Date of Posting: August 27, 2025

Name of Permittee: Derek Kramer

Facility Name: Lightning Renewables, LLC. – Missoula RNG Facility

Physical Site Location: 3737 Coal Mine Road, Missoula, MT 59802

Sent via email: dkramer@archaea.engery

RE: Department Decision on MAQP Application #5286-02; Energy Development Project

The Montana Department of Environmental Quality (DEQ) has issued a Decision, with conditions, on Montana Air Quality Permit (MAQP) Application #5286-02 for the above-named permittee.

The project constitutes an "energy development project," as defined by § 75-2-103(9), Montana Code Annotated (MCA). Pursuant to the applicable requirements of § 75-2-213(1)(a), MCA, the request for hearing must be filed within 30 days after DEQ renders its decision. The Decision may be appealed to the Board of Environmental Review (Board). A request for a hearing must be filed by September 26, 2025. This permit shall become final and effective on September 12, 2025, unless the Board orders a stay on the permit.

Procedures for Appeal: The applicant or a person who has provided DEQ with comments during the formal public comment period, and who is directly and adversely affected by DEQ's Decision, may request a hearing before the Board. The request for a hearing is limited to the issues raised in those comments. The appeal must be filed before the final date stated above. The request for a hearing must contain an affidavit setting forth the grounds for the request. The hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620 or the Board Secretary: DEQBERSecretary@mt.gov.

Conditions: See attached Decision on MAQP #5286-02.

For DEQ,

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MONTANA AIR QUALITY PERMIT

Issued To: Lightning Renewables, LLC dba Lightning Renewables - Missoula RNG Facility 3737 Coal Mine Rd Missoula, MT 59802	MAQP: #5286-02 Application Complete: 06/18/25 Preliminary Determination Issued: 07/24/25 DEQ's Decision Issued: 08/27/2025 Permit Final: 09/12/2025

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Lightning Renewables, LLC dba Lightning Renewables – Missoula RNG facility (Lightning Renewables), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

The Lightning Renewables landfill gas (LFG) collection system is located approximately 0.6 miles from the nearest commercial facility and 0.44 miles from the nearest private farmstead which is located directly east of the proposed pad for the new equipment. The proposed pad is located within Section 5, Township 13 North and Range 19 West. The surrounding area property is generally identified as "landfill" with legal parcels both under the ownership of Allied Waste and BFI Waste Systems. Existing ownership of Allied Waste and BFI Waste Systems are within Sections 5, 8, and 9 within Township 13 North and Range 19 West. Gas collection will occur in those areas producing enough methane from decomposing waste. The physical address of Lightning Renewables is 3737 Cole Mine Road, Missoula MT. The physical pad site is located within a legal parcel owned and operated as a landfill by Allied Waste Systems of Montana, LLC. Lightning Renewables will operate independent of the landfill.

B. Current Permit Action

On May 30, 2025, the Montana Department of Environmental Quality (DEQ) received an application from Archaea Energy, the parent company of Lightning Renewables, to modify MAQP #5286-01. In the application, Lightning Renewables is requesting to revise the facility's design to decrease the maximum LFG throughput capacity from 3,200 dry standard cubic feet per minute (dscfm) to 1,400 dscfm. This design change also involves replacing the thermal recuperative oxidizer (TRO) with a direct-fired thermal oxidizer (TO) and removing the permitted back-up flare from the facility design.

Section II: Conditions and Limitations

A. Emission Limitations

1. Lightning Renewables shall install and continuously operate process instrumentation to demonstrate that a minimum temperature of 1500º F (on a

15-minute rolling average) is being maintained whenever waste gas is being combusted in the TO (ARM 17.8.749 and ARM 17.8.752).

2. Lightning Renewables shall not send waste gases to the TO until the TO temperatures have achieved 1500º degrees Fahrenheit (ºF) and have stabilized according to permit condition Section II.A.1 (ARM 17.8.749).

3. Lightning Renewables shall use pipeline quality natural gas as supplemental fuel for the TO and maintain good combustion practices to minimize emissions (ARM 17.8.749 and ARM 17.8.752).

4. Lightning Renewables shall install a TO with design specifications for no less than 99.0 percent VOC destruction efficiency or 20 parts per million volume (ppmv) as hexane (ARM 17.8.749 and ARM 17.8.752).

5. Emissions from the TO shall not exceed the following based on a 1-hour average (ARM 17.8.749, ARM 17.8.752, and ARM 17.8.770):

   Oxides of Nitrogen (NO_X) – 4.56 pounds per hour (lb/hr)
   Carbon Monoxide (CO) – 15.2 lb/hr
   Volatile Organic Compounds (VOC) – 5.64 lb/hr
   Sulphur Dioxide (SO_2) – 1.72 lb/hr
   Hazardous Air Pollutants (HAPs) – 0.38 lb/hr
   Filterable and Condensable PM with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$) – 0.87 lb/hr

6. Lightning Renewables shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

7. Lightning Renewables shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the TO that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749, ARM 17.8.752).

8. Except as specified in Section II.A.7, Lightning Renewables 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).

9. Lightning Renewables 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).

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. To demonstrate compliance with Section II.A.4 and the lb/hr HAPs emission limit in Section II.A.5, within 180 days of initial startup of the TO Lightning Renewables shall demonstrate a minimum VOC destruction efficiency of 99.0 percent OR an outlet concentration of 20 ppmv of hexane.

   The VOC control efficiency shall be determined by the following equation (ARM 17.8.105 and ARM 17.8.749):

   Control Efficiency = (VOC_{in} lb/hr – VOC_{out} lb/hr)/(VOC_{in} lb/hr) x 100%

   Lightning Renewables shall utilize EPA Methods 1-4 and 25A/or equivalent methods to determine VOC destruction efficiency.

3. To demonstrate compliance with the emission limits in Section II.A.5, within 180 days of initial start-up of the TO, Lightning Renewables shall conduct initial source testing for NOx, CO, and SO_2.

   Lightning Renewables shall utilize EPA Methods 1-4, 6C, 7E, and 10 and/or equivalent methods to determine/validate NO_X, SO_2 and CO emission rates. Testing for NO_X, SO_2 and CO shall occur concurrently.

4. To demonstrate compliance with the opacity limit in Section II.A.7. and the $PM_{2.5}$ emission limit in Section II.A.5, Lightning Renewables shall conduct weekly observations for visible emissions (opacity) from the TO, when it is in operation. If visible emissions are observed, Lightning Renewables shall conduct an EPA Method 9 Visible Opacity determination to demonstrate compliance with the opacity limits in Section II.A.7 (ARM 17.8.749).

5. DEQ may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Lightning Renewables 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. Lightning Renewables shall submit the following information annually to DEQ by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

   a. Hours of operation of the TO
   b. Temperature of TO during operation
   c. Weekly opacity observations
   d. EPA Method 9 Test results

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

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

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

D. Notifications

Lightning Renewables shall provide DEQ with written notification of the following information within the specified time periods (ARM 17.8.749):

a. Initial start-up date of the TO within 15 working days of start-up.

SECTION III: General Conditions

A. Inspection – Lightning Renewables 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 Lightning Renewables fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Lightning Renewables of the responsibility for complying with any

applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by DEQ's decision may request, within 15 days after DEQ renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act.

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

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by DEQ at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Lightning Renewables 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
Lightning Renewables, LLC
MAQP #5286-01

I. Introduction/Process Description

Lightning Renewables, LLC dba Lightning Renewables – Missoula RNG Facility (Lightning Renewables) installed and operates a landfill gas (LFG) processing system. The legal address of the facility is Section 5, Township 13 North, and Range 19 West. The physical address is 3737 Coal Mine Road, Missoula MT. The LFG processing facility is located at an existing municipal solid waste landfill owned and operated by Allied Waste Systems of Montana, LLC (Allied Waste). Lightning Renewables operates independently of the landfill.

A. Permitted Equipment

Lightning Renewables operates a LFG processing system for the purpose of collecting, refining, and injecting renewable natural gas from an existing landfill into an existing natural gas pipeline. Equipment includes:

- Thermal oxidizer (TO)
- 324 horsepower (hp) diesel fired emergency backup generator
- Associated equipment including a closed system processing treatment train (treatment train), which conditions the waste gas received from the landfill allowing for the methane to be recovered and sold and for the waste gases to be combusted in the TO.

B. Source Description

Lightning Renewables Missoula Renewable Natural Gas (RNG) plant utilizes LFG generated from the Allied Waste as feedstock. The LFG received by Lightening Renewables undergoes processing, consisting of dewatering/moisture removal, sulfur compound removal, filtration, temperature swing adsorption, membrane separation, and pressure swing adsorption. The refined RNG consists of greater than 95% methane, that is compressed and injected into a nearby natural gas transmission pipeline for sale. The project uses a thermal oxidizer (TO) as pollution control equipment, and a diesel-fired emergency backup generator for use when the typical sources of power are unavailable.

Currently, all LFG produced is collected at Allied Waste and vented to an existing flare where it is combusted without the ability to recover any of the methane for beneficial use. The Allied Waste flare will continue to remain as a secondary backup for the new Lightning Renewables facility should Lightning Renewables suffer process upsets where waste gases cannot be combusted by the Lightning Renewables TO. Allied Waste currently holds an existing Title V Operating Permit (#OP2831-07), which authorizes the operation of the gas collection system and existing flare. The Title V Operating Permit for Allied Waste will remain in effect regardless of the status of this Montana Air Quality Permit (MAQP) issued to Lightning Renewables.

C. Permit History

MAQP #5286-00 was issued to Lightning Renewables, LLC, on May 8, 2023.

On December 26, 2023, DEQ received a notification from Archaea Energy, the parent company of Lightning Renewables, LLC., of a change of address. **MAQP #5286-01** replaced MAQP #5286-00.

D. Current Permit Action

On May 30, 2025, DEQ received an application from Archaea Energy, the parent company of Lightning Renewables, LLC., to modify MAQP #5286-01. In the application, Lightning Renewables is requesting to revise the facility's design to decrease the maximum LFG throughput capacity from 3,200 dry standard cubic feet per minute (dscfm) to 1,400 dscfm. This design change also involves replacing the thermal recuperative oxidizer (TRO) with a direct fired TO and removes the TOs back-up flare from the design.

The proposed TO has been designed to perform the function as both a flare for waste gas with high heat content and a thermal oxidizer for waste gas with low heat content. In this smaller processing plant design, a direct fired TO, which does not require pre-heating, is more efficient and can fulfill both roles. As a result, the previously proposed worst-case scenario with the backup flare has been eliminated. While there is a slight increase in fuel consumption due to the absence of pre-heating of dilution air by the TO, overall emissions are lower, except for VOC and SO_2. These pollutants are higher due to the more conservative TO design specifications for methane and sulfur content. **MAQP #5286-02** replaces MAQP #5286-01.

E. Response to Comments

Person/Group Commenting	Comment	DEQ Response
No Public Comments Received		

F. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of DEQ, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by DEQ.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by DEQ, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

   Lightning Renewables 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_{10}
11. ARM 17.8.230 Fluoride in Forage

Lightning Renewables 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, Lightning Renewables 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 17.8.322 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). Lightning Renewables is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart JJJJ – Standard of Performance for Stationary Spark Ignition Internal Combustion Engines. The proposed engines are affected sources under this subpart because they are larger than 25 hp and are manufactured after January 1, 2008.

9. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.

a. 40 CFR 61, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below:

b. 40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants From Reciprocating Internal Combustion Engines. The proposed facility contains four stroke lean burn LFG engines at an area source of HAPs which are affected sources under 40 CFR 63 Subpart ZZZZ.

However, because the LFG extraction and purification facility would be an area source of HAPs and not a major source of HAPs, the engines may meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII for spark ignition engines. No further requirements apply for such engines under 40 CFR 63, Subpart ZZZZ.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to DEQ. Lightning Renewables 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.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Lightning Renewables has a PTE greater than 25 tons per year of Carbon Monoxide (CO); therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Lightning Renewables 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. Lightning Renewables submitted an affidavit of publication of public notice for the May 29, 2025, June 5, 2025, and June 12, 2025, issue of the *Missoulian*, a newspaper of general circulation in the city of Missoula in Missoula 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. A BACT analysis was required and included in the 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 Lightning Renewables of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.

12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to

construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

15. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to DEQ.

16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to DEQ for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).

17. ARM 17.8.771 Mercury Emission Standards for Mercury-Emitting Generating Units. This rule identifies mercury emission limitation requirements, mercury control strategy requirements, and application requirements for mercury-emitting generating units.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

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

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as DEQ may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} 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 #5286-01 for Lightning Renewables, 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_{10} nonattainment area.

   d. This facility is subject to any current NSPS (40 CFR 60, Subparts A and IIII).

   e. This facility is not subject to any current NESHAP standards (40 CFR 63, Subpart A and ZZZZ).

   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 Lightning Renewables is a minor source of emissions as defined under Title V.

III. BACT Determination

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

A BACT analysis and determination was not required for emissions generated by the emergency, backup diesel fired generator because the source is limited to 500 annual hours of operation and will only operate during times when the typical sources of power are unavailable.

Therefore, potential emissions are negligible (see Section IV, Emission Inventory) and any add-on control would not be cost-effective.

A BACT analysis was submitted by Lightning Renewables in permit application #5286-02, addressing available methods of controlling VOC emissions from the processing of RNG. DEQ reviewed these methods, as well as previous BACT determinations for similar sources. The following VOC control options have been reviewed by DEQ to make the following BACT determination(s). The BACT analysis follows the traditional 1990 draft New Source Review (NSR) top-down, five step BACT analysis and determination methodology. The analysis is presented using the following steps for each pollutant and emitting unit.

Step 1: Identify All Available Control Technologies
Step 2: Eliminate Technically Infeasible Control Options
Step 3: Rank Remaining Control Technologies by Control Effectiveness
Step 4: Evaluate Most Effective Controls and Document Results
Step 5: Select BACT

VOC Analysis

Step 1 – Identify Control Options

A RBLC search was performed on March 14th, 2025, to identify available control technologies for emissions from RNG processing. Based on review and knowledge of LFG/biogas processing facilities, the following controls of VOC laden waste gas emissions from LFG processing facilities were identified as available technologies:

- Thermal Oxidizers
- Flares
- Good combustion, operation and maintenance practices

Thermal Oxidizers use high heat to break down and remove pollutants. A flare works in a similar way to oxidize VOCs. Good combustion, operation, and maintenance practices include regular equipment inspections, the use of pipeline quality natural gas, and proper fuel handling.

Step 2: Eliminate Technically Infeasible Control Options

All control technologies and strategies identified in Step 1 were evaluated for RNG processing at the Lightening Renewables facility and all three technologies/strategies are deemed technically feasible, as presented in the table below.

Control Technology	RNG processing
Thermal Oxidizers	Technically feasible, VOC
Flare	Technically feasible, VOC
Good Combustion Practices	Technically feasible, VOC

Step 3: Rank Remaining Control Technologies by Control Effectiveness

The control technologies identified in Steps 1 and 2 are ranked by VOC control efficiencies. The TO was ranked highest with a VOC control efficiency of 99%.

	VOC Efficiency	Rank
Thermal Oxidizers	99%	1
Flare	98%	2
Good Combustion Practices	N/A	3

Step 4: Evaluate Most Effective Controls and Document Results

In the initial permitting action for the larger proposed processing plant, Lightning Renewables selected a thermal recuperative oxidizer (TRO) with a back-up flare for use during startup, shutdown, and malfunction events. For the modified smaller processing plant design, a direct fired TO that does not require pre-heating is more feasible and does not require a back-up flare because the natural draft, direct fired TO can serve both purposes. Since the most effective control technology (99%) was selected for VOC, no further evaluation was performed. For other pollutants, good combustion practices is selected as BACT. The TO vendor has provided a NO_X and CO emissions guarantee of 0.06 lb/MMBtu and 0.2 lb/MMBtu, respectively.

Step 5: Select BACT

Lightning Renewables has selected the most effective control technology available for VOCs. Therefore, BACT for the control of VOCs from Lightning Renewables is deemed a TO with a VOC control efficiency of 99%.

$PM_{10}/PM_{2.5}$, SO_2, NO_X, CO Analysis

Step 1: Identify available control technologies.

A RBLC search was performed on March 14th, 2025, to identify possible control technologies for emissions from RNG processing. Based on review and knowledge of LFG/biogas processing facilities, the following controls for $PM_{10}/PM_{2.5}$, SO_2, NO_X and CO laden waste gas emissions from LFG processing facilities were identified as available technologies:

- Good combustion practices
- Use of low-sulfur fuels

The low concentrations make effectively implementing add-on control technologies challenging, as demonstrated by the limited control technologies found in the RBLC database search. The absence of other control technologies from the RBLC database, and particularly from LAER determinations, is an indicator that no additional pollutant control technologies have been successfully demonstrated. Lightning is unaware of any demonstrated add-on control technologies available for reducing emissions from pipeline quality natural gas fueled TO.

Steps 2: Technical Feasibility:

Both the control strategies identified in Step 1 were evaluated for RNG processing at the Lightening Renewables facility and both strategies are deemed technically feasible, as presented in the table below.

Control Technology	RNG processing
Good Combustion Practices	Technically feasible, NO_X, CO, $PM_{10}/PM_{2.5}$, SO_2
Use of Low-Sulfur Fuels	Technically feasible, NO_X, CO, $PM_{10}/PM_{2.5}$, SO_2

Step 3-4: Control Ranking, Energy, Environmental and Economic Considerations

Both control technologies presented above are considered technically feasible, have been proposed by Lightening Renewables, and are not excluded due to energy, environmental or economic considerations. As such, a detailed analysis of BACT steps 3-4 is not warranted.

Step 5 – Select $PM_{10}/PM_{2.5}$, SO_2, NO_X, CO BACT

BACT for the TO is the use of good combustion practices and pipeline quality natural gas, a low sulfur fuel available and appropriate for the proposed TO. The TO vendor has provided a NO_X and CO emissions guarantee of 0.06 lb/MMBtu and 0.2 lb/MMBtu, respectively.

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

CONTROLLED	**tons/year**							
Emission Source	**PM_{Tot}**	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**	**SO_2**	**HAPs**
Thermal Oxidizer	3.80	3.80	3.80	19.99	66.63	24.68	7.54	1.65
Natural Gas Emissions – TO	0.39	0.39	0.39	--	--	0.28	0.003	0.097
Emergency Generator	0.015	0.015	0.015	0.532	0.134	0.532	0.001	0.532
Total Emissions	**4.21**	**4.21**	**4.21**	**20.52**	**66.76**	**25.49**	**7.54**	**2.28**

Notes:
1. Values in table reflect "controlled" emissions
2. NOX and CO TO natural gas emissions are included in WG emissions factor, vender outlet guarantee.
3. PM emissions for the TO are assumed to be PM2.5 Fil. and Cond.

Thermal Oxidizer

Hours of Operation = 8,760.00 hours	8760	**hours**
pounds per ton = 0.000500 lb/ton	0.0005	**lb/ton**
PM Emissions:		
PM Emissions = 3.80ton/yr AP 42, Table 2.4-5	3.80	**ton/yr**
PM-10 Emissions:		
Emission Factor = 0.87 lb/hr (Assume All PM is PMtotal)	0.87	**lb/hr**

Calculation: (8,760.00 hours) * (0.87 lb/hr) * (ton/2000 lb) = 0.872 ton/yr	3.80	**ton/yr**
PM2.5 Emissions		
Emission Factor = 0.87 lb/hr (Assume All PM is PMTotal)	0.87	**lb/hr**
Calculation: (8,760.00 hours) * (0.87 lb/hr) * (ton/2000 lb) = 0.872 ton/yr	3.80	**ton/yr**
NOx Emissions:		
Emission Factor = 1.185 lb/hr Vendor Guarantee	4.56	**lb/hr**
Calculation: (8760.00 hours) * (4.56 lb/hr) * (ton/2000 lb) = 5.190 ton/yr	19.99	**ton/yr**
CO Emissions:		
Emission Factor = 15.21 lb/hr Vendor Guarantee	15.21	**lb/hr**
Calculation: (8,760.00 hours) * (15.21 lb/hr) * (ton/2000 lb) = 10.385 ton/yr	66.63	**ton/yr**
VOC Emissions:		
Emission Factor = 5.64 lb/hr Vendor Guarantee	5.64	**lb/hr**
Calculation: (8,760.00 hours) * (5.64 lb/hr) * (ton/2000 lb) = 6.176 ton/yr	24.68	**ton/yr**
SO_2 Emissions:		
Emission Factor = 1.72 lb/hr Mass Balance/process design	1.72	**lb/hr**
Calculation: (8,760.00 hours) * (1.72 lb/hr) * (ton/2000 lb) = 3.548 ton/yr	7.54	**ton/yr**
HAPs Emissions:		
Emission Factor = 0.4 lb/hr Sampling Data	0.4	**lb/hr**
Calculation: (8,760 hours) * (0.4000 lb/hr) * (ton/2000 lb) = 1.65 ton/yr	1.65	**ton/yr**
Natural Gas Emissions - TO		
Hours of Operation = 8,760.00 hours	8760	**hours**
pounds per ton = 0.000500 lb/ton	0.0005	**lb/ton**
PM Emissions:		
PM Emissions = 0.389 ton/yr AP 42, Table 1.4-2	0.389	**ton/yr**
PM_{10} Emissions:		
Emission Factor = 0.089 lb/hr (Assume All PM is PMTotal)	0.089	**lb/hr**
Calculation: (8,760.00 hours) * (0.089 lb/hr) * (ton/2000 lb) = 0.389 ton/yr	0.389	**ton/yr**
$PM_{2.5}$ Emissions		
Emission Factor = 0.089 lb/hr (Assume All PM is PMTotal)	0.089	**lb/hr**
Calculation: (8,760.00 hours) * (0.089 lb/hr) * (ton/2000 lb) = 0.389 ton/yr	0.389	**ton/yr**
VOC Emissions:		
Emission Factor = 0.041 lb/hr AP 42, Table 1.4-2	0.04	**lb/hr**
Calculation: (8,760.00 hours) * (0.04 lb/hr) * (ton/2000 lb) = 0.180 ton/yr	0.18	**ton/yr**
SO_2 Emissions:		
Emission Factor = 0.00702 lb/hr AP 42, Table 1.4-2	0.00702	**lb/hr**
Calculation: (8,760.00 hours) * (0.00702 lb/hr) * (ton/2000 lb) = 0.0307 ton/yr	0.0307	**ton/yr**
HAPs Emissions:		
Emission Factor = 0.0221 lb/hr AP 42, Table 1.4-3	0.0221	**lb/hr**

Calculation: (8,760 hours) * (0.0221 lb/hr) * (ton/2000 lb) = 0.097 ton/yr	0.097	**ton/yr**

Emergency Diesel Engine

Note: Emissions are based on the power output of the engine (324 hp).		
Operational Capacity of Engine = 324 hp	324	**hp**
Hours of Operation = 500.00 hours	500	**hours**
grams per pound = 0.002205 g/lb	0.002205	**g/lb**
PM Emissions:		
PM Emissions = 0.015 ton/yr (AP-42, Table 1.4-2)	0.0146	**ton/yr**
PM_{10} Emissions:		
Emission Factor = 0.082 g/bhp-hr (Assumed all PM is $PM_{2.5}$)	8.20E-02	**g/bhp-hr**
Calculation: (0.082 g/bhp-hr) * (324.0 hp) * (324 hp) * (0.002205 g/lb) * (0.0820 g/bhp-hr) * (ton/2000 lb) = 0.01 ton/yr	0.0146	**ton/yr**
$PM_{2.5}$ Emissions		
Emission Factor = 0.082 g/bhp-hr (Assumed all PM is $PM_{2.5}$)	8.20E-02	**g/bhp-hr**
Calculation: (0.082 g/bhp-hr) * (324.0 hp) * (324 hp) * (0.002205 g/lb) * (0.0820 g/bhp-hr) * (ton/2000 lb) = 0.01 ton/yr	0.0146	**ton/yr**
NO_X & VOC Emissions:		
Emission Factor = 2.98 g/bhp*hr Manufactures Emissions	2.98	**g/bhp*hr**
Calculation: (2.98 g/bhp*hr) * (324 hp) * (500 hours) * (0.002205 g/lb) * (ton/2000 lb) = 0.53 ton/yr	0.53	**ton/yr**
CO Emissions:		
Emission Factor = 0.75 g/bhp*hr Manufactures Emissions	0.75	**g/bhp*hr**
Calculation: (0.75 g/bhp*hr) * (324 hp) * (500 hours) * (0.002205 g/lb) * (ton/2000 lb) = 0.13 ton/yr	0.13	**ton/yr**
VOC Emissions:		
Emission Factor = 2.98 g/bhp*hr Manufactures Emissions	2.98	**g/bhp*hr**
Calculation: (2.98 g/bhp*hr) * (324 hp) * (500 hours) * (0.002205 g/lb) * (ton/2000 lb) = 0.53 ton/yr	0.53	**ton/yr**
SO_X Emissions:		
Emission Factor = 0.00152 lbs/MMBtu (AP-42, Table 1.4-2)	1.52E-03	**lbs/mmBtu**
Calculation: (0.0015 lbs/MMBtu) * (28 gal/hr) * (0.137 MMBtu/gal) * (500 hr/yr) * (ton/2000 lb) = 0.00 ton/yr	0.00146	**ton/yr**

V. Existing Air Quality

The Lightning Renewables facility is located within an area of Missoula County that is designated as an Unclassifiable/Attainment area for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants with the exception of PM_{10} and CO. The area where the facility is proposed to be located is considered a maintenance area for PM_{10} and CO. Missoula maintains control of the measures for PM_{10} and CO under their SIP approved County Air Quality Program. The CO and PM_{10} emissions associated with MAQP #5286-02 will not trigger any violations of the current Missoula County maintenance plan.

DEQ has determined that there will be no significant impacts to the NAAQS because the proposed equipment will be installed and operated in an already existing Municipal Solid Waste Landfill that currently burns the waste gas in a flare.

VI. Air Quality Impacts

DEQ determined that there will be no impacts from this permitting action because the permitting change reduces the throughput of the facility and replaces a TRO with a TO and eliminates a waste gas flare. Therefore, the DEQ believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #5286-02, the DEQ determined that there will be no impacts from this permitting action. The DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Health Risk Assessment

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

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

Health Risk Assessment:

AERSCREEN 21112 / AERMOD 24142 **04/04/25**
10:03:50

TITLE: ARCHAEA MISSOULA TO SCENARIO

********** **STACK PARAMETERS** **********

SOURCE EMISSION RATE:	0.0501	g/s	0.398	lb/hr
STACK HEIGHT:	18.29	meters	60.00	feet
STACK INNER DIAMETER:	0.965	meters	96.00	inches
PLUME EXIT TEMPERATURE:	699.8	K	800.0	Deg F
PLUME EXIT VELOCITY:	9.567	m/s	31.39	ft/s
STACK AIR FLOW RATE:	94665	ACFM		
RURAL OR URBAN:	RURAL			

INITIAL PROBE DISTANCE = 5025. meters 16486. feet

********** **BUILDING DOWNWASH PARAMETERS** **********

NO BUILDING DOWNWASH HAS BEEN REQUESTED FOR THIS ANALYSIS

********** **PROBE ANALYSIS** **********

---

25 meter receptor spacing: 15. meters - 5025. meters

Zo SECTOR	ROUGHNESS LENGTH	1-HR CONC (ug/m3)	DIST (m)	TEMPORAL PERIOD
1*	**0.100**	**0.8645**	**175.0**	**SUM**

*** = worst case flow sector**

********** **MAKEMET METEOROLOGY PARAMETERS** **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Grassland
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Summer

ALBEDO: 0.18
BOWEN RATIO: 0.80
ROUGHNESS LENGTH: 0.100 (meters) SURFACE

FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR
10 06 12 12 01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-64.00	1.560	-9.000	0.020	-999.	4000.	5653.0	0.100	0.80	0.18	10.00

HT	REF TA	HT
10.0	310.0	2.0

WIND SPEED AT STACK HEIGHT (non-downwash): 20.4 m/s
STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT: 13.3 meters
ESTIMATED FINAL PLUME RISE (non-downwash): 4.7 meters
ESTIMATED FINAL PLUME HEIGHT (non-downwash): 17.9 meters

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR MO DY JDY HR
10 02 03 12 12

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
264.47	0.105	1.200	0.020	604.	78.	-1.0	0.100	0.80	0.18	0.50

HT	REF TA	HT
10.0	310.0	2.0

WIND SPEED AT STACK HEIGHT (non-downwash):	0.7	m/s
STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT:	18.3	meters
ESTIMATED FINAL PLUME RISE (non-downwash):	566.1	meters
ESTIMATED FINAL PLUME HEIGHT (non-downwash):	584.4	meters

********** AERSCREEN AUTOMATED DISTANCES **********

OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
15.24	0.4532E-01	2525.00	0.2207
25.00	0.6839E-01	2550.00	0.2196
50.00	0.1014	2575.00	0.2185
75.00	0.1202	2600.00	0.2175
100.00	0.2670	2625.00	0.2164
125.00	0.6507	2650.00	0.2153
150.00	0.8383	2675.00	0.2143
175.00	0.8645	2700.00	0.2132
200.00	0.8267	2725.00	0.2121
225.00	0.7620	2750.00	0.2110
250.00	0.7319	2775.00	0.2099
275.00	0.6870	2800.00	0.2088
300.00	0.6366	2825.00	0.2077
325.00	0.5858	2850.00	0.2066
350.00	0.5693	2875.00	0.2055
375.00	0.5572	2900.00	0.2044
400.00	0.5394	2925.00	0.2033
425.00	0.5182	2950.00	0.2022
450.00	0.4953	2975.00	0.2012
475.00	0.4717	3000.00	0.2001
500.00	0.4481	3025.00	0.1990
525.00	0.4250	3050.00	0.1980
550.00	0.4028	3075.00	0.1970
575.00	0.3817	3100.00	0.1959
600.00	0.3649	3125.00	0.1949
625.00	0.3615	3150.00	0.1939
650.00	0.3567	3175.00	0.1929
675.00	0.3509	3200.00	0.1919
700.00	0.3443	3225.00	0.1909
725.00	0.3370	3250.00	0.1899
750.00	0.3294	3275.00	0.1890
775.00	0.3215	3300.00	0.1880

800.00	0.3134
825.00	0.3053
850.00	0.2971
875.00	0.2890
900.00	0.2811
925.00	0.2732
950.00	0.2655
975.00	0.2581
1000.00	0.2508
1025.00	0.2437
1050.00	0.2401
1075.00	0.2416
1100.00	0.2429
1125.00	0.2439
1150.00	0.2447
1175.00	0.2453
1200.00	0.2457
1225.00	0.2459
1250.00	0.2459
1275.00	0.2459
1300.00	0.2456
1325.00	0.2453
1350.00	0.2449
1375.00	0.2459
1400.00	0.2468
1425.00	0.2475
1450.00	0.2481
1475.00	0.2486
1500.00	0.2489
1525.00	0.2492
1550.00	0.2493
1575.00	0.2494
1600.00	0.2493
1625.00	0.2492
1650.00	0.2491
1675.00	0.2488
1700.00	0.2485
1725.00	0.2481
1750.00	0.2477
1775.00	0.2472
1800.00	0.2467
1825.00	0.2461
1850.00	0.2455
1875.00	0.2448
1900.00	0.2441
1925.00	0.2434
1950.00	0.2427
1975.00	0.2419
2000.00	0.2411
2025.00	0.2403
3325.00	0.1871
3350.00	0.1861
3375.00	0.1852
3400.00	0.1843
3425.00	0.1833
3450.00	0.1824
3475.00	0.1815
3500.00	0.1806
3525.00	0.1797
3550.00	0.1789
3575.00	0.1780
3600.00	0.1771
3625.00	0.1763
3650.00	0.1755
3675.00	0.1748
3700.00	0.1740
3725.00	0.1733
3750.00	0.1726
3775.00	0.1718
3800.00	0.1711
3825.00	0.1704
3850.00	0.1697
3875.00	0.1690
3900.00	0.1683
3925.00	0.1676
3950.00	0.1669
3975.00	0.1662
4000.00	0.1655
4025.00	0.1648
4050.00	0.1641
4075.00	0.1635
4100.00	0.1628
4125.00	0.1621
4150.00	0.1615
4175.00	0.1608
4200.00	0.1602
4225.00	0.1595
4250.00	0.1589
4275.00	0.1583
4300.00	0.1576
4325.00	0.1570
4350.00	0.1564
4375.00	0.1558
4400.00	0.1552
4425.00	0.1545
4450.00	0.1539
4475.00	0.1533
4500.00	0.1527
4525.00	0.1521
4550.00	0.1516

2050.00	0.2394	4575.00	0.1510
2075.00	0.2385	4600.00	0.1504
2100.00	0.2376	4625.00	0.1498
2125.00	0.2367	4650.00	0.1492
2150.00	0.2358	4675.00	0.1487
2175.00	0.2349	4700.00	0.1481
2200.00	0.2339	4725.00	0.1475
2225.00	0.2329	4750.00	0.1470
2250.00	0.2319	4775.00	0.1464
2275.00	0.2310	4800.00	0.1459
2300.00	0.2300	4825.00	0.1453
2325.00	0.2289	4850.00	0.1448
2350.00	0.2279	4875.00	0.1442
2375.00	0.2269	4900.00	0.1437
2400.00	0.2259	4925.00	0.1432
2425.00	0.2248	4950.00	0.1427
2450.00	0.2238	4975.00	0.1421
2475.00	0.2228	5000.00	0.1416
2500.00	0.2217	5025.00	0.1411

********** **AERSCREEN MAXIMUM IMPACT SUMMARY** **********

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.8659	0.8659	0.7793	0.5196	0.8659E-01

DISTANCE FROM SOURCE **170.00 meters**

IMPACT AT THE AMBIENT BOUNDARY	0.04532	0.04532	0.04079	0.02719	0.04532

DISTANCE FROM SOURCE **15.24 meters**

Human Health Risk Assessment for the TOX

Cancer and Noncancer Chronic Modeled Concentration	8.66E-02	ug/m3 / lb/hr Total Hap Emission Rate
Noncancer Acute Modeled Concentration	8.66E-01	ug/m3 / lb/hr Total Hap Emission Rate

Stack Parameters (Exhaust Stack)

Stack Height (ft)	Stack Diameter (in)	Stack Temp (F)	Stack Flow Rate (acfm)	Total HAP Hourly Emission Rate (lb/hr)
60	96	800	94,665	0.398

HAP Category / Pollutant Name	CAS #	Annual Fraction of all HAPS	Calculated Annual HAP Concentration (ug/m3)	1 hr Fraction of all HAPS	Calculated 1 hr HAP Concentration (ug/m3)	ARM 17.8.770 Table 1 Cancer Annual (ug/m3)	Table 2 Noncancer Chronic Annual (ug/m3)	Table 2 Noncancer Acute Annual (ug/m3)	Exceed ARM 17.8.770 Table 1?	Exceed ARM 17.8.770 Table 2 Chronic?	Exceed ARM 17.8.770 Table 2 Acute?
1,1,1-Trichloroethane	71556	3.37E-05	2.92E-06	3.37E-05	2.92E-05	N/A	3.2000E+00	1.9000E+03	No	No	No
1,1,2,2-Tetrachloroethane	79345	4.24E-05	3.67E-06	4.24E-05	3.67E-05	1.7241E-03	N/A	N/A	No	No	No
1,1,2-Trichloroethane	79005	3.37E-05	2.92E-06	3.37E-05	2.92E-05	6.2500E-03	N/A	N/A	No	No	No
1,1-Dichloroethane	75343	1.30E-04	1.12E-05	1.30E-04	1.12E-04	N/A	N/A	N/A	No	No	No
1,1-Dichloroethene	75354	2.45E-05	2.12E-06	2.45E-05	2.12E-05	2.0000E-03	3.2000E-01	N/A	No	No	No
1,2,4-Trichlorobenzene	120821	4.59E-05	3.97E-06	4.59E-05	3.97E-05	N/A	N/A	N/A	No	No	No
1,2-Dichloroethane	107062	3.68E-04	3.19E-05	3.68E-04	3.19E-04	3.8462E-03	9.5000E-01	N/A	No	No	No
1,2-Dichloropropane	78875	3.25E-05	2.82E-06	3.25E-05	2.82E-05	N/A	4.0000E-02	N/A	No	No	No
1,2-Dichlorobenzene	95501	3.72E-05	3.22E-06	3.72E-05	3.22E-05	N/A	N/A	N/A	No	No	No
1,3-Butadiene	106990	1.37E-05	1.18E-06	1.37E-05	1.18E-05	3.5714E-04	N/A	N/A	No	No	No
1,3-Dichlorobenzene	541731	2.06E-04	1.78E-05	2.06E-04	1.78E-04	N/A	N/A	N/A	No	No	No
1,4-Dichlorobenzene	106467	3.71E-05	3.22E-06	3.71E-05	3.22E-05	9.0909E-03	8.0000E+00	N/A	No	No	No
1,4-Dioxane	123911	4.45E-05	3.86E-06	4.45E-05	3.86E-05	1.2987E-02	4.0000E-02	2.0000E+01	No	No	No
2-Butanone	78933	4.35E-03	3.77E-04	4.35E-03	3.77E-03	N/A	1.0000E+01	N/A	No	No	No
2-Methylnaphthalene	91576	7.06E-07	6.11E-08	7.06E-07	6.11E-07	N/A	N/A	N/A	No	No	No
2-Propanol (IPA)	67630	7.03E-03	6.08E-04	7.03E-03	6.08E-03	N/A	N/A	N/A	No	No	No
3-Methylcholanthrene	56495	5.29E-08	4.58E-09	5.29E-08	4.58E-08	N/A	N/A	N/A	No	No	No
7,12-Dimethylbenz(a)anthracene	57976	4.71E-07	4.07E-08	4.71E-07	4.07E-07	N/A	N/A	N/A	No	No	No
Acenaphthene	83329	5.29E-08	4.58E-09	5.29E-08	4.58E-08	N/A	N/A	N/A	No	No	No
Acenaphthylene	208968	5.29E-08	4.58E-09	5.29E-08	4.58E-08	N/A	N/A	N/A	No	No	No
Acetone	67641	4.91E-03	4.25E-04	4.91E-03	4.25E-03	N/A	N/A	N/A	No	No	No
Acrylonitrile	107131	1.34E-05	1.16E-06	1.34E-05	1.16E-05	1.4706E-03	2.0000E-02	N/A	No	No	No
Allyl Chloride	107051	3.87E-05	3.35E-06	3.87E-05	3.35E-05	N/A	1.0000E-02	N/A	No	No	No
Anthracene	120127	7.06E-08	6.11E-09	7.06E-08	6.11E-08	N/A	N/A	N/A	No	No	No
Arsenic	7440382	7.06E-06	6.11E-07	7.06E-06	6.11E-06	2.3256e-05	5.0000E-03	N/A	No	No	No
Benz(a)anthracene	56553	5.29E-08	4.58E-09	5.29E-08	4.58E-08	5.8824E-05	N/A	N/A	No	No	No
Benzene	71432	6.48E-04	5.61E-05	6.48E-04	5.61E-04	1.2048E-02	7.1000E-01	N/A	No	No	No
Benzo(a)pyrene	50328	3.53E-08	3.06E-09	3.53E-08	3.06E-08	5.8824E-05	N/A	N/A	No	No	No
Benzo(b)fluoranthene	205992	5.29E-08	4.58E-09	5.29E-08	4.58E-08	5.8824E-05	N/A	N/A	No	No	No
Benzo(g,h,i)perylene	191242	3.53E-08	3.06E-09	3.53E-08	3.06E-08	N/A	N/A	N/A	No	No	No
Benzo(k)fluoranthene	207089	5.29E-08	4.58E-09	5.29E-08	4.58E-08	5.8824E-05	N/A	N/A	No	No	No
Benzyl Chloride	100447	3.20E-05	2.77E-06	3.20E-05	2.77E-05	N/A	1.2000E-01	5.0000E-01	No	No	No
Beryllium	7440417	3.53E-07	3.06E-08	3.53E-07	3.06E-07	4.1667E-05	4.8000E-05	N/A	No	No	No
Bromodichloromethane	75274	4.14E-05	3.58E-06	4.14E-05	3.58E-05	N/A	N/A	N/A	No	No	No
Bromoform	75252	6.39E-05	5.53E-06	6.39E-05	5.53E-05	9.0909E-02	N/A	N/A	No	No	No
Bromomethane	74839	2.75E-05	2.38E-06	2.75E-05	2.38E-05	N/A	5.0000E-02	N/A	No	No	No
Cadmium	7440439	4.12E-05	3.57E-06	4.12E-05	3.57E-05	5.5556E-05	3.5000E-02	N/A	No	No	No
Carbon Disulfide	75150	7.72E-05	6.68E-06	7.72E-05	6.68E-05	N/A	7.0000E+00	N/A	No	No	No
Carbon Tetrachloride	56235	3.89E-05	3.37E-06	3.89E-05	3.37E-05	6.6667E-03	2.4000E-02	1.9000E+00	No	No	No
Carbonyl Sulfide	463581	1.46E-05	1.27E-06	1.46E-05	1.27E-05	N/A	N/A	N/A	No	No	No
Chlorobenzene	108907	2.84E-05	2.46E-06	2.84E-05	2.46E-05	N/A	7.0000E-01	N/A	No	No	No
Chlorodifluoromethane	75456	5.56E-04	4.81E-05	5.56E-04	4.81E-04	N/A	N/A	N/A	No	No	No
Chloroethane	75003	1.67E-04	1.45E-05	1.67E-04	1.45E-04	N/A	1.0000E+02	N/A	No	No	No
Chloroform	67663	3.02E-05	2.61E-06	3.02E-05	2.61E-05	4.3478E-03	3.5000E-01	N/A	No	No	No
Chloromethane	74873	2.88E-05	2.50E-06	2.88E-05	2.50E-05	N/A	N/A	N/A	No	No	No

Human Health Risk Assessment for the TOX

Cancer and Noncancer Chronic Modeled Concentration	8.66E-02	ug/m3 / lb/hr Total Hap Emission Rate
Noncancer Acute Modeled Concentration	8.66E-01	ug/m3 / lb/hr Total Hap Emission Rate

Stack Parameters (Exhaust Stack)

Stack Height (ft)	Stack Diameter (in)	Stack Temp (F)	Stack Flow Rate (acfm)	Total HAP Hourly Emission Rate (lb/hr)
60	96	800	94,665	0.398

HAP Category / Pollutant Name	CAS #	Annual Fraction of all HAPS	Calculated Annual HAP Concentration (ug/m3)	1 hr Fraction of all HAPS	Calculated 1 hr HAP Concentration (ug/m3)	ARM 17.8.770 Table 1 Cancer Annual (ug/m3)	Table 2 Noncancer Chronic Annual (ug/m3)	Table 2 Noncancer Acute Annual (ug/m3)	Exceed ARM 17.8.770 Table 1?	Exceed ARM 17.8.770 Table 2 Chronic?	Exceed ARM 17.8.770 Table 2 Acute?
Chromium	18540299	4.12E-05	3.57E-06	4.12E-05	3.57E-05	8.3333E-06	2.0000E-05	N/A	No	No	No
Chrysene	218019	5.29E-08	4.58E-09	5.29E-08	4.58E-08	N/A	N/A	N/A	No	No	No
cis-1,3-Dichloropropene	10061015	2.80E-05	2.43E-06	2.80E-05	2.43E-05	N/A	N/A	N/A	No	No	No
Cobalt	7440484	2.47E-06	2.14E-07	2.47E-06	2.14E-06	N/A	N/A	N/A	No	No	No
Dibenzo(a,h)anthracene	53703	3.53E-08	3.06E-09	3.53E-08	3.06E-08	5.8824E-05	N/A	N/A	No	No	No
Dichlorodifluoromethane	75718	6.23E-04	5.40E-05	6.23E-04	5.40E-04	N/A	N/A	N/A	No	No	No
Dichlorofluoromethane	75434	3.50E-04	3.03E-05	3.50E-04	3.03E-04	N/A	N/A	N/A	No	No	No
Dichloromethane	75092	6.20E-04	5.37E-05	6.20E-04	5.37E-04	2.1277E-01	3.0000E+01	3.5000E+01	No	No	No
Dimethyl Sulfide	75183	8.14E-04	7.05E-05	8.14E-04	7.05E-04	N/A	N/A	N/A	No	No	No
Ethanol	64175	2.84E-02	2.46E-03	2.84E-02	2.46E-02	N/A	N/A	N/A	No	No	No
Ethyl Mercaptan	75081	3.15E-05	2.73E-06	3.15E-05	2.73E-05	N/A	N/A	N/A	No	No	No
Ethylbenzene	100414	2.85E-03	2.47E-04	2.85E-03	2.47E-03	N/A	1.0000E+01	N/A	No	No	No
Ethylene Dibromide	106934	4.75E-05	4.11E-06	4.75E-05	4.11E-05	4.5455E-04	4.6000E-02	N/A	No	No	No
Fluoranthene	206440	8.82E-08	7.64E-09	8.82E-08	7.64E-08	N/A	N/A	N/A	No	No	No
Fluorene	86737	8.23E-08	7.13E-09	8.23E-08	7.13E-08	N/A	N/A	N/A	No	No	No
Formaldehyde	50000	2.21E-03	1.91E-04	2.21E-03	1.91E-03	7.6923E-03	3.6000E-02	3.7000E+00	No	No	No
Hexachlorobutadiene	87683	6.59E-05	5.71E-06	6.59E-05	5.71E-05	4.5455E-03	N/A	N/A	No	No	No
Hexane	110543	5.51E-02	4.77E-03	5.51E-02	4.77E-02	N/A	2.0000E+00	N/A	No	No	No
Hydrogen Chloride	7647010	7.56E-01	6.54E-02	7.56E-01	6.54E-01	N/A	2.0000E-01	3.0000E+01	No	No	No
Hydrogen Fluoride	7664393	1.12E-01	9.71E-03	1.12E-01	9.71E-02	N/A	5.9000E-02	5.8000E+00	No	No	No
Hydrogen Sulfide	7783064	2.83E-03	2.45E-04	2.83E-03	2.45E-03	N/A	N/A	N/A	No	No	No
Indeno(1,2,3-cd)pyrene	193395	5.29E-08	4.58E-09	5.29E-08	4.58E-08	5.8824E-05	N/A	N/A	No	No	No
Lead	7439921	1.47E-05	1.27E-06	1.47E-05	1.27E-05	N/A	1.5000E-02	N/A	No	No	No
Manganese	7439965	1.12E-05	9.68E-07	1.12E-05	9.68E-06	N/A	5.0000E-04	N/A	No	No	No
Mercury	7439976	1.15E-05	9.96E-07	1.15E-05	9.96E-06	N/A	3.0000E-03	3.0000E-01	No	No	No
Methanol	67561	1.67E-03	1.44E-04	1.67E-03	1.44E-03	N/A	6.2000E+00	N/A	No	No	No
Methyl Isobutyl Ketone	108101	5.23E-04	4.53E-05	5.23E-04	4.53E-04	N/A	N/A	N/A	No	No	No
Methyl Mercaptan	74931	3.04E-04	2.63E-05	3.04E-04	2.63E-04	N/A	N/A	N/A	No	No	No
Methyl Tert Butyl Ether	1634044	2.23E-05	1.93E-06	2.23E-05	1.93E-05	N/A	3.0000E+01	N/A	No	No	No
Naphthalene	91203	1.79E-05	1.55E-06	1.79E-05	1.55E-05	N/A	1.4000E-01	N/A	No	No	No
Nickel	7440020	6.18E-05	5.35E-06	6.18E-05	5.35E-05	3.8462E-04	2.4000E-03	1.0000E-02	No	No	No
Phenanthrene	85018	5.00E-07	4.33E-08	5.00E-07	4.33E-07	N/A	N/A	N/A	No	No	No
Pyrene	129000	1.47E-07	1.27E-08	1.47E-07	1.27E-07	N/A	N/A	N/A	No	No	No
Selenium	7782492	7.06E-07	6.11E-08	7.06E-07	6.11E-07	N/A	5.0000E-03	2.0000E-02	No	No	No
Styrene	100425	4.38E-04	3.79E-05	4.38E-04	3.79E-04	N/A	1.0000E+01	N/A	No	No	No
t-1,2-Dichloroethene	156605	5.49E-05	4.75E-06	5.49E-05	4.75E-05	N/A	N/A	N/A	No	No	No
t-1,3-Dichloropropene	10061026	2.80E-05	2.43E-06	2.80E-05	2.43E-05	N/A	N/A	N/A	No	No	No
Tetrachloroethene	127184	7.35E-04	6.36E-05	7.35E-04	6.36E-04	1.6949E-02	3.5000E-01	6.8000E+01	No	No	No
Toluene	108883	5.42E-03	4.70E-04	5.42E-03	4.70E-03	N/A	4.0000E+00	N/A	No	No	No
Trichloroethene	79016	3.01E-04	2.61E-05	3.01E-04	2.61E-04	5.0000E-02	6.4000E+00	N/A	No	No	No
Vinyl Acetate	108054	4.35E-05	3.77E-06	4.35E-05	3.77E-05	N/A	2.0000E+00	N/A	No	No	No
Vinyl Bromide	593602	2.70E-05	2.34E-06	2.70E-05	2.34E-05	N/A	3.0000E-02	N/A	No	No	No
Vinyl Chloride	75014	3.32E-04	2.87E-05	3.32E-04	2.87E-04	1.2821E-03	N/A	N/A	No	No	No
Xylenes	1330207	9.03E-03	7.82E-04	9.03E-03	7.82E-03	N/A	3.0000E+00	4.4000E+01	No	No	No

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.

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)

The proposed project would take place on private land. DEQ has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Montana Clean Air Act. Therefore, DEQ's approval of MAQP #5286-02 would not have private property-taking or damaging implications.

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

AUGUST 27, 2025

Air Quality Permitting Services Section
Air Quality Bureau
Air, Energy and Mining Division
Montana Department of Environmental Quality

PROJECT/SITE NAME: Missoula RNG Facility

APPLICANT/COMPANY NAME: Lightning Renewables, LLC

Montana Air Quality Permit #5286-02

LOCATION: The facility location is 3737 Coal Mine Road, Missoula, MT 59802

Township: 13N Range: 19W Section: 5

COUNTY: Missoula

PROPERTY OWNERSHIP: FEDERAL STATE PRIVATE ✕

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OVERVIEW OF PROPOSED ACTION

Authorizing Action

Pursuant to 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 Montana environment. The Proposed Action is a state action that may have an impact on the Montana environment; therefore, the Montana Department of Environmental Quality (DEQ) must prepare an environmental review. This EA will examine the proposed action and alternatives to the proposed action and disclose potential and proximate 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.

Description of DEQ Regulatory Oversight

DEQ implements the Clean Air Act of Montana, overseeing the development of sources of regulated pollutants and associated facilities. DEQ has authority to analyze proposed emitting units subject to rule established in ARM 17.8.743.

Proposed Action

Lightning Renewable has applied for a Montana Air Quality Permit (MAQP) modification under the Clean Air Act of Montana, § 75-2-101, et. *seq*, requesting to revise the facility's design by decreasing the maximum landfill gas (LFG) throughput capacity from the currently permitted 3,200 dry standard cubic feet per minute (dscfm) to 1,400 dscfm. This design change also involves replacing the thermal recuperative oxidizer (TRO) with a direct-fired thermal oxidizer (TO) and removing the back-up flare from the design. The project would be located on private/public land, in Missoula 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.

Table 1. Summary of Proposed Action

General Overview	This action is to decrease LFG throughput capacity from 3,200 dscfm to 1,400 dscfm and replace a previously proposed thermal recuperative oxidizer (TRO) with a direct-fired thermal oxidizer (TO) and eliminate a waste gas flare from the facility design.
Duration & Hours of Operation	***Construction:*** Construction or commencement would start within three years of issuance of the final air quality permit. ***Operation:*** Until the permit is either revoked at the request of the permittee or DEQ has determined the need for revocation/
Estimated Disturbance	The project requires the construction of a pad to support the proposed equipment. The disturbance is within a parcel currently owned by Allied Waste. The disturbance area is considered minimal and is on an existing landfill.
Construction Equipment	Cranes, delivery trucks, various other types of smaller equipment
Personnel Onsite	***Construction:*** Various number of installation personnel depending on which piece of equipment is being installed. ***Operation:*** 2-5 employees when fully operational

Location and Analysis Area	***Location:*** The facilities location is LAT: 46.908852°N, LONG: -114.018977 °W. Section:5 Township: 13N Range: 13W. 3737 Coal Mine Road, Missoula, Montana 59802 ***Analysis Area:*** 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.

Table 2. The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.

Air Quality	The applicant proposes to modify their air quality permit to reduce facility LFG throughput, install a TO instead of a TRO, and eliminate the need for a waste gas flare.
Water Quality	This permitting action would not affect water quality. Lightning Renewables is required to comply with the applicable local, county, state and federal requirements pertaining to water quality.
Erosion Control and Sediment Transport	This permitting action would not affect erosion control and sediment transport. Lightning Renewables is required to comply with the applicable local, county, state and federal requirements pertaining to erosion control and sediment transport.
Solid Waste	This permitting action would not affect solid waste in the area. Lightning Renewables is required to comply with the applicable local, county, state and federal requirements pertaining to solid waste.
Cultural Resources	This permitting action would not affect cultural resources. Lightning Renewables is required to comply with the applicable local, county, state and federal requirements pertaining to cultural resources.
Hazardous Substances	This permitting action would not contribute to any hazardous substances. Lightning Renewables is required to comply with the applicable local, county, state and federal requirements pertaining to hazardous substances.
Reclamation	This permitting action would not require any reclamation.

Table 3. Cumulative Impacts

Past Actions	Past permitting actions at Lightning Renewables include only the initial Montana Air Quality Permit proposing to install and operate a natural gas collection system for the purpose of collecting, refining, and injecting landfill gas from an existing landfill into an existing natural gas transmission pipeline.
Present Actions	Lightning Renewables is requesting to revise the facility's design to decrease the maximum capacity from 3,200 dry standard cubic feet per minute (dscfm) to 1,400 dscfm. This design change also involves replacing the thermal recuperative oxidizer (TRO) with a direct-fired thermal oxidizer (TO) and removing the back-up flare from the design

Related Future Actions	DEQ is not currently aware of any future projects from Lightning Renewables. Any future projects would be subject to a new permit application.

Purpose, Need, and Benefits

DEQ's purpose in conducting this environmental review is to act upon Lightning Renewable's application for a MAQP modification to decrease throughput capacity from 3,200 dscfm to 1,400 dscfm and replace a proposed thermal recuperative oxidizer with a direct-fired thermal oxidizer and eliminated a waste gas flare. DEQ's action on the permit application is governed by § 75-2-201, et seq., Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) 17.8.740, et seq.

The applicant's purpose and need, as expressed to DEQ in seeking this action, is to change the facility's design by decreasing the maximum LFG throughput capacity from 3,200 dscfm to 1,400 dscfm. This design change also involves replacing the thermal recuperative oxidizer TRO with a direct-fired TO and remove the back-up flare from the facility design.

Figure 1. General Location of the Proposed Project

Other Governmental Agencies and Programs with Jurisdiction

The proposed action would be located on private land owned by Allied Waste. All applicable local, state, and federal rules must be adhered to, which may include other local, state, federal, or tribal agency jurisdiction. Other governmental agencies which may have overlapped, or additional jurisdiction include but may not be limited to: Missoula County, OSHA (worker safety), DEQ Air Quality Bureau and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights) and MDT (road access).

EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

The impact analysis will identify and evaluate the proximate direct and secondary impacts TO THE PHYSICAL ENVIRONMENT AND 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 Montana's environment that may be stimulated, 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 in this analysis. When the analysis discloses environmental impacts, these are proximate impacts pursuant to 75-1-201(1)(b)(iv)(A), MCA.

Cumulative impacts are the collective impacts on Montana's environment within the borders of Montana of 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 actions 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 (ARM 17.4.603(7)). The project identified in Table 1 was analyzed as part of the cumulative impacts assessment for each resource subject to review, pursuant to MEPA (75-1-101, et. *seq*).

The duration of the proposed action is quantified as follows:

- **Construction Impacts (short-term):** These are impacts to the environment that would occur during the construction period, including the specific range of time.

- **Operation Impacts (long-term)**: These are impacts to the environment during the operational period of the proposed action, including the anticipated range of operational 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

This section includes the following resource areas, as required in ARM 17.4.609: Geology; Soil Quality, Stability, and Moisture

Affected Environment

The site is located on a downward slope at an elevation of approximately 3412 ft about sea level. The Clark fork River is approximately 1.5 miles southeast at its closest point. The climatology is humid continental climate with cold and moderately snowy winters with an average rainfall of 27.3 inches per year. The project will take place on privately owned land that is already developed for use as a municipal solid waste landfill. Construction activities would involve vehicle travel, some grading, well boring and casing, and possible entrenching work to bury natural gas transport pipelines. Well boring and casing would be primarily done in the actual landfill through putrescible material and would not extend beyond the landfill.

The geology of the site is part of the McNamara Formation: Dense green and red siltite and argillite in mud cracked couplets containing diagnostic chert beds and rip-up clasts. Thickness as much as 1,650 m (5,413 ft). Bonner Formation: Pink, cross-bedded, feldspathic, medium- to coarse grained quartzite. Thickness as much as 580 m (1,903 ft). Mount Shields Formation: Upper part: red quartzite, siltite, and argillite in mud-cracked couples and couplets with abundant salt casts. Lower part: light gray, flat-laminated, feldspathic, fine-grained quartzite. Thickness as much as 2,000 m (6,562 ft).

Access to the site is already established by existing roadways. A 30-foot by 50-foot area is already established for installation of the TO. As the landfill grows, new wells would need to be bored and cased, and transmission lines installed.

Direct Impacts

Proposed Action: Any impacts from the proposed project would be negligible long-term, and consistent with previously permitted impacts. This action replaces the existing permitted pollution control technology and eliminates the need for construction of a waste gas flare on-site. The action would have a smaller footprint than the initially permitted operation; therefore, while ground disturbance would occur, it would occur within an existing industrial site and would be less extensive than the previously permitted operation.

Secondary Impacts

Proposed Action: No secondary impacts to geology, stability and moisture would be expected because this action replaces the existing permitted pollution control technology and eliminates the need for construction of a waste gas flare on-site. Once constructed, no additional land disturbance would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: Minor cumulative impact to geology, stability and moisture would be expected because of this permitting action. Because the initially proposed operation has not been constructed, only impacts from the proposed changes to the design would be realized. Further, because the facility would be located on an existing industrial site (i.e., landfill), any impacts would be consistent with existing conditions.

2. Water Quality, Quantity, And Distribution

This section includes the following resource areas, as required in ARM 17.4.609: Water Quality, Quantity and Distribution

Affected Environment

The Lightning Renewables facility is located approximately 1.9 miles from the Clark Fork River. Discharges would not be released to ground or surface water. No fragile or unique water resources or values are present.

Once the gas is collected from the landfill, it is sent through an electrically driven mechanical chiller along with a tube and shell heat exchanger where a propylene glycol mixture is used to reduce the inlet temperature to "knock-out" condensate prior to the refining process. The condensate is then collected and stored onsite in collection tanks. The condensate is analyzed for waste characterization, if the sample analysis shows that the condensate is non-hazardous, it is returned to the landfills existing leachate collection system. If the analysis shows that the condensate is hazardous, it is transported off-site to an appropriate disposal facility.

Direct Impacts

No direct impacts to water quality, quantity and distribution would be expected because of the proposed action. The proposed project does not use water for operations and no water resources (potable, lake, pond, stream, river) are located on site. Further, all condensate collected during the refining process would either be treated on-site and processed via the landfill leachate collection system or sent to an appropriate disposal facility.

Secondary Impacts

Proposed Action: During operations, no water will be discharged to ground or surface water because the proposed action. The proposed project would not be expected to cause or contribute to a violation of the applicable or secondary NAAQS see permit analysis for more detailed information regarding air quality impact. Secondary NAAQS provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Therefore, no secondary impacts to water quality would be expected because of the proposed action. No water resources would be required for proposed action's normal operations. No secondary impacts to water quality, quantity and distribution would be expected from this action.

Cumulative Impacts

No major cumulative impacts to water quality, quantity, and distribution are anticipated from this permitting action. Lightning Renewables has not submitted any other permit applications that DEQ is aware of. Further, DEQ is unaware of any related actions under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures.

3. Air Quality

This section includes the following resource areas, as required in ARM 17.4.609: Air Quality

Affected Environment

The U.S. Environmental Protection Agency (EPA) designated Missoula, Montana as a moderate nonattainment area for the 24-hour NAAQS for particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}) upon enactment of the federal Clean Air Act Amendments of 1990 (56 FR 56694, November 6, 1991).

The nonattainment classification was based on violations of the 24-hour standard that occurred throughout the 1980s. The EPA fully approved Montana's moderate PM_{10} control plan as a State Implementation Plan (SIP) revision for the Missoula PM_{10} nonattainment area in 1995 (60 FR 45051). There has been no measured violation of the PM_{10} standard since 1989.

As a result of the 1977 amendments to the Clean Air Act (CAA), Missoula was designated nonattainment for carbon monoxide (CO) by the U.S. Environmental Protection Agency (EPA) in the Federal Register (FR) notice (43 FR 9010) on March 3, 1978. The CO NAAQS is 9 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year. Missoula's historic violations of the CO NAAQS were attributed primarily to motor vehicle emissions and residential wood combustion. The community took several steps to reduce the ambient levels of CO, including reconfiguring traffic intersections to relieve congestion and implementing rules to limit emissions from residential wood combustion and outdoor burning. Missoula continued to violate the NAAQS until the early 1990s.

Following promulgation of the Clean Air Act Amendments of 1990, EPA classified Missoula as a moderate nonattainment area for CO (56 FR 56694) based on a design value of 9.7 for 1987 through 1989. This designation required Missoula to develop a new base year inventory for 1990 and establish an oxygenated fuel program by November 1992. In June 1992, Missoula incorporated an oxygenated fuels program into the Missoula City-County Air Pollution Control Program. It was approved by the Montana Board of Environmental Review (BER) in September 1992 and implemented that November. On November 6, 1992, the Governor of Montana submitted the oxygenated fuels program to EPA for approval. Since implementing the oxygenated fuels program, Missoula has not violated the CO NAAQS.

There have been several SIP updates since Missoula was first declared nonattainment for CO. The EPA approved the Missoula CO nonattainment area plan on January 16, 1986 (51 FR 2397). Subsequent revisions were approved on November 8, 1994 (59 FR 55585) regarding the oxygenated gasoline program in Missoula; December 13, 1994 (59 FR 64133) regarding CO contingency measures; December 6, 1999 (64 FR 68034) regarding an update to the SIP narrative; and November 15, 2001 (66 FR 57391) regarding revisions to the Missoula Air Pollution Control Program that included extensive renumbering, reorganization and rule revisions.

In 2005, the Missoula City-County Health Department developed a redesignation request and maintenance plan for CO with guidance based on the 1990 amendments to the CAA and a September 4, 1992, EPA memo from John Calgani to the EPA Regional Air Directors. The Governor of Montana submitted the redesignation request to EPA on May 27, 2005, and EPA approved it in an FR notice on August 17, 2007 (72 FR 46158). The redesignation request addressed the five criteria required by Section 107(d)(3)(E) of the CAA, as follows:

The 2005 Missoula CO Redesignation Request included a full maintenance plan as required by the CAA for moderate nonattainment areas. However, CO levels in Missoula have dropped precipitously since the area was classified as a "moderate" nonattainment area. Between 2006 and 2011 (the most recent 5 years of CO data), the maximum CO 8-hour concentration was 4.1 ppm – well below the NAAQS.

The Missoula CO maintenance area includes the following (Range and Township) sections: R19W T14N – sections: 29 and 32; R19W T13N – sections: 2, 5, 7, 8, 11, 14 through 24, and 26 through 34; R19W T12N – sections: 4 through 7; R20W T13N – sections: 23 through 26, 35 and 36.

Missoula County maintains jurisdiction of the maintenance areas for PM_{10} and CO through their SIP approved air quality program. Montana DEQ maintains jurisdiction over major sources and those sources taking limits to avoid major status. Both DEQ and Missoula County have shared jurisdiction over issues involving Lightning Renewables. The CO and PM_{10} emissions associated with the proposed action will not trigger any violations of the current Missoula County maintenance plan.

Direct Impacts

Installation of the proposed equipment will refine the collected gas and inject it into the high-pressure pipeline instead of routing it to a flare. The result of the scrubbing and refining the gas will cause a decrease in CO and PM10 emissions from the landfill. Gas that is not capable of being refined and injected into the pipeline would be sent to the TO for destruction. The collocated landfill site currently has an operating flare that will become obsolete following installation and operation of the TO. Because emissions from the existing landfill flare would be similar than that of the proposed TO, any resulting impacts to air quality would be consistent with current conditions.

A detailed emission inventory is included in Section IV of the permit. Regulated emissions from Lightning Renewables include CO, PM_{Tot}, PM_{10}, $PM_{2.5}$, NO_X, SO_2 and VOC. Lightning Renewables will also release hazardous air pollutants (HAPs) but remains a minor source of HAPs.

Secondary Impacts

In the event of a complete failure of Lightning Renewables to collect and treat landfill gases, the system design will divert to the current landfill flare operated by Allied Waste until such time as Lightning Renewables can restart and safely begin collecting and refining waste gas. Negligible and consistent impacts to air quality would be expected in the event of equipment malfunction.

Cumulative Impacts

Cumulative impacts to air quality from the operation of the Lightning Renewables facility are to be restricted by an MAQP and therefore should have minor air quality impacts. Minor impacts are anticipated from this permitting action due to the elimination of the waste gas flare and the reduction in LFG throughput.

4. Vegetation Cover, Quantity, and Quality

This section includes the following resource areas, as required in ARM 17.4.609: Vegetation Cover, Quantity and Quality

Affected Environment

No fragile or unique resources or resources of statewide or societal importance, are present. The area around the Lightning Renewables facility is owned by Allied Waste, and is industrial in nature, with little to no vegetation. DEQ conducted research using the Montana Natural Heritage Program (MTNHP) website and ran the query titled "Environmental Summary Report" dated July 15, 2025, which identified the following plant Potential Species of Concern (SOC) located in or near the affected facility: Panic Grass, Pointed Broom Sedge, Pale-yellow, Jewel-weed, Columbia Water-meal, Crawe's Sedge, Small Yellow Lady's-slipper, Beaked Spikerush, Coville's Rush, Rydberg's Parsley, Dwarf woolly-heads, Fleshy Stitchwort, Flatleaf Bladderwort, Linearleaf Moonwort, and Linear-leaf Fleabane.

The proposed action would be located within the existing footprint of Allied Waste and a building site has already been cleared for construction, as allowed under the initial permit action.

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 directly within the affected area.

The affected area constitutes an existing industrial site; therefore, no unique or important plant species or areas are present.

As the landfill continues to grow, new wells will need to be bored into the landfill body. These wells are small in diameter and will not present a large impact on vegetative cover that may be present on the landfill.

Direct Impacts

Because the proposed action would be located within the Allied Waste facility property boundary, minor long-term impacts to vegetation cover are anticipated, as this permitting action is not considered first time disturbance and some vegetation will be lost with the addition of a concrete pad to install the TO and associated equipment. As this land is leased from Allied Waste, the property is located within the Allied footprint, therefore that would not be considered first time disturbance for the entire property.

Secondary Impacts

Minor, long-term secondary impacts to vegetation cover, quantity, and quality are expected because any new land disturbance created because of the proposed project would be minimal and would occur on an existing industrial site.

Cumulative Impacts

Minor cumulative impacts to vegetation cover, quantity, and quality are expected because of the proposed action as it will require minor land disturbance and thus may reduce a small amount of vegetation cover. However, because the proposed action would occur within an existing industrial site any be minor and consistent with existing impacts.

5. Terrestrial, Avian, and Aquatic Life and Habitats

This section includes the following resource areas, as required in ARM 17.4.609: Terrestrial and Aquatic Life and Habitats; Unique, Endangered, Fragile, or Limited Environmental Resources

Affected Environment

As described earlier in Section 4., Vegetation Cover, Quantity, and Quality, the affected area is represented by agricultural and industrial operations. DEQ conducted research using the MTNHP website and ran the query titled "Environmental Summary Report" dated July 15, 2025, which identified the following species of concern (SOC): Yellow-billed Cuckoo, Monarch, Western Skink, American White Pelican, Long-billed Curlew, Canada Lynx, Little Brown Myotis, Long-eared Myotis, Long-legged Myotis, Silver-haired Bat, Black-backed Woodpecker, Trumpeter Swan, Northern Alligator Lizard, Lyrate Mountainsnail, Snapping Turtle, Fringed Myotis, Townsend's Big-eared Bat, Clark's Nutcracker, A Caddisfly, Western Pearlshell, Brewer's Sparrow, Harlequin Duck, Wolverine, Bull Trout, Westslope Cutthroat Trout, Evening Grosbeak, Suckley's Cuckoo Bumble Bee, Great Blue Heron, Northern Hoary Bat, Grizzly Bear, Cassin's Finch, Pacific Wren, Pileated Woodpecker, Worn Stygobromid, and Varied Thrush.

The polygon area analyzed using the MTNHP website produces an area inherently larger than the specific disturbance area, so some species identified by the MTNHP report may not necessarily be present within the affected area. Further, because the proposed action would occur within the footprint of the existing Allied Waste facility, and the affected area is industrial in nature, the identified Species of Concern would not be expected to locate within or use the affected area for all or part of their life cycle.

No unique or important bird areas are present on the Allied Waste property.

Direct Impacts

Potential impacts to terrestrial, avian and aquatic life and habitats because of the proposed project would be negligible and consistent with existing impacts due to the long-term industrial nature of the site. This is not considered first time disturbance on the property. Therefore, any direct impacts will be long-term and negligible.

Secondary Impacts

Because the proposed action would occur within the existing footprint of the Allied Waste facility on land leased by Lightning Renewables and because the facility is industrial by nature, no secondary impacts to terrestrial, avian and aquatic life and habitats would be stimulated or induced by the direct impacts analyzed above as all actions are occurring within property boundaries and this is not considered first time disturbance by Allied Waste or Lightning Renewables.

Cumulative 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. This is not considered first time disturbance on the property. Therefore, any cumulative impacts will be long-term and negligible.

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

This section includes the following resource areas, as required in ARM 17.4.609: Unique, Endangered, Fragile, or Limited Environmental Resources.

Affected Environment

As described in Section 5 above, DEQ conducted a search using the MTNHP webpage. The search used a polygon that overlapped the site and produced the list of species of concern identified in Section 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. This project is located approximately 0.5 miles from an area that is designated by the Sage Grouse Habitat Conservation Program as "Exempt Community Boundaries."

Direct Impacts

Among the SOC identified by the MTNHP, these species would not be expected to be displaced by the proposed action as the land where the permitting action would occur is leased by Lightning Renewable and owned by Allied Waste and has been part of an existing industrial facility for years. Therefore, any potential direct impacts would be short-term and negligible.

Secondary Impacts

The proposed action would have no secondary impacts to the identified species of concern because the permit conditions are protective of human and animal health and welfare, and the affected area is currently used for industrial operations and would not change the effect to existing habitats that may be present in the affected area.

Cumulative Impacts

The proposed action would have no cumulative impacts to endangered species because such species would not be expected to locate within the affected area and the permit conditions are protective of human and animal health and all lands involved in the proposed action are currently used for industrial operations and would not change the effect to the environment outside of the original construction of the facility.

7. Historical and Archaeological Sites

This section includes the following resource areas, as required in ARM 17.4.609: Historical and Archaeological Sites

Affected Environment

The Montana State Historical Preservation Office (SHPO) was contacted to conduct a file search for historical and archaeological sites that may be located within Section 5, Township 13 North, Range 19 West, which includes the area affected by the proposed action. SHPO provided a letter dated July 16, 2025, stating there have been a few previously recoded sites within the designated search location, but none located within the proposed project area. The following sites were listed:

Site Type 1	Site Type 2	NR Status
Historic Pipeline	NA	Ineligible
Historic Irrigation System	NA	Ineligible
Precontact Rock Cairn (s)	NA	Unresolved

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 conducted by SHPO identified recorded cultural sites/resources in the search area, none of the identified sites are located directly within the proposed project area for the Lightning Renewables facility. Therefore, no impacts to the identified sites would be expected because of the proposed project. Further, because the proposed project would occur within the footprint of the existing Allied Waste operations, the proposed project would not be expected to impact any new, previously unrecorded cultural resources that may exist in the affected area. Therefore, no direct impacts to historical and archaeological sites would be expected because of the proposed project.

Secondary Impacts

No secondary impacts to historical and archaeological sites are anticipated because the proposed action is located on land currently and historically used for industrial purposes (i.e., landfill) and none of the identified cultural sites are located directly within the affected location.

Cumulative Impacts

No cumulative impacts to historical and archaeological sites are anticipated because the proposed action is located on land currently in industrial use and no sites are located within the proposed permitting location.

8. Aesthetics

This section includes the following resource areas, as required in ARM 17.4.609: Aesthetics

Affected Environment

The proposed action would occur on private land owned by Allied Waste and leased by Lightning Renewables near Missoula, MT. This area is mainly surrounded by the existing landfill and is on the North side of Interstate 90. The closest structures are located with in the Allied Waste Facility.

Direct Impacts

Minor impacts are expected with the installation of the proposed equipment. The addition of the thermal oxidizer and backup flare would be visible to the surrounding areas. The area is located at a higher elevation with regards to the city of Missoula and would be mostly concealed from eyesight. The sound attenuation for the TO at the nearest commercial facility is approximately 19.4 decibels located approximately 0.6 miles to the southwest and 24.4

decibels at the nearest residential site approximately 0.4 miles to the east. The area between the proposed facility and the nearest residential property is separated by a ridge with the residential structure located at a lower elevation on the west side of the ridge, creating a natural sound barrier.

Secondary Impacts

There would be moderate secondary impacts on the aesthetics due to the addition of the TO stack and associated buildings. Further the affected area is industrial in nature, as it is land owned by Allied Waste. Therefore, any impacts to aesthetics would be long-term, minor, and consistent with existing industrial operations in the affected area.

Cumulative Impacts

Long-term impacts will occur with the addition of the proposed project. Minor and long-term cumulative impacts are anticipated from the addition of the facility with associated stacks and new buildings. This is not considered first time disturbance at the property, as it has previously been disturbed by landfill activities.

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

This section includes the following resource areas, as required in ARM 17.4.609: Demands on Environmental Resources of Land, Water, Air, or Energy

Affected Environment

The site is located on land owned by Allied Waste and leased by Lightning Renewables. See Sections 2, 3, and 4 of this EA for details regarding land, water, and air impacts.

Direct Impacts

There would be a minor increase in demand for the environmental resources of land, air, and energy for these actions. Land usage would be converted for the addition of the Lightning Renewables project. However, as the land is owned by Allied Waste, this property already requires these resources. Now that it is leased by Lightning Renewable, it will still require the same resources. There will be minor impacts on air and energy as the emissions increased with the addition of the Lightning Renewable therefore the energy usage also increased with these actions. Any direct impacts would be long-term and minor, and consistent with the area.

Secondary Impacts

Minor secondary impacts to demands on land, water, air, and energy are anticipated as a result of this permitting action due to this site already being an industrial in nature.

Cumulative Impacts

Minor cumulative impacts to demands on land, water, air, and energy are anticipated as a result of this permitting action. Minor cumulative impacts are anticipated with the addition of the TO, in terms of land, air, and energy, as this causes an increase demand on all of those areas.

10. Impacts on Other Environmental Resources

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Other Environmental Resources

Affected Environment

The site is currently a part of the Allied Waste facility and is being leased by Lightning Renewables.

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

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Human Health and Safety

Affected Environment

The applicant would be required to adhere to all applicable state and federal safety laws. The Occupational Safety and Health Administration (OSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be in immediate proximity to the project during construction or operations.

Direct Impacts

Impacts to human health and safety are anticipated to be short-term and minor as a result of this project.

Secondary Impacts

Any impacts to human health and safety because of the proposed project would be negligible and long term because the proposed project would comply with all applicable requirements of the air quality permit, which is protective of the primary and secondary NAAQS. Primary NAAQS are protective of human health, including any potential impacts to sensitive populations.

Cumulative Impacts

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

12. Industrial, Commercial, and Agricultural Activities and Production

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Human Health and Safety

Affected Environment

This site is used for industrial purposes as it is privately owned by Allied Waste and being leased by Lightning Renewables.

Direct Impacts

This permitting action would not change the purpose of the property as it is currently and would continue to be used as a landfill. The proposed project would add the ability for LFG produced by the landfill to be refined and sold in lieu of flaring the gas. Therefore, any impacts on industrial, commercial, and agricultural activities and production in the are would be long-term and minor due to the addition of the new structure and TO, which would refine the landfill gas from the landfill to send into an existing natural gas pipeline.

Secondary Impacts

Any impacts to industrial, commercial, and agricultural activities and production would be long-term and minor because the proposed permitting action would add equipment for the refining and processing of LFG for sale to existing industrial landfill operations.

Cumulative Impacts

Any cumulative impacts would be long-term and minor as the affected area is currently used for industrial purposes but will see minor, long-term increases in industrial activity from the addition of the structure and TO. The proposed action would allow for the collection, processing and sale of LFG in lieu of flaring, which would be consistent with existing industrial nature of the affected area.

13. Quantity and Distribution of Employment

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Quantity and Distribution of Employment

Affected Environment

There will be 2-5 permanent jobs at Lightning renewables. All will be full-time jobs. During construction associated with the permitting action multiple temporary construction personnel will be on-site to complete the construction. Once construction is completed, all temporary construction personnel will no longer be on-site.

Direct Impacts

The proposed action would be expected to have short- and long-term, minor impacts on the overall distribution of employment in the affected area. Construction of the facility would require a temporary, minor influx of construction laborers. Ongoing operation of the affected facility would be expected to employ 2-5 individuals. However, individuals located in nearby cities and towns would be expected to fulfill these jobs; therefore, it would not be expected to cause an increase or decrease in any nearby populations.

Secondary Impacts

Minor, long-term secondary impact to the quality and distribution of employment is expected because of the proposed action as there will be 2-5 new employees necessary to operate the proposed facility operations.

Cumulative Impacts

There would be long-term, minor cumulative impacts on employment because 2-5 employees would be added as a result of this permitting action. Once construction is completed, construction personnel would no longer be required.

14. Local and State Tax Base and Tax Revenue

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Local and State Tax Base and Tax Revenue

Affected Environment

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.

Direct Impacts

The proposed action would be expected to have long-term and major, beneficial impacts on the local and state tax base and tax revenues due to the addition of the Lightning Renewables facility and associated collection, processing and sale of refined LFG.

Secondary Impacts

Lightning Renewables and/or Allied Waste would be responsible for accommodation of any increased taxes associated with the operation of the modified facility. Minor secondary impacts to local and state tax base and tax revenues are anticipated as a result of the proposed permitting action.

Cumulative Impacts

Major, beneficial impacts to local and state tax base and tax revenues would be expected because of construction and operation of a new facility. Lightning Renewables and/or Allied Waste would continue to be responsible for accommodation of any increased taxes associated with the operation of the facility. Local, state, and federal governments would be responsible for appraising the property, setting tax rates, and collecting taxes from the affected companies, employees, or landowners benefiting from this operation. Therefore, any cumulative impacts would be beneficial, major and consistent with existing impacts in the affected area.

15. Demand for Government Services

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Demands for Government Services

Affected Environment

The area surrounding Lighting Renewable's site consists of industrial activities and residential properties.

Direct Impacts

The air quality permit has been prepared by state government employees as part of their day-to-day, regular responsibilities. Therefore, any direct impacts to demands for government services would be short-term, consistent with existing impacts, and negligible. Compliance review and assistance oversight by DEQ AQB and Missoula Public Health would be conducted in concert with other area activity when in the vicinity of the proposed project. Therefore, any direct impacts would be long-term and negligible to minor, mainly through increased regulatory oversight by DEQ.

Secondary Impacts

Initial and ongoing compliance inspections of facility operations would be accomplished by state government employees as part of their typical, regular duties and required to ensure the facility is operating within the limits and conditions listed in the air quality permit. Therefore, any secondary impacts to demands for government services would be long-term, consistent with existing impacts, and negligible.

Cumulative Impacts

The air quality permit has been prepared by state government employees as part of their day-to-day, regular responsibilities. Following construction of the proposed facility, initial and ongoing compliance inspections of facility operations would be accomplished by state government employees as part of their typical, regular duties and required to ensure the facility is operating within the limits and conditions listed in the air quality permit. Therefore, any cumulative impacts to demands for government services would be short- and long-term, consistent with existing impacts, and negligible. 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

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Locally Adopted Environmental Plans and Goals

Affected Environment

Lightning Renewables is located in Missoula County. Missoula County has been redesignated to attainment for the PM_{10} and CO NAAQS under Limited Maintenance Plans. PM_{10} and CO emissions associated with the proposed action would not be expected to cause or contribute to a future violation of the subject NAAQS and would comply with the local SIP-approved control plans for CO and PM_{10}.

Direct Impacts

The proposed action would have no impact on locally adopted environmental plans and goals. The proposed TO would refine LFG from the Allied Waste landfill that would be otherwise be flared, effectively resulting in a reduction of emissions due to the renewable natural gas being produced and the TO pollution control efficiency being greater than that of the existing flare.

Secondary Impacts

In the event of a complete failure of Lightning Renewables to collect and treat LFG, the system design will divert to the current flare operated by Allied Waste until such time as Lightning Renewables can restart and safely begin collecting and refining waste gas. The proposed

project would not be expected to cause or contribute to a future violation of the CO or PM_{10} NAAQS.

Cumulative Impacts

No cumulative impacts would be expected to due to the reduction of the flared landfill gas from Allied Waste.

17. Access to and Quality of Recreational and Wilderness Activities

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Access to and Quality of Recreation and Wilderness Activities

Affected Environment

The Lightning Renewables facility is surrounded on three (3) sides by undeveloped, single owner private land and the City of Missoula on the 4th side with Interstate 90 as a barrier between the two. There is not access to any recreation and wilderness activities from the established industrial site.

Direct Impacts

There would be no impacts to the access to wilderness activities as none are in the vicinity of the proposed action. Therefore, no direct impacts to access to and quality of wilderness activities would be expected because of the proposed project. The affected area is industrial by nature and no recreational opportunities exist in the area affected by the proposed project. Therefore, no direct impacts would be expected. Recreation in the area would not be impacted by this permitting action because the affected area is currently and has historically been used for industrial purposes, which would not change because of the proposed action.

Secondary Impacts

No wilderness areas are located near or accessed through this land owned by Allied Waste and leased by Lightning Renewables. Therefore, no secondary impacts to access to and quality of wilderness activities would be expected because of the proposed project. 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 Allied Waste landfill property.

Cumulative Impacts

No wilderness areas are located near or accessed through this land owned by Allied Waste and leased by Lightning Renewables. Therefore, no cumulative impacts to access to and quality of wilderness activities would be expected because of the proposed project. 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 Allied Waste landfill property.

18. Density and Distribution of Population and Housing

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Density and Distribution of Population and Housing

Affected Environment

The city of Missoula, MT has approximately 78,204 residents (U.S. Census Bureau).

Direct Impacts

Construction of the proposed project would require a short-term, temporary influx of construction laborers to the affected area; however, any temporary workers would be expected to use existing housing resources to accommodate the construction phase of the proposed project. Lightning Renewables will employ 2-5 full time employees for ongoing operation of the facility and these employees would be expected to come from nearby cities and towns. Therefore, the proposed project would not be expected to result in an increase in the local population and need for housing. Any impacts to density and distribution of population and housing would be negligible and long-term because of the proposed action.

Secondary Impacts

Lightning Renewables would employ new staff to operate the facility, but the proposed project would not be expected to result in an actual increase in the local population and need for housing. Negligible, long-term secondary impacts to density and distribution of population and housing would be expected because of the proposed action, as it is a small industrial operation with 2-5 full time employees, likely sourced from the Missoula area.

Cumulative Impacts

Lightning Renewables would employ new staff to operate the facility, but the proposed project would not be expected to result in an actual increase in the local population and need for housing. Negligible cumulative impacts to density and distribution of population and housing are anticipated as a result of the proposed permitting action as it is a small industrial operation with 2-5 full time employees, likely sourced from the Missoula area.

19. Social Structures and Mores

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Social Structures and Mores

Affected Environment

DEQ is not aware of any Native American cultural concerns that would be affected by the proposed action. Based on the information provided by the Applicant, it is not anticipated that this project would disrupt traditional lifestyles or communities. The existing nature of the area affected by the proposed project is industrial.

Direct Impacts

The proposed action is located within an existing industrial site; therefore, no changes to or disruption of native or traditional lifestyles would be expected because of the proposed project. Therefore, no impacts to local customs and behaviors would be expected because of the proposed project.

Secondary Impacts

No secondary impacts to social structures and mores would be expected because of the proposed action due to the existing industrial nature of the facility.

Cumulative Impacts

No cumulative impacts to social structures and mores would be expected because of the proposed action. Any cumulative impacts would be consistent with the existing industrial nature of the affected area.

20. Cultural Uniqueness and Diversity

This section includes the following resource areas, as required in ARM 17.4.609: Impacts to Cultural Uniqueness and Diversity

Affected Environment

Based on the required information provided by Lightning Renewables, DEQ is not aware of any unique qualities of the area that would be affected by the proposed action located within an existing industrial area.

Direct Impacts

Construction of the proposed project would result in a short-term, temporary influx of construction laborers. Further, Lightning Renewables would employ 2-5 new staff for ongoing operation of the facility, but the proposed project would not be expected to result in an increase or decrease in the local population. Therefore, no direct impacts to the existing cultural uniqueness and diversity of the affected population would be expected because of the proposed project.

Secondary Impacts

The existing nature of the area affected by the proposed project is industrial. Further, the addition of new staff under the proposed action would not be expected to result in an increase or decrease in the local population. Therefore, no secondary impacts to the existing cultural uniqueness and diversity of the affected population are anticipated as a result of the proposed action.

Cumulative Impacts

The existing nature of the area affected by the proposed project is industrial. Further, the addition of new staff under the proposed action and thus the proposed project would not be expected to result in an increase or decrease in the local population. Therefore, no cumulative impacts to the existing cultural uniqueness and diversity of the affected population are anticipated as a result of the proposed action.

21. Private Property Impacts

The proposed project would take place on private land owned by the applicant. DEQ's approval of MAQP #5286-02 would affect the applicant's real property. DEQ has determined, however, that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Clean Air Act. Therefore, DEQ's approval of MAQP #5286-02 would not have private property-taking or damaging implications.

22. Other Appropriate Social and Economic Circumstances

This section includes the following resource areas, as required in ARM 17.4.609: Impacts to Other Appropriate Social and Economic Circumstances

Affected Environment

The proposed action would modify plans to install alternative pollution control at the Lightning Renewables facility.

Direct Impacts

DEQ is unaware of any other appropriate short-term social and economic circumstances in the affected area that may be directly affected by the proposed project. Therefore, no further direct impacts would be anticipated.

Secondary Impacts

DEQ is unaware of any other appropriate short-term social and economic circumstances in the affected area that may be directly affected by the proposed project. Therefore, no further secondary impacts would be anticipated.

Cumulative Impacts

DEQ is unaware of any other appropriate short-term social and economic circumstances in the affected area that may be directly affected by the proposed project. Therefore, no further cumulative impacts would be anticipated.

23. Greenhouse Gas Assessment

Issuance of this permit would authorize Lightning Renewables to be permitted to operate a thermal oxidizer.

The analysis area for this resource is limited to the activities regulated by the issuance of MAQP #5286-02, which is the construction and operation of a thermal oxidizer. The amount of natural gas and waste gas 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 range of emissions using a factor of 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_2), methane (CH_4), nitrous oxide (N_2O), 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 natural gas at the site would release GHGs primarily consisting of carbon dioxide (CO_2), nitrous oxide (N_2O) and much smaller concentrations of un-combusted fuel components including methane (CH_4) 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_2), nitrous oxide (N_2O), and methane (CH_4) and reports the total as CO_2 equivalent (CO_2e) in metric tons CO_2e. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory. DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the organization (EPA Center for Corporate Climate Leadership). DEQ's review of Scope 1 emissions is consistent with the agency not evaluating downstream effects of other types of impacts.

This review does not include an assessment of GHG impacts in quantitative economic terms, otherwise known as evaluating the social cost of carbon. DEQ instead calculates potential GHG emissions and provides a narrative description of GHG impacts. This approach is consistent with Montana Supreme Court caselaw and the agency's discussion of other impacts in this EA. *See Belk v. Mont. DEQ*, 2022 MT 38, ¶ 29.

Direct Impacts

Operation of thermal oxidizer is fueled by natural gas throughout the life of the proposed project. Therefore, the proposed project would produce exhaust fumes containing GHGs. GHG emissions from the Lightning Renewables operation phase were quantified using 40 CFR Part 98, GHG Reporting emission factors. The construction related emission sources were calculated using emission factors developed from EPA's 2025 MOVES5 program located in the region of the Lightning Renewables.

Applicant estimates that approximately 53,752 metric tons of CO2e would be produced per year from the thermal oxidizer. Applicant estimates the construction phase of the proposed project will produce approximately 1,605 metric tons of CO2e.

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).

Per EPA's website "Climate Change Indicators", the lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane remains in the atmosphere for approximately 12 years. Nitrous oxide has the potential to remain in the atmosphere for about 109 years (EPA, Climate Change Indictors). The impacts of climate change throughout the Southeastern part of Montana include changes in flooding and drought, rising temperatures, and 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_2e. The SIT consists of eleven Excel based modules with pre-populated data that can be

used with 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 GHG emissions by sector and GHG 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 the estimated total annual greenhouse gas inventory by year. The SIT data from EPA is currently only updated through the year 2021, as it takes several years to validate and make new data available within revised modules. DEQ maintains a copy of the output results of the SIT.

DEQ has determined that the use of the default data provides a reasonable representation of the GHG inventory for all of the state sectors, and an estimated total annual GHG inventory by year. At present, Montana accounts for 47.77 million metric tons of CO_2e based on the EPA SIT for the year 2021. This project may contribute up to 53,766 metric tons per year of CO2e. The estimated emission of 53,766 metric tons of CO2e from this project would contribute 0.112% of Montana’s annual CO2e emissions.

The renewable natural gas production process utilizes landfill gas, which inherently contains a high methane content. However, the LFG is sourced from an existing landfill, meaning that there is no additional methane generation. Instead, this process is repurposing the methane for beneficial use that would otherwise be emitted into the atmosphere. Furthermore, one-third of the CO_2 emissions from the process are considered biogenic and are naturally occurring from the LFG.

Description of Alternatives

No Action Alternative: In addition to the proposed action, DEQ must also considered a "no action" alternative. The "no action" alternative would deny the approval of 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.

If the applicant demonstrates compliance with all applicable rules and regulations required for approval, the “no action” alternative would not be appropriate.

Other Reasonable Alternative(s):
In order to meet the project objective to permit this facility with addition of the TO, has no other way to accomplish this action outside of not having this equipment on-site, which would then result in the facility not needing a MAQP.

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 (*this section can just name the material used, as it will all be appropriately cited under References*):

MAQP #5284-02 Application, EPA State Inventory Tool, the EPA GHG Calculator Tool, the Montana Natural Heritage Program Website, the Montana Cadastral Mapping Program, the State of Montana GIS Mapping Program, Missoula County Public Health website, and the State Historical Preservation Office.

Public Involvement

The Public comment period for this permit action will be from July 24, 2025, through August 25, 2025.

Significance of Potential Impacts and Need for Further Analysis

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 the department 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 minor impacts to air quality and GHG emissions in Missoula 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 not result in first time disturbance, as the land is owned by the Allied Waste facility and has been previously disturbed. 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 on land owned by Allied Waste that is 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 by Allied Waste. The public is not allowed on the Lightning Renewable site that is leased from Allied Waste. 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

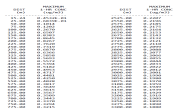
Environmental Assessment and Significance Determination Prepared By:

Conor Fox
Air Quality Engineering Scientist

Environmental Assessment Reviewed By:

Eric Merchant, Air Quality Permitting Services Section Supervisor

Approved By:



July 23, 2025

Eric Merchant, Supervisor
Air Quality Permitting Services Section
Air Quality Bureau
Air, Energy and Mining Division
Department of Environmental Quality

Date

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