

September 21, 2017

Jeff Claridge
Facility Manager
LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904

Dear Mr. Claridge:

Montana Air Quality Permit #3860-02 is deemed final as of September 21, 2017, by the Department of Environmental Quality (Department). This permit is for a portable non-metallic mineral processing plant. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,



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



Rhonda Payne
Environmental Science Specialist
Air Quality Bureau
(406) 444-5287

JM:RP
Enclosures

Montana Department of Environmental Quality
Air, Energy & Mining Division

Montana Air Quality Permit #3860-02

LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904

September 21, 2017



MONTANA AIR QUALITY PERMIT

Issued To: LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904

MAQP: #3860-02
Application Complete: 6/22/17
Preliminary Determination Issued: 8/1/17
Department's Decision Issued: 9/5/17
Permit Final: 9/21/2017

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to LHC, Inc. (LHC), 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 LHC “home-pit” where the permitted portable facility will initially operate is located approximately 5 kilometers (km) north of Kalispell, MT, in the Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, Flathead County, MT. However, MAQP #3860-02 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department) approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum #3 will apply while operating at any locations in or within 10 km of certain PM₁₀ nonattainment areas. A complete list of permitted equipment is contained in Section I.A of the permit analysis to this permit.

B. Current Permit Action

On June 22, 2017, the Department received an application to modify MAQP #3860-01 to request de minimis-friendly conditions with operational limitations. LHC proposed that up to two generators may be used, not to exceed 1700 horsepower (hp) and operation limits of 3800 hours per year. The Department made the requested change and updated the permit to reflect current language and rule references used by the Department.

Section II: Conditions and Limitations

A. Emission Limitations and Operational Conditions

1. 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 CFR 60, Subpart OOO):

- For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity

- For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity
2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - For equipment that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 10% opacity
 3. 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).
 4. 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.1, II.A.2, and II.A.3 (ARM 17.8.749).
 5. LHC 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).
 6. LHC shall treat all unpaved portions of the haul roads, access roads, parking lots, or 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.5 (ARM 17.8.749).
 7. LHC crushing operations shall be limited to one portable crusher with a maximum material throughput capacity of 450 tons per hour (TPH) (ARM 17.8.749).
 8. LHC screening operations shall be limited to one portable screen with a maximum material throughput capacity of 450 TPH (ARM 17.8.749).
 9. LHC shall operate no more than two diesel-fired generator engines with a combined maximum rated design capacity to not exceed 1,700 hp (ARM 17.8.749).
 10. Operation of the diesel engine(s) driving the generator(s) shall not exceed 3,800 hours each during any rolling 12-month time period (ARM 17.8.1204).
 11. If the permitted equipment is used in conjunction with any other equipment owned or operated by LHC, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

12. LHC shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
13. LHC 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).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all NSPS-affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, General Provisions 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. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing/screening plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. LHC shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be 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 the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. LHC shall notify the Department 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, fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, 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. LHC 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 LHC 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 the Department, and must be submitted to the Department upon request (ARM 17.8.749).
5. LHC shall document, by month, the hours of operation of the diesel engine/generator. By the 25th day of each month, Cascade County shall total the hours of operation for the diesel 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.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. LHC shall annually certify that its emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

Section III: General Conditions

- A. Inspection – LHC 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 Monitoring Systems (CEMS) or Continuous Emissions Rate Monitoring System (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if LHC fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving LHC of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for 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 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 therefore, 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 Department personnel at the location of the permitted source.
- G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by LHC 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 in 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).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. LHC shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
LHC, Inc.
MAQP #3860-02

I. Introduction/Process Description

LHC, Inc. (LHC) owns and operates a portable non-metallic mineral processing plant which will be initially located in the Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, of Flathead County, MT.

A. Permitted Equipment

The permitted equipment includes one crusher with a maximum material throughput capacity of 450 tons per hour (TPH), one screen with a maximum material throughput capacity of 450 TPH, and up to two diesel engine/generator sets with a combined maximum rated design capacity to not exceed 1700 horsepower (hp).

B. Source Description

Typical operations begin by loading the sand and gravel material to be processed into the crusher. From the crusher, materials are sent to the screen for sizing and ultimately conveyed to a product stockpile(s) for use in various construction activities.

LHC's crushing and screening plant will initially be located within the Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, of Flathead County, MT (48.252899, -114.354029).

C. Permit History

On September 6, 2006, the Department of Environmental Quality (Department) issued **MAQP #3860-00** and **Addendum #1** for the operation of a portable crushing/screening plant.

On March 7, 2008, the Department received a request from Bison Engineering on behalf of LHC to modify MAQP #3860-00 to replace the originally permitted generator (maximum design capacity up to 545 kilowatts (kW)) with a larger generator (maximum design capacity of 1,081 hp). LHC also requested the use of federally-enforceable manufacturer-guaranteed emission rates to determine potential emissions from the generator. **MAQP #3860-01** and **Addendum #2** replaced MAQP #3860-00 and Addendum #1.

D. Current Permit Action

On June 22, 2017, the Department received a request to modify MAQP #3860-01 to request de minimis-friendly conditions with operational limitations. LHC proposed that up to two generators may be used, not to exceed 1700 horsepower (hp) and operation limits of 3800 hours per year. The Department made the requested change and updated the permit to reflect current language and rule references used by the Department. **MAQP #3860-02** and **Addendum #3** replaces MAQP #3860-01 and Addendum #2.

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, 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 the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, 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).

LHC 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 the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department 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 four 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:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide;
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide;
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide;
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter; and
5. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀.

LHC 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, LHC 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 or authorize 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 rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
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 section.
6. 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 truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, New Source Performance Standards (NSPS). LHC 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 crushing 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. Based on the information submitted by LHC the portable crushing equipment to be used under MAQP #3860-02 is subject to this subpart as it meets the definition of an affected facility constructed 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 that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. A CI ICE is considered stationary if it remains or will remain at a location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. As the permit is written in a de minimis-friendly manner, the CI ICE equipment to be used by LHC under MAQP #3860-02 are potentially subject to this Subpart depending upon the construction/manufacture date and the location, nature, and duration of operation. Since the CI ICE are intended to be portable, LHC may not be required to comply with the requirements of 40 CFR 60, Subpart IIII. This subpart could become applicable if an CI ICE remains in a location for more than 12 months.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. LHC is potentially a NESHAP-affected facility under 40 CFR Part 63 and is potentially subject to the requirements of the following subparts.
- 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. An area source of HAP emissions is a source that is not a major source. A RICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. As LHC is considered an area source of HAP emissions and operates

RICE equipment, the engines are potentially subject to this subpart depending upon the location, nature, and duration of operation. Since the RICE to be used under MAQP #3860-02 are intended to be portable, LHC may not be required to comply with the requirements of 40 CFR 63, Subpart ZZZZ. However, this subpart would become applicable if LHC constructed and operated a RICE that remains in a location for more than 12 months.

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 the Department. LHC 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 the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; 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. The Department 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 asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. LHC has a PTE greater than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), oxides of nitrogen (NO_x), and 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. LHC 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. LHC submitted an affidavit of publication of public notice for the June 15, 2017, issue of the *Daily Inter Lake*, a newspaper of general circulation in the Town of Kalispell in Flathead County, Montana, 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 the Department 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 the Department 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 LHC 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 the Department'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 17.8.762 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.

12. 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).
13. 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.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) 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 the Department.

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 Modification-- 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 since it is not a listed source and the facility's PTE is less than 250 tons per year of any regulated air 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 stationary 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 the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (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 Air Quality Permit #3860-02 for LHC, 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 of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to an NSPS under 40 CFR 60, Subpart OOO and potentially Subpart IIII.
 - e. This facility is potentially subject to a current NESHAP under 40 CFR 63, Subpart ZZZZ.
 - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
 - g. This source is not an Environmental Protection Agency (EPA) designated Title V source.

LCH requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program. However, in the event that the EPA makes minor sources that are subject to NSPS obtain a Title V Operating Permit; this source will be subject to the Title V Operating Permit Program.

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.
 - i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
 - ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3)(a) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

III. BACT Determination

A BACT determination is required for any new or modified source. LHC shall install on the new or modified source the maximum air pollution control capability that is technologically practicable and economically feasible, except that BACT shall be used.

This modification is to allow more operational flexibility for LHC by allowing LHC to run up to two diesel engine/generator sets up to 1700 hp combined. Due to the limited amount of emissions produced by the diesel-fired engines used in association with MAQP #3860-02 and the lack of cost-effective add-on controls, such add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel-fired engines.

In addition, any new diesel-fired engine would likely be required to comply with federal engine emission limitations including, for example, EPA Tiered emission standards for non-road engines (40 CFR Part 89 or 1039), NSPS emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or NESHAP for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). The Department has determined that compliance with any applicable federal emissions limits and standards, with no additional requirements, constitutes BACT for these engines.

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

IV. Emission Inventory ^a

CONTROLLED Emission Source	tons/year							
	PM	PM10	PM2.5	NO_x	CO	VOC	SO₂	CO₂
Cold Aggregate Storage Piles	15.64	7.40	1.12	--	--	--	--	--
Cold Aggregate Screen (450 TPH)	4.34	1.46	0.10	--	--	--	--	--
Crusher (450 TPH)	2.37	1.06	0.20	--	--	--	--	--
Cold Aggregate Handling/Conveyors	1.10	0.36	0.10	--	--	--	--	--
Plant Load-Out	1.55	0.79	0.12	--	--	--	--	--
Haul Roads / Vehicle Traffic	5.68	1.57	0.16	--	--	--	--	--
600 hp Diesel Engine Generator	2.51	2.51	2.51	35.34	7.62	2.87	2.34	1311.00
1100 hp Diesel Engine Generator	1.46	1.46	1.46	50.16	11.5	1.34	0.03	2424.40
Total Emissions	34.65	16.61	5.77	85.5	19.12	4.21	2.37	3735.40

- a. Inventory reflects enforceable limits on hours of operation of the diesel engine generator(s) to keep emissions below the Title V threshold of 100 tpy of any pollutant; the allowable emissions remain at or above the attainment area modeling threshold 80 tpy.

**CO = carbon monoxide
 NO_x = oxides of nitrogen
 PM = particulate matter
 PM10 = particulate matter with an aerodynamic diameter of 10 microns or less
 PM2.5 = particulate matter with an aerodynamic diameter of 2.5 microns or less
 SO₂ = sulfur dioxide

HAPs = hazardous air pollutants
 VOC = volatile organic compounds
 (fil) = filterable
 hp = horsepower
 TPH = tons per hour

Cold Aggregate Storage Piles

Maximum Process Rate = 450 ton/hr (Maximum plant process rate)	450	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr	8760	hrs/yr
Number of Piles = 1 pile	1	pile

PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00794$ lb/ton	0.00794	lb/ton
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Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.74	
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U = mean wind speed = 9.3 mph www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)	9.3	mph
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M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations	1.5	%
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Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00794 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) = 15.64$ ton/yr	15.64	ton/yr
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PM₁₀ Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00375$ lb/ton	0.00375	lb/ton
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Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.35	
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U = mean wind speed = 9.3 mph www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)	9.3	mph
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M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations	1.5	%
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Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00375 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) = 7.40$ ton/yr	7.40	ton/yr
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PM_{2.5} Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00057$ lb/ton	0.00057	lb/ton
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Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.053	
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U = mean wind speed = 9.3 mph www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)	9.3	mph
--	-----	-----

M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations	1.5	%
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Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00057 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) = 1.12$ ton/yr	1.12	ton/yr
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Screening

Maximum Process Rate = 450 ton/hr	450	ton/hr
Maximum Hours of Operation = 8,760 hrs/yr (3,942,000 tons/year)	8760	hrs/yr
Number of Screens = 1 screen (Company Information)	1	screen

PM Emissions:

Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
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Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 4.34$ ton/yr	4.34	ton/yr
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PM₁₀ Emissions:

Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00074	lb/ton
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Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 1.46 \text{ ton/yr}$ **1.46** **ton/yr**

PM_{2.5} Emissions

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04) 0.00005 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (1 \text{ screen}) * (\text{ton}/2000 \text{ lb}) * (0.0022 \text{ lb/ton}) = 0.10 \text{ ton/yr}$ **0.10** **ton/yr**

Crushing

Maximum Process Rate = 450 ton/hr 450 ton/hr

Maximum Hours of Operation = 8,760 hrs/yr 8760 hrs/yr

PM Emissions:

Based on AP-42

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) 0.0012 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ ton/hr}) * (0.0012 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 2.37 \text{ ton/yr}$ **2.37** **ton/yr**

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) 0.00054 lb/ton

Calculation: $(0) * (0) * (0.00054 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 1.06 \text{ ton/yr}$ **1.06** **ton/yr**

PM_{2.5} Emissions

Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) 0.0001 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ ton/hr}) * (0.0001 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.20 \text{ ton/yr}$ **0.20** **ton/yr**

Truck Unloading

Maximum Process Rate = 450 ton/hr (Maximum plant process rate) 450 ton/hr

Maximum Hours of Operation = 8,760 hrs/yr 8760 hrs/yr

Number of loads = 25 loads (Estimate) 25 loads

PM Emissions:

Emission Factor = 0.0000314 lb/ton (PM=PM₁₀ / 51%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90) 0.0000314 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0000314 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (25 \text{ loads}) = 1.55 \text{ ton/yr}$ **1.55** **ton/yr**

PM₁₀ Emissions:

Emission Factor = 0.000016 lb/ton (PM₁₀=1.6E-05, AP 42, Table 11.19.2-2, 8/04) 0.000016 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.000016 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (25 \text{ loads}) = 0.79 \text{ ton/yr}$ **0.79** **ton/yr**

PM_{2.5} Emissions:

Emission Factor = 0.0000024 lb/ton (PM_{2.5}=1.6E-05 * 15%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90) 0.0000024 lb/ton

Calculation: $(450 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.0000024 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (25 \text{ loads}) = 0.12 \text{ ton/yr}$ **0.12** **ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate) 5 VMT/day

VMT per hour = $(5 \text{ VMT/day}) * (\text{day}/24 \text{ hrs}) = 0.21 \text{ VMT/hr}$ 0.21 VMT/hr

Hours of Operation = 8,760 hrs/yr 8760 hrs/yr

PM Emissions:

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

11/06.

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 12.46 \text{ lb/VMT}$	12.46	lb/VMT
Where: $k = \text{constant} = 4.9 \text{ lbs/VMT}$ (Value for PM ₃₀ /TSP, AP 42, Table 13.2.2-2, 11/06)	4.9	lbs/VMT
$s = \text{surface silt content} = 7.1 \%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)	54	tons
$a = \text{constant} = 0.7$ (Value for PM ₃₀ /TSP, AP 42, Table 13.2.2-2, 11/06)	0.7	
$b = \text{constant} = 0.45$ (Value for PM ₃₀ /TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 11.37 \text{ tons/yr}$ (Uncontrolled Emissions)	11.37	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (4.90 \text{ lbs/VMT}) * (\text{ton}/2000 \text{ lb}) * (\text{Control Efficiency}) = 5.68 \text{ tons/yr}$ (Controlled Emissions)	5.68	tons/yr

PM₁₀ Emissions:

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

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 3.43 \text{ lb/VMT}$	3.43	lb/VMT
Where: $k = \text{constant} = 1.5 \text{ lbs/VMT}$ (Value for PM ₁₀ , AP 42, Table 13.2.2-2, 11/06)	1.5	lbs/VMT
$s = \text{surface silt content} = 7.1 \%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)	54	tons
$a = \text{constant} = 0.9$ (Value for PM ₁₀ , AP 42, Table 13.2.2-2, 11/06)	0.9	
$b = \text{constant} = 0.45$ (Value for PM ₁₀ , AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 3.13 \text{ tons/yr}$ (Uncontrolled Emissions)	3.13	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (1.50 \text{ lbs/VMT}) * (\text{ton}/2000 \text{ lb}) * (\text{control Efficiency}) = 1.57 \text{ tons/yr}$ (Controlled Emissions)	1.57	tons/yr

PM_{2.5} Emissions

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

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 0.34 \text{ lb/VMT}$	0.34	lb/VMT
Where: $k = \text{constant} = 0.15 \text{ lbs/VMT}$ (Value for PM _{2.5} , AP 42, Table 13.2.2-2, 11/06)	0.15	lbs/VMT
$s = \text{surface silt content} = 7.1 \%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.1	%
$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)	54	tons
$a = \text{constant} = 0.9$ (Value for PM _{2.5} , AP 42, Table 13.2.2-2, 11/06)	0.9	
$b = \text{constant} = 0.45$ (Value for PM _{2.5} , AP 42, Table 13.2.2-2, 11/06)	0.45	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 0.31 \text{ tons/yr}$ (Uncontrolled Emissions)	0.31	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.15 \text{ lbs/VMT}) * (\text{ton}/2000 \text{ lb}) * (\text{Control Efficiency}) = 0.16 \text{ tons/yr}$ (Controlled Emissions)	0.16	tons/yr

Diesel Engine(s): 600 hp

Note: Emissions are based on the power output of the engine (600 hp).

Operational Capacity of Engine = 600 hp	600	hp
Hours of Operation = 3,800.00 hours	3,800.00	hours

Total PM/PM10/PM2.5 Emissions:

Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	2.20E-03	lbs/hp-hr
Calculation: $(3,800 \text{ hours}) * (600 \text{ hp}) * (0.0022 \text{ lbs/hp-hr}) = 5,016.00 \text{ lbs/yr}$	5016.00	lbs/yr

Calculation: (3,800 hours) * (600 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.51 ton/yr	2.51	ton/yr
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NOx Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.031	lbs/hp-hr
Calculation: (3,800 hours) * (600 hp) * (0.031 lbs/hp-hr) = 70,680.00 lbs/yr	70680.00	lbs/yr
Calculation: (3,800 hours) * (600 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 35.34 ton/yr	35.34	ton/yr

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	6.68E-03	lbs/hp-hr
Calculation: (3,800 hours) * (600 hp) * (0.00668 lbs/hp-hr) = 15,230.40 lbs/yr	15230.40	lbs/yr
Calculation: (3,800 hours) * (600 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 7.62 ton/yr	7.62	ton/yr

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)	2.51E-03	lbs/hp-hr
Calculation: (3,800 hours) * (600 hp) * (0.0025141 lbs/hp-hr) = 5,732.15 lbs/yr	5732.15	lbs/yr
Calculation: (3,800 hours) * (600 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.87 ton/yr	2.87	ton/yr

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	2.05E-03	lbs/hp-hr
Calculation: (3,800 hours) * (600 hp) * (0.00205 lbs/hp-hr) = 4,674.00 lbs/yr	4674.00	lbs/yr
Calculation: (3,800 hours) * (600 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 2.34 ton/yr	2.34	ton/yr

CO₂ Emissions:

Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15E+00	lbs/hp-hr
Calculation: (3,800 hours) * (600 hp) * (1.15 lbs/hp-hr) = 2,622,000.00 lbs/yr	2622000.00	lbs/yr
Calculation: (3,800 hours) * (600 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,311.00 ton/yr	1311.00	ton/yr

Diesel Engine(s): 1,100 hp

Note: Emissions are based on the power output of the engine (1100 hp).

Operational Capacity of Engine = 1,100 hp	1,100	hp
Hours of Operation = 3,800.00 hours	3,800.00	hours

Total PM/PM10/PM2.5 Emissions:

Emission Factor = 0.0007 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.4, Table 3.4-1, 10/96)	7.00E-04	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (0.0007 lbs/hp-hr) = 2,926.00 lbs/yr	2926.00	lbs/yr
Calculation: (3,800 hours) * (1,100 hp) * (0.0007 lbs/hp-hr) * (ton/2000 lb) = 1.46 ton/yr	1.46	ton/yr

NOx Emissions:

Emission Factor = 0.024 lbs/hp-hr (AP-42, Sec. 3.4, Table 3.4-1, 10/96)	0.024	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (0.024 lbs/hp-hr) = 100,320.00 lbs/yr	100320.00	lbs/yr
Calculation: (3,800 hours) * (1,100 hp) * (0.024 lbs/hp-hr) * (ton/2000 lb) = 50.16 ton/yr	50.16	ton/yr

CO Emissions:

Emission Factor = 0.0055 lbs/hp-hr (AP-42, Sec. 3.4, Table 3.4-1, 10/96)	5.50E-03	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (0.0055 lbs/hp-hr) = 22,990.00 lbs/yr	22990.00	lbs/yr
Calculation: (3,800 hours) * (1,100 hp) * (0.0055 lbs/hp-hr) * (ton/2000 lb) = 11.50 ton/yr	11.50	ton/yr

VOC Emissions:

Emission Factor = 0.00064155 lbs/hp-hr (AP-42, Sec. 3.4, Table 3.4-1, VOC = 91% * TOC, 10/96)	6.42E-04	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (0.00064155 lbs/hp-hr) = 2,681.68 lbs/yr	2681.68	lbs/yr

Calculation: (3,800 hours) * (1,100 hp) * (0.00064155 lbs/hp-hr) * (ton/2000 lb) = 1.34 ton/yr	1.34	ton/yr
SOx Emissions:		
Emission Factor = 0.000012135 lbs/hp-hr (AP-42, Sec. 3.4, Table 3.4-1, 10/96, assume ULSD S=15ppm)	1.21E-05	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (0.000012135 lbs/hp-hr) = 50.72 lbs/yr	50.72	lbs/yr
Calculation: (3,800 hours) * (1,100 hp) * (0.000012135 lbs/hp-hr) * (ton/2000 lb) = 0.03 ton/yr	0.03	ton/yr
CO ₂ Emissions:		
Emission Factor = 1.16 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.16E+00	lbs/hp-hr
Calculation: (3,800 hours) * (1,100 hp) * (1.16 lbs/hp-hr) = 4,848,800.00 lbs/yr	4848800.00	lbs/yr
Calculation: (3,800 hours) * (1,100 hp) * (1.16 lbs/hp-hr) * (ton/2000 lb) = 2,424.40 ton/yr	2424.40	ton/yr

V. Existing Air Quality

MAQP#3860-02 is issued for the operation of a portable crushing/screening facility to operate at various locations throughout Montana. This facility would be allowed to operate at this proposed site and any other areas designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding those counties that have a Department-approved permitting program, those areas considered Tribal Lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.* Addendum #3 applies to the LHC facility while operating at any location in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas during the summer months (April 1 – September 30) and at sites approved by the Department during the winter months (October 1 – March 31), including the initial site location, the Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, of Flathead County, MT.

VI. Air Quality Impacts

Based on the relatively small amount of emissions resulting from the LHC operation and the limits and conditions that are included in MAQP#3860-02, the Department believes that the allowable/permitted emissions from this source would not cause or contribute to an exceedance of any ambient air quality standard while operating in any area classified as attainment or unclassified for the ambient air quality standards. Further, Addendum #3 to MAQP #3860-02 would cover this portable crushing/screening plant while operating in or within 10 km of certain PM₁₀ nonattainment areas and would include more stringent requirements for operating within these areas. Based on Department guidance related to operations in or within 10 km of nonattainment area locations and ambient air dispersion modeling conducted specifically for LHC operations locating in or within 10 km of certain PM₁₀ nonattainment areas, the Department believes that the allowable/permitted emissions covered under Addendum #3 to MAQP #3860-02 would not further contribute to the current PM₁₀ nonattainment status of these areas.

VII. Ambient Air Quality Impact Analysis

MAQP #3860-02 and Addendum #3 will cover the operations of this portable crushing/screening plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands. Addendum #3 will also apply to the operations of this portable crushing/screening plant while operating in or within 10 km of certain PM₁₀

nonattainment areas during the winter months (October 1 through March 31) as well as during the summer months (April 1 through September 30).

VIII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

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

IX. Environmental Assessment

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

Analysis Prepared By: R. Payne

Date: 7/25/2017

Addendum #3
LHC, Inc.
Montana Air Quality Permit (MAQP) #3860-02

An addendum to air quality MAQP #3860-02 is issued to LHC, Inc. (LHC), pursuant to Section 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

Addendum #3 to MAQP #3860-02 allows for the operation of a portable crushing/screening plant to be located in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀) nonattainment areas including but not limited to: Libby, Thompson Falls, Kalispell (and the nearby Evergreen area), Whitefish, Columbia Falls, and Butte. LHC's application for MAQP #3860-02 indicates winter and summer time operations in or within the Kalispell PM₁₀ nonattainment area. The portable non-metallic mineral processing plant incorporates a crusher with a maximum material throughput capacity of 450 tons per hour (TPH), a screen with a maximum material throughput capacity of 450 TPH, and associated material handling equipment. The crushing/screening plant is powered by up to two diesel-fired engine/generator set(s) with a combined maximum rated design capacity to not exceed 1,700 horsepower (hp).

II. Seasonal and Site Restrictions

Addendum #3 applies to the LHC facility while operating at any location in or within 10 km of certain PM₁₀ nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

- A. Winter Season (October 1-March 31). During the winter season, the only location(s) in or within 10 km of certain PM₁₀ nonattainment area(s) where LHC may operate is:
1. Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, Flathead County, MT (LHC Home Pit) (Kalispell PM₁₀ nonattainment area).
 2. Any other site in or within 10 km of certain PM₁₀ nonattainment areas that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. Summer Season (April 1-September 30). LHC may operate at any location in or within 10 km of the Libby, Thompson Falls, Kalispell (and the nearby Evergreen area), Whitefish, Columbia Falls, and Butte PM₁₀ nonattainment areas.
- C. LHC shall comply with the additional limitations and conditions contained in Addendum #3 to MAQP #3860-02 while operating in or within 10 km of any of the previously listed PM₁₀ nonattainment areas. Addendum #3 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #3 at any time based on local conditions of any future site. These conditions may

include, but are not limited to: local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

A. Operational and Emission Limitations: Winter Season (October 1 – March 31) and Summer Season (April 1 – September 30).

1. All visible emissions from the crushing/screening plant may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749). For NSPS-affected equipment constructed after April 22, 2008 for which an opacity limitation of 7% applies (such as screens and conveyors), that 7% limit shall apply to the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. LHC shall not cause or authorize to be discharged into the atmosphere from any other equipment, such as screens or transfer points, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
3. Water and water spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections III.A.1 and III.A.2 (ARM 17.8.749).
4. LHC shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
5. LHC shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation in Section II.A.4 (ARM 17.8.749).
6. LHC crushing operations shall be limited to one portable crusher with a maximum material throughput capacity of 450 TPH (ARM 17.8.749).
7. Crushing production from the LHC facility shall be limited to 10,800 tons per day (ARM 17.8.749).
8. LHC screening operations shall be limited to one portable screen with a maximum material throughput capacity of 450 TPH (ARM 17.8.749).
9. Screening production from the LHC facility shall be limited to 10,800 tons per day (ARM 17.8.749).
10. LHC may operate up to two diesel-fired engine/generator set(s) with a combined maximum rated design capacity to not exceed 1,700 hp (ARM 17.8.749).

B. Operational Reporting Requirements

1. If this crushing/screening plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Production information for the sites covered by this addendum must be maintained for 5 years and submitted to the Department upon request. The information must include (ARM 17.8.749):
 - a. Tons of material crushed by each crusher at each site (including amount of recirculated/rerun material);
 - b. Tons of material screened by each screen at each site (including amount of recirculated/rerun material);
 - c. Tons of bulk material loaded at each site (production);
 - d. Daily hours of operation at each site;
 - e. Gallons of diesel used by each generator at each site;
 - f. Hours of operation and sizes for each generator at each site; and
 - g. Fugitive dust information consisting of the total miles driven on unpaved roads for all plant vehicles.
3. LHC shall document, by day, the total crushing production. LHC shall sum the total crushing production during the previous day to verify compliance with the limitation in Section III.A.7. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted and may be submitted along with the annual emissions inventory (ARM 17.8.749).
4. LHC shall document, by day, the total screening production. LHC shall sum the total screening production during the previous day to verify compliance with the limitation in Section III.A.9. A written report of compliance and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted and may be submitted along with the annual emissions inventory (ARM 17.8.749).

Addendum #3 Analysis
LHC, Inc.
Montana Air Quality Permit (MAQP) #3860-02

I. Permitted Equipment:

LHC, Inc. (LHC) owns and operates a portable non-metallic mineral processing plant to be operated at various locations within Montana. Equipment used at this facility includes, but is not limited to:

- A portable non-metallic mineral crusher with a material throughput capacity of 450 tons per hour (TPH);
- A portable non-metallic mineral screen with a material throughput capacity of 450 TPH;
- Up to two diesel-fired engine/generator set(s) with a combined maximum rated design capacity to not exceed 1,700 horsepower (hp); and
- Associated material handling and storage equipment and operations.

II. Source Description

LHC operates a portable crushing/screening facility to be operated at various locations within Montana. Typical operations begins by loading the sand and gravel material to be processed into the crusher. From the crusher, materials are sent to the screen for sizing and ultimately conveyed to a product stockpile(s) for use in various construction activities.

III. Applicable Rules and Regulations

The following are partial quotations 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 the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

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

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that LHC demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. LHC demonstrated compliance with all applicable rules and standards as required for permit issuance.
- B. ARM 17.8.764 Modification of Permit. An air quality permit may be modified 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 which do not result in an increase in emissions because of the changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:

1. Written notice of Intent to Transfer location and proof of public notice are sent to the Department;
2. The source will operate in the new location for a period of less than 1 year; and
3. The source will not have any significant impact on any nonattainment area or any Class I area.

LHC shall submit proof of compliance with the transfer and public notice requirements when LHC transfers to any of the locations covered by this Addendum and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and limitations in Addendum #3 to MAQP #3860-02 will prevent LHC from having a significant impact on certain PM₁₀ nonattainment areas.

IV. Emission Inventory

CONTROLLED Emission Source	pounds/day								
	PM	PM ₁₀	PM _{2.5}	NO _x	CO	VOC	SO ₂	CO ₂ e	Total HAPs
Cold Aggregate Storage Piles	85.72	40.54	6.14	--	--	--	--	--	--
Cold Aggregate Handling/Conveyors	6.05	1.99	0.56	--	--	--	--	--	--
Cold Aggregate Screens	23.76	7.99	0.54	--	--	--	--	--	--
Crushers	58.32	25.92	1.08	--	--	--	--	--	--
Haul Roads / Vehicle Traffic	31.15	8.59	0.86	--	--	--	--	--	--
1700 hp Diesel Engine	89.76	89.76	89.76	1264.8	272.54	102.58	83.64	46920	--
Total Emissions	294.76	174.79	98.94	1264.8	272.54	102.58	83.64	46920.00	0.00

Cold Aggregate Storage Piles

Maximum Process Rate = 450 ton/hr (Maximum plant process rate)

450 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 24 hrs/day (Summer and Winter hours)

24 hrs/day (Summer and Winter hours)

Number of Piles = 1 pile

1 pile

Filterable PM Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00794$ lb/ton

0.00794 lb/ton

Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06)

0.74

U = mean wind speed = 9.3 mph
www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)

9.3 mph

M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations

1.5 %

Calculation: (450 ton/hr) * (24 hrs/day) * (0.00794 lb/ton) * (1 piles) = 85.72 lb/day (Summer and Winter hours)

85.72 lb/day (Summer and Winter hours)

Filterable PM₁₀ Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00375$ lb/ton

Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)
 U = mean wind speed = 9.3 mph
www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)
 M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.00375 \text{ lb/ton}) * (1 \text{ piles}) = 40.54 \text{ lb/day}$ (Summer and Winter hours)

0.00375 lb/ton

0.35

9.3 mph

1.5 %

40.54 lb/day

(Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)
www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)
 See guidance - based on moisture contents assumed for crushing and screening operations

(Summer and winter hours)

Filterable PM_{2.5} Emissions:

Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06.

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00057$ lb/ton

Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 9.3 mph
www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)
 M = material moisture content = 1.5% See guidance - based on moisture contents assumed for crushing and screening operations

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.00057 \text{ lb/ton}) * (1 \text{ piles}) = 6.14 \text{ lb/day}$ (Summer and Winter hours)

0.00057 lb/ton

0.053

9.3 mph

1.5 %

6.14 lb/day

(Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06)

www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html (See Guidance - wind data for Statewide Average)
 See guidance - based on moisture contents assumed for crushing and screening operations

(Summer and Winter hours)

Conveyor Transfer Point (SCC 3-05-02006)

Maximum Process Rate = 450 ton/hr (Maximum single screen process rate estimate)

450 ton/hr

Maximum Hours of Operation = 24 hrs/day

24 hrs/day

Number of Transfers = 4 transfers

4 transfers

(Maximum single screen process rate estimate)

(Summer and Winter hours)

Filterable PM Emissions:

Emission Factor = 0.00014 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)

0.00014 lb/ton

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.00014 \text{ lb/ton}) * (4 \text{ transfers}) = 6.05 \text{ lb/day}$

6.05 lb/day

(0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)

(Summer and Winter Hours)

Filterable PM₁₀ Emissions:

Emission Factor = 0.000046 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)

0.000046 lb/ton

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.000046 \text{ lb/ton}) * (4 \text{ transfers}) = 1.99 \text{ lb/day}$

1.99 lb/day

(0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)

(Summer and Winter Hours)

Filterable PM_{2.5} Emissions:

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)

0.000013 lb/ton

(0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.000013 \text{ lb/ton}) * (4 \text{ transfers}) * (1 - 0/100) = 0.56 \text{ lb/day}$

0.56 lb/day (Summer and Winter Hours)

Fines Screening (SCC 3-05-020-21)

Maximum Process Rate = 450 ton/hr (Maximum plant process rate)

450 ton/hr

(Maximum plant process rate)

Maximum Hours of Operation = 24 hrs/day

24 hrs/day

(Summer and Winter Hours)

Number of Screens = 1 screen

1 screen

PM Emissions:

Emission Factor = 0.0022 lb/ton (0.025 uncontrolled, 0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)

0.0022 lb/ton

(0.025 uncontrolled, 0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.0022 \text{ lb/ton}) * (1 \text{ screen(s)}) = 23.76 \text{ lb/day}$

23.76 lb/day

(Summer and Winter Hours)

PM₁₀ Emissions:

Emission Factor = 0.00074 lb/ton (0.0087 uncontrolled, 0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)

0.00074 lb/ton

(0.0087 uncontrolled, 0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.00074 \text{ lb/ton}) * (1 \text{ screen}) = 7.99 \text{ lb/day}$

7.99 lb/day

(Summer and Winter Hours)

PM_{2.5} Emissions:

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)

0.00005 lb/ton

(0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.00005 \text{ lb/ton}) * (1 \text{ screen}) = 0.54 \text{ lb/day}$ (Summer Hours)

0.54 lb/day

(Summer and Winter Hours)

Crushing [Jaw Crusher] (SCC 3-05-020-05)

Maximum Process Rate = 450 ton/hr (Maximum plant process rate)

450 ton/hr

(Maximum plant process rate)

Maximum Hours of Operation = 24 hrs/day

24 hrs/day

(Summer and Winter Hours)

Number of Crushers = 1 crusher

1 crusher

PM Emissions:

Emission Factor = 0.0054 lb/ton (tertiary crushing (uncontrolled), AP 42, Table 11.19.2-2, 8/04)

0.0054 lb/ton

(tertiary crushing (uncontrolled), AP 42, Table 11.19.2-2, 8/04)

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.0054 \text{ lb/ton}) * (1 \text{ crusher}) = 58.32 \text{ lb/day}$ (Summer and Winter Hours)

58.32 lb/day

(Summer and Winter Hours)

PM₁₀ Emissions:

Emission Factor = 0.0024 lb/ton (tertiary crushing (uncontrolled), AP 42, Table 11.19.2-2, 8/04)

0.0024 lb/ton

(tertiary crushing (uncontrolled), AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0%

0 %

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.0024 \text{ lb/ton}) * (1 \text{ crusher}) = 25.92 \text{ lb/day}$ (Summer and Winter Hours)

25.92 lb/day

(Summer and Winter Hours)

PM_{2.5} Emissions:

Emission Factor = 0.0001 lb/ton (tertiary crushing (controlled), AP 42, Table 11.19.2-2, 8/04)

0.0001 lb/ton

(tertiary crushing (controlled), AP 42, Table 11.19.2-2, 8/04)

Control Efficiency = 0%

0 %

Calculation: $(450 \text{ ton/hr}) * (24 \text{ hrs/day}) * (0.0001 \text{ lb/ton}) * (1 \text{ crusher}) = 1.08 \text{ lb/day}$ (Summer and Winter Hours)

1.08 lb/day

(Summer and Winter Hours)

Diesel Engine

Note: Emissions are based on the power output of the engine (up to 1700 hp).

Operational Capacity of Engine = 1,700 hp
Hours of Operation = 24.00 hrs/day

Total PM/PM₁₀/PM_{2.5} Emissions:

Emission Factor = 0.0022 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (0.0022 lbs/hp-hr) = 89.76 lb/day (Summer and Winter Hours)

NO_x Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (0.031 lbs/hp-hr) = 1,264.80 lb/day (Summer and Winter Hours)

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (0.00668 lbs/hp-hr) = 272.54 lb/day (Summer and Winter Hours)

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (0.0025141 lbs/hp-hr) = 102.58 lb/day (Summer and Winter Hours)

SO_x Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (0.00205 lbs/hp-hr) = 83.64 lb/day (Summer and Winter Hours)

CO₂ Emissions:

Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)
Calculation: (24 hrs/day) * (1,700 hp) * (1.15 lbs/hp-hr) = 46,920.00 lb/day (Summer and Winter Hours)

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedances of the national standards for PM₁₀, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM₁₀. As a result of this designation, EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors to PM₁₀ emissions.

Addendum #3 to MAQP #3860-02 is for a portable crushing/screening plant to be located in or within 10 km of certain PM₁₀ nonattainment areas during the summer season (April 1 through September 30) and winter season (October 1 through March 31). Operating locations under Addendum #3 may include areas in or within 10 km of certain PM₁₀ nonattainment areas, including, but not limited to Libby, Kalispell (and the nearby Evergreen area), Columbia Falls, Whitefish, Thompson Falls, and Butte.

The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. Also, this facility is a portable source that would be expected to operate on an intermittent and temporary basis and any effects on air quality would be expected to be minor and short-lived.

VI. Air Quality Impacts

MAQP #3860-02 and Addendum #3 will cover the operations of this portable crushing/screening plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum #3 will cover the operations of this portable crushing/screening plant, while operating in or within 10 km of the Kalispell PM₁₀ nonattainment area during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of PM₁₀ nonattainment areas during the summer months (April 1 through September 30).

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?

YES	NO	
	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.

Addendum Analysis Prepared by: R. Payne

Date: 7/25/17

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy & Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, MT 59620
(406) 444-3490

ENVIRONMENTAL ASSESSMENT (EA)

Issued To: LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904

Montana Air Quality Permit (MAQP) number: 3860-02

EA Draft: 8/1/2017
EA Final: 9/5/2017
Permit Final: 9/21/2017

1. *Legal Description of Site:* MAQP #3860-02 would apply while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.* Addendum #3 would apply while operating at any locations in or within 10 km of certain PM₁₀ nonattainment areas. The LHC “home-pit”, where the permitted portable facility would initially operate, is located approximately 5 km north of Kalispell, MT, in the Northeast ¼ of Section 26 and the Northwest ¼ of Section 25, Township 29 North, Range 22 West, in Flathead County, MT.
2. *Description of Project:* LHC submitted to the Department received a request to modify MAQP #3860-01 to request de minimis-friendly conditions with operational limitations. LHC proposed that up to two generators may be used, not to exceed 1700 horsepower (hp) and operation limits of 3800 hours per year.
3. *Objectives of Project:* The increase in engine/generator set size would assist LHC in providing crushed and sized aggregate material for varied construction activity requiring sand and gravel materials, state-wide.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. The “no-action” alternative would mean the LHC would have more limited crushing and screening potential resulting in the loss of revenue for LHC. However, the Department does not consider the “no-action” alternative to be appropriate because LHC has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a Best Available Control Technology (BACT) analysis and determination, would be included in MAQP #3860-02.

6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.
7. *SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:* The following comments have been prepared by the Department.

A. *Terrestrial and Aquatic Life and Habitats*

This permitting action would have a minor effect on terrestrial and aquatic life and habitats, as the larger engine/generator set(s) would be in an existing industrial property that has already been disturbed. Furthermore, the air emissions from the increased engine emissions would be well dispersed in the area of the operations (see Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. *Water Quality, Quantity, and Distribution*

The larger engine/generator set(s) would be located with other previously permitted equipment in an existing industrial property that has already been disturbed. Water would be required for dust suppression on the surrounding roadways and general plant area. This water use would only cause minor, if any, impacts to water resources because the engine/generator set(s) and associated equipment only require a small volume of water to be used. In addition, the engine/generator set(s) would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. However, the Department determined that, due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #3860-02, any impacts from deposition of pollutants on water quality, quantity, and distribution would be minor.

C. *Geology and Soil Quality, Stability, and Moisture*

Only minor impacts from deposition of air pollutants on soils would result (as described in Section 7.F of this EA) and only minor amounts of water would be used for pollution control, and would be used, only as necessary, in controlling particulate emissions. Thus, only minimal water runoff would occur. Since only minor amounts of pollution would be generated and corresponding emissions would be widely dispersed before settling upon surrounding soils and vegetation (as described in Section 7.D of this EA), impacts would be minor. Therefore, any effects upon geology and soil quality, stability, and moisture from air pollutant emissions from operation of the larger engine/generator set(s) would be minor and short-lived.

D. *Vegetation Cover, Quantity, and Quality*

Minor impacts would occur on vegetative cover, quality, and quantity because the larger engine/generator set(s) would operate in an area where vegetation has been previously disturbed. During operations, the engine/generator set(s) would be a relatively minor source of emissions and the pollutants would be greatly dispersed (as described in Section

7.F of this EA); therefore, deposition on vegetation from the proposed project would be minor. Also, because the water usage would be minimal (as described in Section 7.B of this EA), and the associated soil disturbance from the application of water and water runoff would be minimal (as described in Section 7.C of this EA), corresponding vegetative impacts would be minor.

E. *Aesthetics*

The engine/generator set(s) would be visible and would create noise while operating at the existing mining site. The engine/generator set(s) would be portable, would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and minor.

F. *Air Quality*

Air quality impacts from the proposed project would be minor because the engine/generator set(s) and associated equipment would operate on an intermittent and temporary basis. MAQP #3860-02 would include conditions limiting the hours of operation of the engine/generator set(s). In addition, MAQP #3860-02 would require water be used to control particulate emissions from the surrounding roadways and general plant area. Additionally, Addendum #3 would apply while the engine/generator set(s) and associated equipment are operating in or within 10 km of a certain PM₁₀ nonattainment areas and would impose more stringent requirements for operations within those areas.

Further, the Department determined that the larger engine/generator set(s) would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit would be limited below the major source threshold level of 100 tons per year for any regulated pollutant. Pollutant deposition from the engine/generator set(s) would be minimal because the pollutants emitted would be widely dispersed (from factors such as wind speed and wind direction) and would have minimal deposition on the surrounding area. Therefore, air quality impacts from operating the larger engine/generator set(s) in this area would be minor.

G. *Unique Endangered, Fragile, or Limited Environmental Resources*

Emissions from the proposed project may impact unique, endangered, fragile, or limited environmental resources located in a given proposed project area. However, as detailed in Section V of the permit analysis and Section I and V of the analysis for Addendum #3, any emissions and resulting impacts from the project would be minor due to the low concentration of those pollutants emitted.

MAQP #3860-02 and Addendum #3 would cover the operation of the larger engine/generator set(s) while located at various locations throughout the state. Most operations would take place within existing and previously disturbed industrial gravel pits thereby resulting in only minor impacts to the industrial area. Further, given the temporary and portable nature of the operations, any impacts would be minor and short-lived. In addition, operational conditions and limitations in MAQP #3860-02 would be protective of these resources by limiting overall impacts to the surrounding environment.

Overall, any impacts to the above-cited physical and biological resource of the human environment of the project area would be minor because the operation of the larger engine/generator set(s) would typically occur within areas designated for such operations. Therefore, the overall industrial nature of the area would not change as a result of the proposed project and any associated impacts would be minor.

H. *Sage Grouse Executive Order*

The Department recognizes the site location is not within the Greater Sage Grouse Habitat Area as defined by Executive Order No. 12-20158.

I. *Demands on Environmental Resources of Water, Air, and Energy*

Due to the relatively small size of the project, only small demands on environmental resources would be required for proper operation. Only small quantities of water would be required for dust suppression of particulate emissions being generated at the site. In addition, impacts to air resources would be minor because the source is a minor industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed as described in Section 7.F of this EA. Energy requirements would also be small, as the engine/generator set(s) would use small amounts of fuel. Overall, any impacts to water, air, and energy resources would be minor.

J. *Historical and Archaeological Sites*

Typically, the engine/generator set(s) would operate within a previously disturbed open-cut pit used for such purposes. According to past correspondence from the Montana Historical Society, State Historic Preservation Office (SHPO), there are no previously recorded sites in the area of the proposed project location and there is a low likelihood of adverse disturbance to any known archaeological or historic site given any previous industrial disturbance in any given area of operation. Therefore, it is unlikely that the proposed operation of the engine/generator set(s) would impact any historical or archaeological sites in a given area of operation.

K. *Cumulative and Secondary Impacts*

The operation of the engine/generator set(s) would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of PM₁₀, oxides of Nitrogen (NO_x), carbon monoxide (CO), Volatile Organic Compounds (VOC), and oxides of Sulfur (SO_x) emissions to be generated. Emissions and noise generated from the equipment would, at most, result in only minor impacts to the area of operations because the diesel engine powered generator would be seasonal and temporary. The proposed project would be short-term in nature, and have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would be minor.

8. *SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:*
The following comments have been prepared by the Department.

A. *Social Structures and Mores*

The operation of the engine/generator set(s) would cause no disruption to the social structures and mores in the area because the source is an existing minor industrial source of emissions and would operate on a temporary and intermittent basis. The current project would not change the nature of the operations and would not impact the local social structures or mores.

B. *Cultural Uniqueness and Diversity*

The cultural uniqueness and diversity of this area would not be impacted by the proposed operation of the engine/generator set(s) because the proposed source would be a portable source and would conduct seasonal and intermittent operations. The predominant use of the surrounding area would not change as a result of the operation of the engine/generator set(s). Therefore, the cultural uniqueness and diversity of the area would not be impacted.

C. *Local and State Tax Base and Tax Revenue*

The operation of the engine/generator set(s) would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source and would conduct only seasonal and intermittent operations. Thus, only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and the money generated for taxes would be widespread.

Overall, any impacts to the above-cited economic and social resource of the human environment of the project area would be minor because the proposed crushing/screening operation would typically operate within areas designated for such operations. Therefore, the overall industrial nature of the area would not change as a result of the proposed project and any associated impacts would be minor.

D. *Agricultural or Industrial Production*

The operation of the engine/generator set(s) would have only a minor impact on local industrial production since the source would be a minor source of air emissions. Because minimal deposition of air pollutants would occur on the surrounding land (as described in Section 7.F of this EA), only minor and temporary effects on the surrounding vegetation (i.e. agricultural production) would occur. In addition, the engine/generator set(s) operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D of this EA.

E. *Human Health*

MAQP #3860-02 and Addendum #3 would include limits and conditions to ensure that the engine/generator set(s) would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from the proposed source would be minimized by the use of water spray and other process limits that would be required by MAQP #3860-02 and Addendum #3. Also, the engine/generator set(s) would operate on a temporary and intermittent basis and pollutants would be widely dispersed (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the engine/generator set(s) operations.

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

Noise from the proposed project would be minor because the operation of the engine/generator set(s) would be small by industrial standards and would operate in areas typically used for such crushing/screening operations (i.e. existing gravel pit). As a result, the amount of noise generated would be minimal for the area. Also, the source would operate on a seasonal and intermittent basis. Therefore, any impacts to the quality of recreational and wilderness activities created by the proposed project would be expected to be minor and short-lived.

G. *Quantity and Distribution of Employment*

The operation of the engine/generator set(s) would not require additional employees to operate and results in little, if any, permanent immigration into or emigration out of a given area of operation. Therefore, the proposed project would not impact the quantity and distribution of employment in the proposed area of operation.

H. *Distribution of Population*

The operation of the engine/generator set(s) would not require additional employees to operate and results in little, if any, permanent immigration into or emigration out of a given area of operation. Therefore, the proposed project would not impact the distribution of population at the initially proposed or any other given operating site.

I. *Demands of Government Services*

Minor increases may be seen in traffic on existing roadways in the area while the engine/generator set(s) is being operated. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be minor.

J. *Industrial and Commercial Activity*

The operation of the engine/generator set(s) would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operation.

K. *Locally Adopted Environmental Plans and Goals*

MAQP #3860-02 would allow LHC to operate in areas designated by EPA as attainment or unclassified for the National and Montana ambient air quality standards. In addition, Addendum #3 to MAQP #3860-02 would allow for operations in or within 10 km of certain PM₁₀ nonattainment areas. The Montana SIP provides that the state must improve the air quality in these areas to the point of compliance with the PM₁₀ standard. MAQP #3860-02 and Addendum #3 to MAQP #3860-02 would include limits and conditions that would protect air quality and keep facility emissions in compliance with any applicable ambient air quality standards thereby protecting the existing PM₁₀ nonattainment areas from further degradation. In addition to the air quality protection provided by MAQP #3860-02 and Addendum #3, the engine/generator set(s) would be a portable source and would have intermittent and seasonal operations, thus, any impacts from the facility would be minor and short-lived.

L. *Cumulative and Secondary Impacts*

The operation of the engine/generator set(s) would cause only minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be a portable and temporary source. Minor increases in traffic would have minor effects on local traffic in the immediate area. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the engine/generator set(s). Further, this source may be operated in conjunction with other equipment owned and operated by LHC, but any cumulative impacts upon the social and economic aspects of the human environment would be minor and short-lived. Thus, only minor and temporary cumulative effects would result to the local economy.

Recommendation: An Environmental Impact Statement (EIS) is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of a portable non-metallic mineral processing facility. MAQP #3860-02 and Addendum #3 include conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Department of Environmental Quality – Air, Energy & Mining Division, Montana Natural Heritage Program; and the State Historic Preservation Office (Montana Historical Society)

Individuals or groups contributing to this EA: Montana Department of Environmental Quality (Air Quality Bureau), Montana State Historic Preservation Office (Montana Historical Society)

EA prepared by: R. Payne

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