator/crematorium, there are no other ways to accomplish this action outside of modifying the existing MAQP for the Bitterroot Pet Crematorium. This site has been in operation since 2000 and is required to have a MAQP for the existing incinerator/crematorium onsite.

If the applicant demonstrates compliance with all applicable rules and regulations as required for approval, the “no action” alternative would not be appropriate. Pursuant to, § 75-1-201(4)(a), (MCA) DEQ “may not withhold, deny, or impose conditions on any permit or other authority to act based on” an environmental assessment.

### **CONSULTATION**

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. External scoping efforts also included queries to the following websites/databases/personnel:

MAQP#3117-02 Application, EPA State Inventory Tool, the EPA GHG Calculator Tool, the Montana Natural Heritage Program Website, the Montana Cadastral Mapping Program, the City of Hamilton Website, and the State Historical Preservation Office

### **PUBLIC INVOLVEMENT:**

The public comment period for this permit action was from July 25, 2024, through August 8, 2024. No public comments were received.



## **OTHER GOVERNMENTAL AGENCIES WITH JURSDICTION:**

The proposed project would be located on private land. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, or federal agency jurisdiction.

This environmental review analyzes the proposed project submitted by the Applicant. The project would be negligible and would be fully reclaimed to the permitted postmining land uses at the conclusion of the project and thus would not contribute to the long-term cumulative effects of mining in the area.

## **NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS**

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

- The severity, duration, geographic extent, and frequency of the occurrence of the impact;
- The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
- Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
- The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
- The importance to the state and to society of each environmental resource or value that would be affected.
- Any precedent that would be set as a result of an impact of the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

## **CONCLUSIONS AND FINDINGS**

DEQ finds that this action results in negligible impacts to air quality and GHG emissions in Ravalli County, Montana.

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed air quality project would be limited. The proposed action would result in no new disturbance with the installation and operation of the second incinerator/crematorium. The site would be permitted to operate two incinerators/crematoriums.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed actions for any environmental resource. DEQ does not believe that the proposed activities by the Applicant would have any growth-inducing or growth-inhibiting aspects, or contribution to cumulative impacts. The proposed site does not appear to contain known unique or fragile resources.

There are no unique or known endangered fragile resources in the project area. No underground disturbance would be required for this project.

There would be major impacts to view-shed aesthetics as the facility would be constructed where there previously was not one.

Demands on the environmental resources of land, water, air, or energy would not be significant, as it is already an operational facility.

Impacts to human health and safety would not be significant as access roads would be closed to the public and because the site is on Privately Owned Land. The public is not allowed on the Bitterroot site.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed activities on any environmental resource.

Issuance of a Montana Air Quality Permit to the Applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the Applicant submits another modification or amendment, DEQ is not committed to issuing those revisions. DEQ would conduct an environmental review for any subsequent permit modifications sought by the Applicant that require environmental review. DEQ would make permitting decisions based on the criteria set forth in the Clean Air Act of Montana.

Issuance of the Permit to the Applicant does not set a precedent for DEQ's review of other applications for Permits, including the level of environmental review. The level of environmental review decision is made based on case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed air quality permitting action by the Applicant would have any growth-inducing or growth-inhibiting impacts that would conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed operation is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of environmental review for MEPA.

## **PREPARATION AND APPROVAL**

**EA prepared by:**

**Emily Hultin**  
Air Quality Engineering Scientist

Environmental Assessment Reviewed by: Craig Henrikson

**Approved by: Craig Henrikson**

---

## References

- 1.) Air Quality Permit Application Received June 10, 2024**
- 2.) Response to Incompleteness Letter Received July 5, 2024**
- 3.) Montana State Historical Preservation Office (SHPO) Report Received June 27, 2024**  
*HIS SHPO.* (n.d.). Svc.mt.gov. Retrieved July 11, 2024, from <https://svc.mt.gov/adsams/DocumentSubmission.aspx>
- 4.) Montana Natural Heritage Program (Website Search Downloads) Last Download June 26, 2024**  
*NHP Mapviewer.* (n.d.). Mtnhp.org. Retrieved July 11, 2024, from <https://mtnhp.org/MapView/?t=4>
- 5.) Montana Cadastral GIS Layer – Through-Out Project Up Until Decision Issuance**  
(2014) mtdeq.us.  
<https://gis.mtdeq.us/portal/home/webmap/viewer.html?webmap=bb443b5b50d74f1d83f040497010882e>
- 6.) Air Quality Bureau Permitted Source List-GIS Layer**  
(2014) mtdeq.us.  
<https://gis.mtdeq.us/portal/home/webmap/viewer.html?webmap=bb443b5b50d74f1d83f040497010882e>
- 7.) Air Quality Permit MAQP #2991-07**
- 8.) Air Quality Permit MAQP # 5187-00**
- 9.) City of Hamilton Website**  
*City of Hamilton.* City Of Hamilton. (n.d.). <https://cityofhamilton.net/>

## **ABBREVIATIONS and ACRONYMS**

AQB – Air Quality Bureau  
ARM - Administrative Rules of Montana  
BACT – Best Available Control Technology  
BITTERROOT – Bitterroot Pet Crematorium, Inc.  
BMP - Best Management Practices  
CAA – Clean Air Act of Montana  
CFR - Code of Federal Regulations  
CO - carbon monoxide  
DEQ – Department of Environmental Quality  
DNRC – Department of Natural Resources and Conservation  
EA – Environmental Assessment  
EIS – Environmental Impact Statement  
EPA - U.S. Environmental Protection Agency  
FCAA Federal Clean Air Act  
MAQP – Montana Air Quality Permit  
MCA – Montana Code Annotated  
MEPA – Montana Environmental Policy Act  
MTNHP - Montana Natural Heritage Program  
NO<sub>x</sub> - oxides of nitrogen  
PM - particulate matter  
PM<sub>10</sub> - particulate matter with an aerodynamic diameter of 10 microns and less  
PM<sub>2.5</sub> - particulate matter with an aerodynamic diameter of 2.5 microns and less  
PPAA - Private Property Assessment Act  
Program - Sage Grouse Habitat Conservation Program  
PSD - Prevention of Significant Deterioration  
SHPO - Montana State Historic Preservation Office  
SOC - Species of Concern  
SO<sub>2</sub> - sulfur dioxide  
tpy – tons per year  
U.S.C. - United States Code  
VOC - volatile organic compound