

July 8, 2022

Greg Hildebrand, VP – Environmental Permitting
GMA Garnet USA, LLC.
P.O. Box 161
Alder, MT 59710

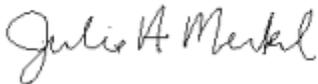
Sent via email:

RE: Decision for MAQP #2888-05

Dear Mr. Hildebrand:

Montana Air Quality Permit (MAQP) #2888-05 is deemed final as of July 2, 2022, by DEQ. This permit is for a Garnet Sand Production Mine. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,

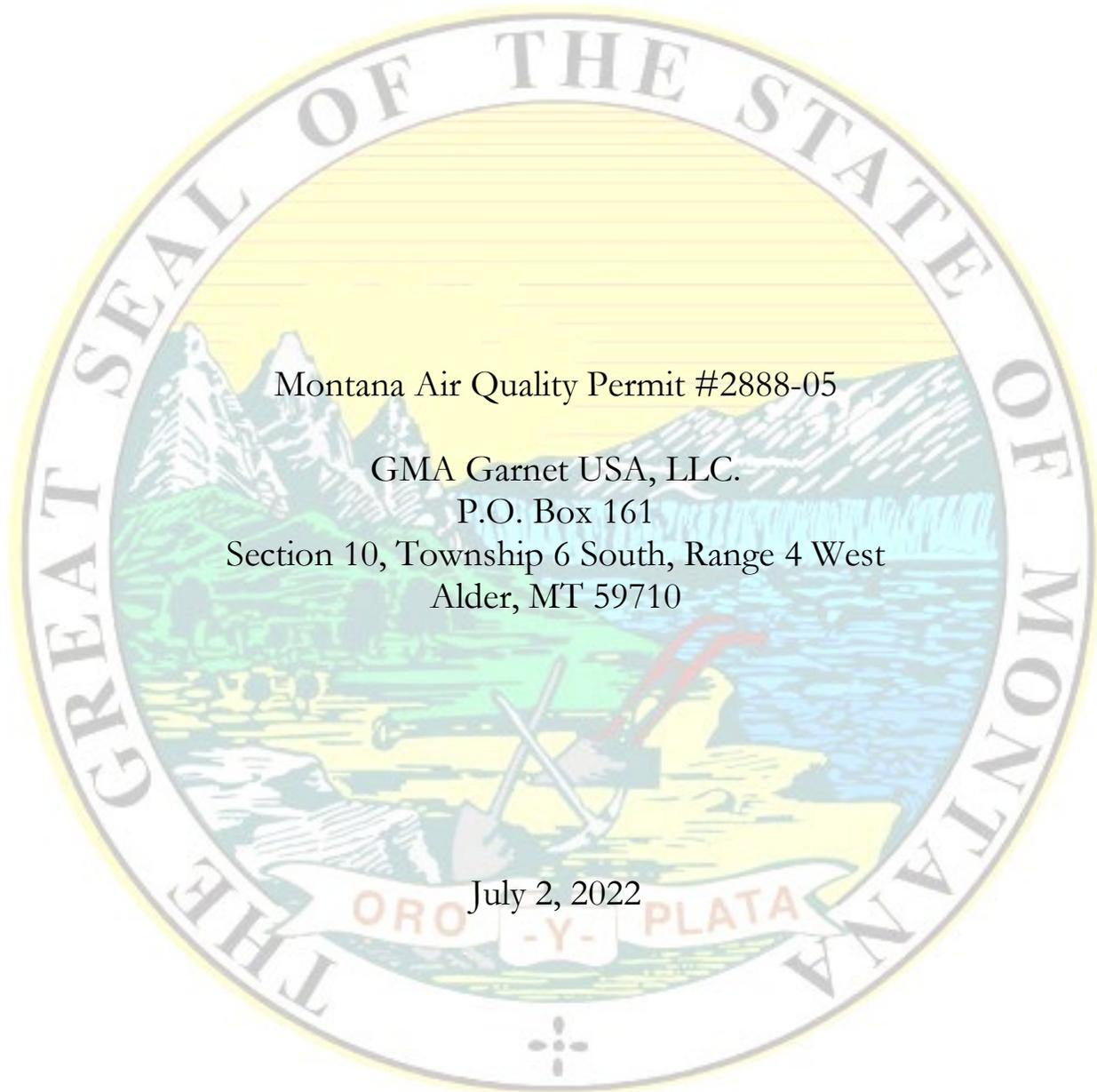


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Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau



Montana Air Quality Permit #2888-05

GMA Garnet USA, LLC.
P.O. Box 161
Section 10, Township 6 South, Range 4 West
Alder, MT 59710

July 2, 2022

MONTANA AIR QUALITY PERMIT

Issued to: Garnet USA, LLC
P.O. Box 161
Alder, MT 59710

MAQP: #2888-05
Application Complete: 4/28/2022
Preliminary Determination Issued: 5/26/2022
Department Decision Issued: 6/16/2022
Permit Final: 7/2/2022

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Garnet USA, LLC (Garnet) 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

Garnet owns and operates a garnet sand production facility, including drilling, blasting, excavation (placer mining) of garnet-bearing sand and gravel, separation, screening, and concentration of the garnet sand and product drying. The mine site is located one-half mile east of the city of Alder in Section 10, Township 6 South, Range 4 West, Madison County, Montana.

B. Current Permit Action

On March 29, 2022, the Department of Environmental Quality (DEQ) received an application from Garnet to add multiple emitting units to the MAQP. The application also includes the addition of previously accepted De Minimis additions and the removal of permitted equipment that is no longer on site.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Process fugitive emissions shall be limited to 10% opacity (ARM 17.8.749).
2. Stack emissions shall be limited to 7% opacity from the product handling baghouse (ARM 17.8.749).
3. Particulate emissions shall be limited to 0.05 grams per dry standard cubic meter (g/dscm) from the product handling baghouse. An initial demonstration of compliance (stack testing) will not be required, but DEQ may require testing at a later time based on visual observation (ARM 17.8.105 and 17.8.749).
4. Particulate emissions shall be limited to 0.01 grains per dry standard cubic foot (gr/dscf) from the propane dryer baghouse. (ARM 17.8.752).

5. Maximum annual garnet sand production shall be limited to 100,000 metric tons (110,000 US Tons) per rolling 12-month time period. The maximum amount of raw material handled shall be limited to 2,000,000 metric tons (2,204,600 US Tons) per rolling 12-month time period (ARM 17.8.749).
6. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 Code of federal Regulation (CFR) Part 60, Subpart OOO).
 - For Crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
 - For crushers that commenced construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 15% opacity
7. All visible emissions from any other NSPS-affected equipment, other than a crusher (such as screens or conveyors), shall not exhibit opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340, and 40 CFR 60, Subpart OOO).
 - For equipment that commences constructing, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - For equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity
8. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
9. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.6, II.A.7, and II.A.8 (ARM 17.8.752).
10. Garnet shall not operate more than one (1) crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 1,000 tons per hour (TPH) (ARM 17.8.749)
11. Garnet shall not operate more than two (2) screens at any given time and the combined maximum rated design capacity of the screens shall not exceed 800 TPH (ARM 17.8.749).
12. Garnet shall not operate or have on site more than five (5) diesel-fired generator/engine sets at any given time. The combined maximum rated design capacity of the diesel-fired generator/engine(s) shall not exceed 325 hp.

13. The total combined hours for the diesel-fired generator/engine set(s) shall not exceed 6,000 hours of operation during any rolling 12-month time period (ARM 17.8.749).
14. Garnet shall use proper blasting techniques, proper explosive selection, optimized application of explosives, and the utilization of best operating practices to mitigate gaseous and particulate emissions from explosives detonation and blasting (ARM 17.8.752).
15. Garnet shall use a drill platform shroud enclosure for the drilling of overburden and garnet producing rock and soil (ARM 17.8.752).
16. Garnet shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions or airborne particulate matter (ARM 17.8.308).
17. Garnet shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.16 (ARM 17.8.749).
18. Garnet shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 Code of Federal Regulations (CFR) 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
19. Garnet 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 Engines* and, 40 CFR 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocation Internal Combustion Engines*, for any applicable diesel or gasoline engine (ARM 17.8.340, 40 CFR 60, Subpart IIII; ARM 17.8.342; and 40 CFR 63, Subpart ZZZZ)

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup, and Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR Part 60.675 must be performed on all NSPS-affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.6 and II.A.7 (ARM 17.8.340, 40 CFR 60, Subpart A and Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

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

C. Operational Reporting Requirements

1. Garnet 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 for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations. Garnet shall submit the annual garnet sand production and raw material handled annually to DEQ by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

2. Garnet shall notify DEQ of any construction or improvement project conducted pursuant to ARM 17.8.745 that would include the ***addition of a new emission unit***, change in the control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to DEQ, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an anticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
3. Garnet shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by Garnet 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 (ARM 17.8-745).
4. Garnet shall document, by month, the hours of operation for each of the diesel generator set(s). By the 25th day of each month, Garnet shall total the hours of operation for each diesel/gasoline engine/generator for the previous month.

The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.13. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749)

5. All records compiled in accordance with this permit must be maintained by Garnet 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 (ARM 17.8.749).
6. Garnet shall document, by month, the amount of raw material handled and garnet sand produced. By the 25th day of each month, Garnet shall total the raw material handled and garnet sand production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.5 (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Garnet shall allow the Department’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 Garnet fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Garnet of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department 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 the Department’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 the Department’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, the Department’s decision on the application is final 16 days after the Department’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 the Department at the location of the source.

- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Garnet 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 (MAQP) Analysis
Garnet USA, LLC.
MAQP #2888-05

I. Introduction/Process Description

A. Permitted Equipment

Garnet USA, LLC. (Garnet) operates the following equipment at their home pit, located approximately one-half mile east of the town of Alder, in Section 10, Township 6 South, Range 4 West, in Madison County, Montana.

Permitted Equipment

- One (1) 10 MMBTU/hour propane-fired rotary dryer
- Three (3) baghouses
- One (1) Impact crusher
- One (1) Triple deck screen
- Fourteen (14) propane-fired heaters
- One (1) 190 hp gasoline water pump
- One (1) 26 hp diesel-fired light generator
- One (1) 8 hp diesel-fire generator
- One (1) 40 hp diesel-fired light generator
- One (1) 150 hp diesel-fired generator
- One (1) 80 hp diesel-fired air compressor
- One (1) 21 hp diesel-fired heater
- One (1) 20,000-gallon vertical diesel storage tank
- Two (2) 6,000-gallon horizontal diesel storage tanks
- One (1) 0.4 MMBtu propane conveyor belt heater (DM, 2016)
- One (1) 400,000 Btu/hr propane heater (DM, 2021)
- Four (4) Modine Propane Heaters
- One (1) 3 HP gasoline Honda EM4000SX
- One (1) 6 HP gasoline Honda EG5000SX
- One (1) 16 HP Diesel Oman Generator
- One (1) 420,000 Btu diesel heater

Other Equipment

- Two (2) 16.9 Diesel Wacker Neuson Light Plants
- One (1) 20 HP Kohler Engine – Portable Power Washer
- One (1) 8 HP Portable Welder
- One (1) 24.7 HP Pipe Pro Welder

Engines operating as mobile equipment such as mounted in a vehicle, portable wheel-mounted generators, or towable light plants, are regulated as non-road engines subject to federal emissions standards based on size and type. However, mobile engines operated at a single location for more than 12 months lose their non-road designation and are regulated as stationary sources.

Garnet's MAQP includes several of these types of engines, which must continue to comply with applicable federal emissions standards if operated as stationary sources.

B. Facility Description

Garnet USA, LLC. (Garnet) owns and operates a garnet sand production facility, including drilling, blasting, excavation (placer mining) of garnet-bearing sand and gravel, separation, screening, and concentration of the garnet sand and product drying.

The project processes up to two million metric tons per year of garnet bearing sands and gravels from previous placer gold mining tailings. Raw material is mined with a dragline feeding a nearby skid-mounted trommel, screen, and jig. Garnet bearing sands then goes to a stationary concentration plant followed by drying (propane-fired) and bagging.

C. Permit History

Cominco American, Inc. (Cominco American) submitted an air quality permit application on June 7, 1995, for a placer garnet mining operation to be located near Alder.

The application was deemed complete as of June 21, 1995, upon receipt of public notice. **MAQP #2888-00** was issued to Cominco American on August 4, 1995.

The Department of Environmental Quality (DEQ) received a request, dated January 29, 2000, from Cominco American and Montana Oregon Investment Group, LLC (Montana Oregon) to transfer ownership of MAQP #2888-00. Ownership of MAQP #2888-00 was transferred to Montana Oregon and permit rule references and language were updated. **MAQP #2888-01** replaced MAQP #2888-00.

DEQ received a request, dated September 8, 2004, from Montana Oregon and Ruby Valley Garnet, LLC (Ruby Valley) to transfer ownership of MAQP #2888-01 to Ruby Valley. The permit action transferred ownership of MAQP #2888-01 to Ruby Valley. **MAQP #2888-02** replaced MAQP #2888-01.

DEQ received a request on April 6, 2012, from Ruby Valley and Garnet to transfer ownership of MAQP #2888-02 to Garnet. The permit action reflected the transfer of ownership of the facility and updated the permit language and rule references used by DEQ. **MAQP#2888-03** replaced MAQP#2888-02.

On December 30, 2015, DEQ received an application to modify MAQP#2888-03. The modification removed existing equipment and also included the addition of new propane heaters; diesel generator sets, gasoline water pump, removal and replacement of a rotary dryer, and increasing the amount of waste rock processing to yield more garnet bearing material, as well as updated the permit language used by DEQ. **MAQP# 2888-04** replaced MAQP# 2888-03.

D. Current Permit Action

On March 29, 2022, DEQ received an application from Garnet to add multiple emitting units to the MAQP. The equipment includes two heaters, numerous small gas and diesel fired portable generators, pressure washers, and welding units. **MAQP #2888-05** replaces MAQP #2888-04.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Achievable Control Technology/Reasonably Achievable Control Technology (BACT/RACT) determinations, air quality impacts, and environmental assessments, are 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 locations 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 section 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 emissions 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.*, MCA.

Garnet 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 Testing Protocol and Procedures Manual is available from DEQ upon request.

4. ARM 17.8.110 Malfunctions. (2) DEQ must be notified promptly by phone 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 four (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 which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

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

1. ARM 17.8.204 Ambient Air Monitoring.
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide (SO₂)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O₃)
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.223 Ambient Air Quality Standards for Particulate Matter with an Aerodynamic Diameter of Ten Microns or Less (PM₁₀)

Garnet 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 an 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 section requires an opacity limitation of 20% for all fugitive emissions sources and that reasonable precautions are taken to control emissions of airborne particulate matter. (2) Under this rule, Garnet 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 section 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 section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This section 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 section requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.340 Standard of Performance for New Stationary Sources. This section incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS).

Garnet 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 OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a processing plant to be subject to this subpart, the facility must meet the definition of an affected facility and the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Garnet operates equipment subject to this subpart because it meets the definition of an affected facility and has been constructed or modified after August 31, 1983.
 - c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE after July 11, 2005, are subject to this subpart. Garnet operates CI ICE that may be subject to this subpart because they meet the definition of an affected facility if operated as a stationary source.
 - d. 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE). Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2008, for engines with a maximum engine power less than 500 HP, are subject to this regulation. Garnet operates SI ICE equipment subject to this subpart when operated as a stationary source because it has a power rating greater than 19 KW (25 hp) and is gasoline fueled.
7. ARM 17.8.341 Emission Standard for Hazardous Air Pollutants. This section incorporates, by reference, 40 CFR 61, National Emission Standards for Hazardous Air Pollutant (NESHAP) for Source Categories. This facility does not meet the applicability definition within 40 CFR 61.
 8. ARM 17.8.342 Emission Standard for Hazardous Air Pollutant for Source Categories. This section incorporates, by reference, 40 CFR 63, NESHAP for Source Categories. This facility meets the applicability definition of the following subpart(s) of 40 CFR 63:

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.
- b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. Garnet operates RICE equipment subject to this subpart when operated as a stationary source.

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 section 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. Garnet 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, as 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 which 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 tpy of any pollutant. Garnet has a PTE greater than 25 tpy of PM and PM₁₀; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was submitted by Garnet 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. Garnet submitted an affidavit of publication of public notice in a newspaper of general circulation in the city of Butte, in Silver Bow County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by DEQ must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by DEQ at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Garnet 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.

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 PSD source since this facility is not a listed source and the site's potential to emit is below 250 tpy 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 tpy of any pollutant;
 - b. PTE > 10 tpy of any single Hazardous Air Pollutant (HAP), PTE > 25 tpy of any combination of HAPs, or lesser quantity as DEQ may establish by rule; or
 - c. PTE > 70 tpy of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2888-05 for Garnet, the following conclusions were made.
 - a. The facility's PTE is less than 100 tpy for any pollutant.
 - b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy of combined HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to current NSPS (Subpart OOO, and potentially Subpart IIII and Subpart JJJJ).
 - e. This facility is potentially subject to current NESHAP (Subpart ZZZZ).
 - f. This source is not a Title IV affected source.
 - g. This facility is not a solid waste combustion unit.
 - h. This source is not an EPA designated Title V source.

Based on these facts, DEQ determined that Garnet is a minor source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or modified source. Garnet 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.

Garnet referred to a BACT analysis that was submitted in a previous application addressing some available emission control methods for operations associated with the current permit action. The following control options have been reviewed by DEQ in order to make the following BACT determination.

A. Gas/Diesel Engines

Any new diesel-fired engine would likely be required to comply with the federal engine emission limitations including, for example, EPA Tier emission standards for non-road engines (40 CFR Part 89 or 1039), New Source Performance Standard emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII) and stationary spark ignition engines (40 CFR 60, Subpart JJJJ), or National Emission Standards for Hazardous Air Pollutant Sources for Reciprocation Internal Combustion Engines (40 CFR 63, Subpart ZZZZ).

Based on the above analysis and information, DEQ agrees with Garnet that compliance with applicable federal standards and proper operation and maintenance of the engines constitutes BACT for the engine.

B. Propane-fired Heaters

Add on controls for reducing propane heater NO_x, CO, SO₂, and VOC emissions consist of Selective Catalytic Reduction, Catalytic Oxidization, and good combustion practices. Good combustion practices consist of limiting emissions through the use of low sulfur, commercial grade propane. Very little PM emissions are generated due to the combustion of propane. Due to the relatively small amount of maximum potential emissions of these pollutants, as well as the short amount of time the propane heaters are predicted to operate during the year, add-on controls would require an excessive expense for relatively little environmental benefit.

Based on the above analysis and information, DEQ concurs with Garnet that the use of good combustion practices constitutes BACT for control of gaseous emissions from operating the Propane Comfort Heaters.

IV. Emission Inventory

Source ID	Source Name	Existing or New	PM	PM ₁₀	PM _{2.5}	NOx	CO	SOx	VOC	Single HAP	Total HAP
			(tons/year)								
	Aboveground Mine Sources		11.12	4.34	1.93	0.93	3.66	0.11			
1	Drilling	New	10.14	3.35	1.87						
2A	Blasting - particulate emissions	New	0.98	0.98	0.06						
2B	Blasting - gaseous emissions	New				0.93	3.66	0.11			
	Fugitive Sources - Non-Process		106.00	32.01	4.28						
3	Haul Road Travel (updating)	Existing	75.20	20.73	2.07						
4	Pit Piles (Updating)	Existing	8.84	4.18	0.63						
5	Unwashed Plant Piles (updating)	Existing	13.26	6.27	0.95						
6	Washed Plant Piles (updating)	Existing	8.69	0.82	0.62						
	Fugitive Sources - Process		19.22	7.08	1.19						
7	Truck Loading	New	0.37	0.26	0.03						
8	Cone Crusher	Existing	1.05	0.47	0.09						
9	Jaw Crusher	Existing	3.15	1.42	0.26						
10	Impact Crusher	Existing	1.05	0.47	0.09						
11	Tripple Deck Screen	Existing	5.78	1.94	0.13						
12	Integrated Vibrating Cone Screen	Existing	1.93	0.65	0.04						
13	Material Transfer (updating)	Existing	5.52	1.81	0.51						
14	Truck UnLoading (updating)	Existing	0.37	0.04	0.03						
	Non-Fugitive Sources - Process		2.90	2.90	2.90	42.84	14.13	2.34	15.09	0.00	0.04
15	10 MMBTU/hr Propane Dryer - Dry Plant	New	0.23	0.23	0.23	4.26	2.46	1.31E-04	0.33		
16	Propane Heaters (Facility Wide Comfort Heat) ¹	New	0.11	0.11	0.11	2.06	1.19	6.34E-05	0.00		
17	190 HP Ford Water Pump Generator	New	0.41	0.41	0.41	6.27	3.97	0.34	12.31	1.57E-03	1.50E-02
18	26 HP Isuzu Generator - Light Plant	New	0.17	0.17	0.17	2.42	0.52	0.16	0.20	2.72E-04	3.00E-03
19	8 HP Generac Generator - EPA Tier 4	New	0.05	0.05	0.05	0.74	0.16	0.05	0.06	2.72E-04	1.58E-03
20	40 HP Caterpillar Generator - Light Plant- EPA Tier 4	New	0.27	0.27	0.27	3.74	0.81	0.25	0.30	3.32E-04	4.12E-03
21	150 HP John Deere Generator -EPA Tier 1	New	0.99	0.99	0.99	13.95	3.01	0.92	1.13	1.24E-03	1.28E-02
22	80 HP Caterpillar Generator - Air Compressor-EPA Tier 1	New	0.53	0.53	0.53	7.44	1.60	0.49	0.60	6.61E-04	7.26E-03
25	21 HP Isuzu Generator - Stationary Heater	Existing	0.14	0.14	0.14	1.95	0.42	0.13	0.16	2.72E-04	5.51E-04
23	Two, 6,000 Gallon Diesel Stoarge Tanks	Existing	Insignificant (VOCs only)								
24	One, 20,000 Gallon Diesel Storage Tank	New	Insignificant (VOCs only)								

Source ID	Source Name	PM	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	Total HAP
18	Propane Heater (400,000 BTU/Hour) Wet Plant Building Comfort Heat	0.01	0.01	0.01	0.25	0.14	0.0000	0.02	
24	<i>Two (2) 16.9 HP Wacker Neuson Light Plant (Kubota Engine Tier 4) - Light Plant</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>4.59</i>	<i>1.34</i>	<i>0.32</i>	<i>1.14</i>	<i>4.84E-03</i>
26	3 HP Gasoline Honda EM4000SX- Powers Pit Diesel Fuel Tank	0.010	0.010	0.010	0.14	0.09	0.01	0.28	3.54E-04
27	6 HP Gasoline Honda EG5000SX- Powers Ground Water Monitoring Pump	0.02	0.02	0.02	0.81	0.29	0.05	0.07	1.64E-03
28	<i>20 HP Kohler Engine - Portable Power Washer</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>2.72</i>	<i>0.18</i>	<i>0.02</i>	<i>0.57</i>	<i>6.90E-04</i>
29	<i>8 HP Portable Welder</i>	<i>0.08</i>	<i>0.08</i>	<i>0.08</i>	<i>1.09</i>	<i>0.07</i>	<i>0.23</i>	<i>0.09</i>	<i>1.87E-03</i>
30	<i>24.7 HP Pipe Pro Welder (Portable-Truck Mounted) Tier 4</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>3.35</i>	<i>0.98</i>	<i>0.22</i>	<i>0.83</i>	<i>3.79E-03</i>
31	16 HP Oman Generator - Powers Pit Drill Rig - Tier 4	0.003	0.003	0.003	2.17	0.6	0.14	0.54	2.79E-03
32	420,000 BTU/hr (20.8 HP) Forced Air Heater	0.20	0.20	0.20	2.82	0.6	0.19	0.23	-
	<i>Totals</i>	<i>0.53</i>	<i>0.53</i>	<i>0.53</i>	<i>17.9</i>	<i>4.3</i>	<i>1.18</i>	<i>3.77</i>	<i>0.02</i>
	Stationary Totals	0.24	0.24	0.24	6.19	1.76	0.39	1.14	0.005

Note: The emissions inventory was provided in MAQP application #2888-05.

V. Existing Air Quality

The location of the Garnet facility is located within an area classified as attainment/unclassifiable for all criteria pollutants for which the operation emits.

VI. Ambient Air Impact Analysis

DEQ determined, based on the potential to emit and the actual operating conditions of the plant, the impacts from this permitting action will be minor. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

VIII. Environmental Assessment

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



Garnet USA, LLC.

**Final Environmental Assessment for the
Department Decision for Montana Air Quality Permit
#2888-05**

Montana Department of Environmental Quality
Air Quality Bureau
Air Permitting Services Section
ENVIRONMENTAL ASSESSMENT

APPLICANT: Garnet USA, LLC.		
SITE NAME:		
PROPOSED PERMIT NUMBER: Montana Air Quality Permit Number 2888-05		
APPLICATION DATE: Initially received on 03/29/2022		
LOCATION: Township 6S, Range 4W, Section 10		COUNTY: Madison
PROPERTY OWNERSHIP:	FEDERAL ___ STATE ___ PRIVATE <u>X</u>	
EA PREPARER:	John P. Proulx – Environmental Scientist 2	
EA Draft Date	EA Final Date	Permit Final Date
May 26, 2022	June 16, 2022	July 2, 2022

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with the proposed action. However, an agency is required to prepare an EA whenever statutory requirements do not allow sufficient time for the agency to prepare an EIS. This document may disclose impacts over which DEQ has no regulatory authority.

COMPLIANCE WITH THE CLEAN AIR ACT OF MONTANA

The state law that regulates air quality permitting in Montana is the Clean Air Act of Montana (§ 75-2-201, et seq., Montana Code Annotated (MCA)). DEQ may not approve a proposed project contained in an application for an air quality permit unless the project complies with the requirements set forth in the Clean Air Act of Montana and the administrative rules adopted thereunder. DEQ's approval of an air quality permit application does not relieve the Garnet USA, LLC. (Garnet) from complying with any other applicable federal, state, or county laws, regulations, or ordinances. Garnet is responsible for obtaining any other permits, licenses, approvals, that are required for any part of the proposed project. DEQ will decide whether to approve the permit in accordance with the requirements of the Clean Air Act of Montana. DEQ may not withhold, deny, or impose conditions on the permit based on the information contained in this Environmental Assessment. § 75-1-201(4), MCA.

SUMMARY OF THE PROPOSED ACTION: Garnet has applied for a Montana air quality permit modification under the Clean Air Act of Montana for the installation of multiple small emitting units. The proposed action would be located in the existing Garnet mine site located in Madison County, Montana. All information included in the EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools.

PURPOSE AND BENEFIT FOR PROPOSED ACTION: DEQ's purpose in conducting this environmental review is to act upon Garnet's air quality permit modification application to authorize the installation of multiple small emitting units. DEQ's action on the permit application is governed by the Clean Air Act of Montana, § 75-2-201, et seq., Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*

The benefits of the proposed action include: Garnet is proposing to add multiple small emitting units that will be used to as heat sources and provide electricity to equipment throughout the mine site.

REGULATORY RESPONSIBILITIES: In accordance with ARM 17.4.609(3)(c), DEQ must list any federal, state, or local authorities that have concurrent or additional jurisdiction or environmental review responsibility for the proposed action and the permits, licenses, and other authorizations required.

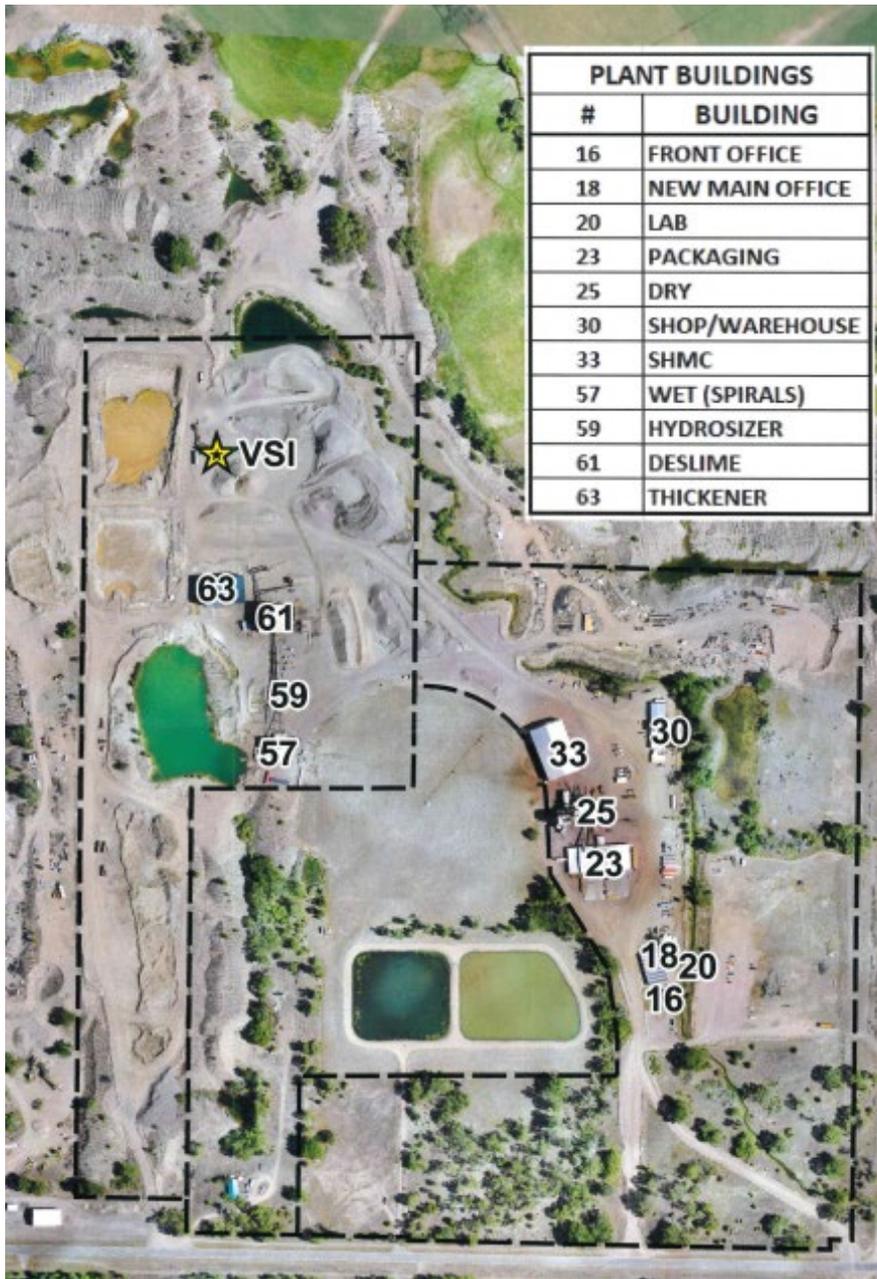
Garnet must conduct its operations according to the terms of its permit. Garnet further agrees to be legally bound by the permit, The Clean Air Act of § 75-2-201, et seq., Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*

No other permit applications have been submitted by Garnet at the time this EA was prepared but construction would require a building permit. Garnet must cooperate fully with, and follow the directives of any federal, state, or local entity that may have authority over Garnet’s operations. These permits, licenses, and other authorizations may include: Montana Planning Department (zoning), OSHA (worker safety), MSHA (mine safety), and DEQ AQB (air quality).

Table 1: Proposed Action Details

Summary of Proposed Action	
General Overview	Garnet’s air quality permit modification application consists of multiple, small emitting units located in Section II The facility would be permitted to operate until Garnet requested permit revocation or until the permit were revoked by DEQ due to gross non-compliance with the permit conditions.
Proposed Action Estimated Disturbance	
Disturbance	No new disturbance is expected outside of normal delivery operations.
Proposed Action	
Duration	Construction: No construction is expected with the proposed permit action Construction Period: n/a Operation Life: Until permit is either revoked at the request of the permittee or DEQ has determined the need for revocation.
Construction Equipment	None
Personnel Onsite	Construction: Various number of installation personnel depending on which piece of equipment is being installed. Operations: Current number of employees.
Location and Analysis Area	Location: Section 10, Township 6S, Range 4W, Madison County, MT 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.
Air Quality	This EA will be attached to the Air Quality Permit which would include all enforceable conditions for operation of the emitting units
Conditions incorporated into the Proposed Action	The conditions developed in the Preliminary Determination of the Montana Air Quality Permit dated May 26, 2022.

Figure 1: Map of general location of the proposed project.



EVALUATION AND SUMMARY OF POTENTIAL IMPACTS TO THE PHYSICAL AND HUMAN ENVIRONMENT IN THE AREA AFFECTED BY THE PROPOSED PROJECT:

The impact analysis will identify and evaluate direct and secondary impacts. Direct impacts are those that occur at the same time and place as the action that triggers the effect. Secondary impacts means “a further impact to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action.” ARM 17.4.603(18). Where impacts are expected to occur, the impacts analysis estimates the duration and intensity of the impact.

The duration of an impact is quantified as follows:

- **Short-term:** Short-term impacts are defined as those impacts that would not last longer than the proposed operation of the site.
- **Long-term:** Long-term impacts are defined as impacts that would remain or occur following shutdown of the proposed facility.

The severity of an impact 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 modify the resource.

1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Direct Impacts:

Proposed Action: No impacts to topography, geology, stability, and moisture would be expected because the proposed project would occur within an already existing facility and would not cause any new disturbances.

Secondary Impacts:

Proposed Action: No secondary impacts to topography, geology, stability, and moisture are anticipated with the proposed action.

2. WATER QUALITY, QUANTITY, AND DISTRIBUTION:

Direct Impacts:

Proposed Action: No impacts to water quality, quantity, and distribution would be expected because the proposed project would occur within an already existing facility no new demands for water resources.

Secondary Impacts:

Proposed Action: No secondary impacts are anticipated with the proposed action.

3. AIR QUALITY:

Direct Impacts:

Proposed Action: Minor impacts to air quality would be expected with the proposed action due to an increase in the facility's potential to emit air pollutants.

Secondary Impacts:

Proposed Action: Negligible impacts could be expected with the proposed action in the event of equipment malfunction.

4. VEGETATION COVER, QUANTITY AND QUALITY:

Direct Impacts:

Proposed Action: No impacts to vegetative cover, quantity, or quality would be expected because the proposed project would occur within an already existing facility and would not cause any new disturbances.

Secondary Impacts:

Proposed Action: No impacts to land disturbance at the site may result in propagation of noxious weeds.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Direct Impacts:

Proposed Action: No primary impacts to terrestrial, avian, and aquatic life and habitats stimulated or induced by the proposed action because the proposed project would occur within an already existing facility and would not cause any new disturbances.

Secondary Impacts:

Proposed Action: No secondary impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above would be anticipated for the proposed action.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Direct Impacts:

Proposed Action: No primary impacts to unique, endangered, fragile, or limited environmental resources that could be stimulated or induced by the direct impacts analyzed above would be expected because the proposed project would occur within an already existing facility and would not cause any new disturbances.

Secondary Impacts:

Proposed Action: No secondary impacts to unique, endangered, fragile, or limited environmental resources that could be stimulated or induced by the direct impacts analyzed above would be expected.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:

Direct Impacts:

Proposed Action: 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, we would recommend that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place. The Garnet facility is less than 50 years old and there is no disturbance or modification to structures over fifty years of age.

Secondary Impacts:

Proposed Action: No secondary impacts to historical and archaeological sites are anticipated with the proposed action.

8. SAGE GROUSE EXECUTIVE ORDER:

The current permit action is not located in the Greater Sage Grouse habitat area.

9. AESTHETICS:

Direct Impacts:

Proposed Action: Negligible primary impacts may be associated with the current permit application due to the installation of new equipment outside of the facility.

Secondary Impacts:

Proposed Action: No secondary impacts to aesthetics and noise are anticipated with the proposed action.

10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Direct Impacts:

Proposed Action: No impacts are expected with the current permit action. The Garnet facility is an existing, developed facility and the current permit action does not disturb any new land or water bodies.

Secondary Impacts:

Proposed Action: No secondary impacts to land, water, air or energy resources are anticipated with the proposed action.

11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:

Direct Impacts:

Proposed Actions: The Garnet facility is an existing, developed facility and the current permit action will not have any impacts on environmental resources outside those already identified in this EA.

Secondary Impacts:

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

12. HUMAN HEALTH AND SAFETY:

Direct Impacts:

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

Secondary Impacts:

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

13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:

Direct Impacts:

Proposed Action: Negligible industrial impacts are anticipated due to construction and installation of new equipment. No impacts to commercial and agricultural activities are anticipated.

Secondary Impacts:

Proposed Action: No secondary impacts to industrial, commercial, water conveyance structures, and agricultural activities and production are anticipated as a result of the proposed action.

14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Direct Impacts:

Proposed Action: No impacts to quantity and distribution of employment are anticipated for the proposed action.

Secondary Impacts:

Proposed Action: Negligible increases in in distribution of employment are anticipated as a result of the proposed action.

15. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Direct Impacts:

Proposed Action: Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, from the companies, employees, or landowners benefitting from this operation.

Secondary Impacts:

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

16. DEMAND FOR GOVERNMENT SERVICES:

Direct Impacts:

Proposed Action: No impacts are anticipated for demand for government services because the permittee is already in possession of a Montana Air Quality Permit and is subject to compliance inspections.

Secondary Impacts:

Proposed Action: No secondary impacts are anticipated with the proposed action.

17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

Direct Impacts:

Proposed Action: No primary impacts to the locally adopted environmental plans and goals are anticipated as a result of the proposed action.

Secondary Impacts:

Proposed Action: No secondary impacts to the locally adopted environmental plans and goals are anticipated as a result of the proposed action.

18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Direct Impacts:

Proposed Action: No primary impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed action.

Secondary Impacts:

Proposed Action: No secondary impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed action.

19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Direct Impacts:

Proposed Action: No primary impacts to density and distribution of population and housing are anticipated as a result of the proposed action.

Secondary Impacts:

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

20. SOCIAL STRUCTURES AND MORES:

Direct Impacts:

Proposed Action: No primary impacts anticipated to social structures and mores are anticipated as a result of the proposed action.

Secondary Impacts:

Proposed Action: No secondary impacts to social structures and mores are anticipated as a result of the proposed action.

21. CULTURAL UNIQUENESS AND DIVERSITY:

Direct Impacts:

Proposed Action: No primary impacts anticipated to cultural uniqueness and diversity are anticipated from the proposed action.

Secondary Impacts:

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

22. PRIVATE PROPERTY IMPACTS:

The proposed action would take place on privately-owned land. The analysis below in response to the Private Property Assessment Act indicates no impact. DEQ does not plan to deny the application or impose conditions that would restrict the regulated person’s use of private property so as to constitute a taking. Further, if the application is complete, DEQ must take action on the permit pursuant to § 75-2-218(2), MCA. Therefore, DEQ does not have discretion to take the action in another way that would have less impact on private property—its action is bound by a statute.

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

YES	NO	
		economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

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

23. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

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

ADDITIONAL ALTERNATIVES CONSIDERED:

No Action Alternative: In addition to the proposed action, DEQ is considering a "no action" alternative. The "no action" alternative would deny the approval of the proposed 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 as required for approval, the "no action" alternative would not be appropriate. Pursuant to, § 75-1-201(4)(a), (MCA) DEQ "may not withhold, deny, or impose conditions on any permit or other authority to act based on" an environmental assessment.

CUMULATIVE IMPACTS:

Cumulative impacts are the collective impacts on the human 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 preimpact statement studies, separate impact statement evaluation, or permit processing procedures. This environmental review analyzes the proposed action submitted by the Garnet.

DEQ considered potential impacts related to this project and potential secondary impacts. Due to the limited activities in the analysis area, cumulative impacts related to this project would be minor and short-term.

PUBLIC INVOLVEMENT:

Scoping for this proposed action consisted of internal efforts to identify substantive issues and/or concerns related to the proposed operation. Internal scoping consisted of internal review of the environmental assessment document by DEQ Air Permitting staff.

Internal efforts also included queries to the following websites/ databases/ personnel:

- Montana State Historic Preservation Office
- Montana Department of Environmental Quality (DEQ)
- Montana Natural Heritage Program

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:

The proposed project would be fully located on privately-owned land. All applicable local, state, and federal rules must be adhered to, which, at some level, may also include other local, state, federal, or tribal agency jurisdiction. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: OSHA (worker safety), MSAH (mine safety), DEQ AQB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT and Madison County (road access).

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

Under ARM 17.4.608, DEQ is required to determine the significance of impacts associated with the proposed action. This determination is the basis for the agency's decision concerning the need to prepare an environmental impact statement and also refers to DEQ's evaluation of individual and cumulative impacts. DEQ is required to consider the following criteria in determining the significance of each impact on the quality of the human environment:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;

“Severity” is analyzed as the density of the potential impact while “extent” is described as the area where the impact is likely to occur. An example could be that a project may propagate ten noxious weeds on a surface area of 1 square foot. In this case, the impact may be a high severity over a low extent. If those ten noxious weeds were located over ten acres there may be a low severity over a larger extent.

“Duration” is analyzed as the time period in which the impact may occur while “frequency” is analyzed as how often the impact may occur. For example, an operation that occurs throughout the night may have impacts associated with lighting that occur every night (frequency) over the course of the one season project (duration).

2. 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;

3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;
6. Any precedent that would be set as a result of an impact of the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts with moderate or major severity may be determined to be not significant if the duration of the impacts is considered to be short-term. As another example, however, moderate or major impacts of short-term duration may be considered to be significant if the quantity and quality of the resource is limited and/or the resource is considered to be unique or fragile. As a final example, moderate or major impacts to a resource may be determined to be not significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

Pursuant to ARM 17.4.607, preparation of an environmental assessment is the appropriate level of environmental review under MEPA if statutory requirements do not allow sufficient time for an agency to prepare an environmental impact statement. An agency determines whether sufficient time is available to prepare an environmental impact statement by comparing statutory requirements that establish when the agency must make its decision on the proposed action with the time required to obtain public review of an environmental impact statement plus a reasonable period to prepare a draft environmental review and, if required, a final environmental impact statement.

SIGNIFICANCE DETERMINATION

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed action would be limited. Garnet proposes to construct and operate the proposed action on private land located in the Section 10, Township 6 South, Range 4 West, Madison County, Montana.

DEQ has not identified any significant impacts associated with the proposed action for any environmental resource. Approving Garnet's Air Quality Application would not set precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If Garnet submits another permit application, DEQ is not committed to approve those applications. DEQ would conduct a new environmental review for any subsequent air quality permit applications sought by Garnet. DEQ would make a decision on Garnet's subsequent application based on the criteria set forth in the Clean Air Act of Montana.

DEQ's issuance of an Air Quality Permit to Garnet for this proposed operation does not set a precedent for DEQ's review of other applications, including the level of environmental review. The level of environmental review decision is made based on a case-specific consideration of the criteria set forth in ARM 17.4.608.

DEQ does not believe that the proposed action has any growth-inducing or growth-inhibiting aspects or that it conflicts 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 state action is not predicted to significantly impact the quality of the human environment. Therefore, at this time, preparation of an environmental assessment is determined to be the appropriate level of environmental review under the Montana Environmental Protection Act.

Environmental Assessment and Significance Determination Prepared By:

<u>John P. Proulx</u>	<u>Environmental Scientist 2</u>
Name	Title

EA Reviewed By:

<u>Ed Warner</u>	<u>Lead Engineer</u>
Name	Title

Responses to Substantive Comments are located in the Permit Analysis Section of the Air Quality Permit.

References

Montana Air Quality Permit Application – 2888-05_2022_03_29_APP

Montana Air Quality Permit – 2888-04