April 20, 2018

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

Dear Mr. Tabish:

Montana Air Quality Permit #2615-16 is deemed final as of April 20, 2018, by the Department of Environmental Quality (Department). This permit is for a 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,

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

John P. Proulx
Air Quality Specialist
Air Quality Bureau
(406) 444-5391

JM:JPP
Enclosure

Montana Department of Environmental Quality
Air, Energy & Mining Division

Montana Air Quality Permit #2615-16

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

April 20, 2018

MONTANA AIR QUALITY PERMIT

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

MAQP: #2615-16
Application Complete: 2/28/18
Preliminary Determination Issued: 3/14/2018
Department's Decision Issued: 4/4/2018
Permit Final: 4/20/2018
AFS #: 777-2615

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:

LHC owns and operates a portable non-metallic mineral processing plant located in various locations throughout Montana. MAQP #2615-16 applies while operating at any location in Montana, except within those areas having a Montana Department of Environmental Quality (Department)-approved permitting program or those areas considered tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum is required for locations in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas.

Addendum #16 will apply to the LHC facility while operating at locations in or within 10 km of PM_{10} nonattainment areas during the summer months (April 1 – September 30) and specified PM_{10} nonattainment areas during the winter months (November 1 – September March 31). A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action:

On January 18, 2018, the Department of Environmental Quality (Department) received a permit modification application from LHC to increase the crushing and screening production throughput capacity of the plant to 800 tons per hour (TPH) and well as increase the diesel-fired generator horsepower (hp) to 1600 hp with an operational limit of 4000 hours per year.

Section II: Conditions and Limitations

A. Emission Limitations

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 Code of Federal Regulation (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, other than a crusher (such as screens or conveyors), shall not exhibit opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR, Subpart OOO).

   - For equipment that commences construction, modification, or reconstruction on or after April 22, 2008: 7% opacity

   - For equipment that commences construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity

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 and 17.8.752).

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 may operate one or more crushers at any given time where the combined maximum rated design capacity shall not exceed 800 TPH (ARM 17.8.749).

8. LHC may operate one or more screens at any given time where the combined maximum rated design capacity shall not exceed 800 TPH (ARM 17.8.749).

9. LHC may operate one or more diesel-fired engines, including generator set engines, where the combined maximum capacity of the diesel-fired engines shall not exceed 1600 brake-horsepower (bhp) (ARM 17.8.749).

10. Operation of the diesel engine(s) driving the generator(s) shall not exceed 4000 hours per year during any rolling 12-month time period (ARM 17.8.749 and 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, and the 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 will 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, Subpart A and Subpart OOO).

2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. 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 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. 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 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, or 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 annually certify that its emissions are less than those that would require the source to obtain an air quality operation permit is 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 17.8.1204).

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 (Continuous Emission Monitoring System (CEMS), Continuous Emission 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. Permit Fee – 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 into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

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 #2615-16

I. Introduction/Process Description

A. Permitted Equipment

LHC, Inc. (LHC) owns and operates a portable non-metallic mineral processing plant consisting of the following equipment;

- Material Crushers with 800 tons per hour (TPH) combined capacity
- Material Screens with 800 TPH combined capacity
- Diesel-fired engine(s) powering generator sets or direct drive units with a combined rating not to exceed 1600 brake-horsepower (bhp)
- Associated equipment, such as; feeders, conveyors (including integrated equipment conveyors), stackers, and other material handling equipment.

MAQP #2615-16 is written de minimis friendly, whereby operational flexibility is provided so that alternate equipment may be utilized so long as maximum capacities are not exceeded. See Section II of the MAQP for specific equipment limitations and/or conditions.

B. Source Description

The crushing/screening plant is used to crush and sort sand and gravel materials for sale and use in construction operations. In a typical operational setup, unprocessed materials are loaded into the plant via a feed hopper and transferred by conveyor to the crushers. Crushed materials are then conveyed to the screen where materials are screened, separated, and stockpiled or sent back through the crusher for resizing.

The designated home location for this facility is Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County, Montana.

C. Permit History

On February 3, 1990, **MAQP #2615-00** was issued to LHC to operate a 1958 Universal portable gravel crusher.

On July 16, 1993, **MAQP #2615-01**, with **Addendum #1**, was issued because the crushing plant moved to within approximately 7 kilometers (km) of the Whitefish particulate matter with an aerodynamic diameter of ten microns or less (PM_{10}) nonattainment area (NAA). Addendum #1 expired September 30, 1993. On July 1, 1994, **MAQP #2615-02**, with **Addendum #2**, was issued because the crushing/screening plant moved to the same location. Addendum #2 expired on September 30, 1994.

On November 10, 1994, **MAQP #2615-03**, with **Addendum #3**, was issued because the crushing/screening plant moved within approximately 5 km of the Whitefish and Columbia Falls PM_{10} NAAs. Addendum #3 expired on September 30, 1995.

On March 2, 1995, **MAQP #2615-04**, with **Addendum #4**, was issued to allow the crushing/screening plant to operate in or within 10 km of certain PM_{10} NAAs during the summer months (April 1, 1995, through September 30, 1995). Addendum #4 expired on September 30, 1995.

On August 17, 1995, **MAQP #2615-05**, with **Addendum #5**, was issued to allow the crushing plant to operate in or within 10 km of the Columbia Falls and Whitefish PM_{10} NAA's during the winter months (October 1, 1995, through March 31, 1996). Addendum # 5 expired on March 31, 1996.

On March 23, 1997, **MAQP #2615-06** was issued for the replacement of the 1958 Universal jaw and rolls crusher with a 1950 Pioneer jaw crusher, to include the 206 kilowatt (kW) diesel generator, and **Addendum #6** was used to allow the facility to operate in or within 10 km of certain PM_{10} NAAs through September 30, 1997.

On October 6, 1997, **MAQP #2615-07,** with **Addendum #7**, was issued to allow the permitted facility to operate in or within 10 km of the Kalispell PM_{10} NAA through March 31, 1998.

On January 2, 1998, **MAQP #2615-08**, with **Addendum #8**, was issued to allow the permitted facility to operate in or within 10 km of the Columbia Falls PM_{10} NAA through September 30, 1998.

On February 7, 1998, a modification to MAQP #2615-08 was issued. LHC requested MAQP #2615-08 be modified to allow the permitted facility to operate in or within 10 km of the Thompson Falls PM_{10} NAA (Section 13, Township 21 North, Range 29 West, Sanders County, Montana; lying south of Montana Highway 200 and north of the Burlington Northern Railroad right-of-way) through September 30, 1998. LHC was still allowed to operate in or within 10 km of the Columbia Falls PM_{10} NAA (Section 36, Township 30 North, Range 21 West, Lot 3, Flathead County, Montana) through September 30, 1998. LHC was also still allowed to operate in or within 10 km of the Kalispell PM_{10} NAA (Sections 25 and 26, Township 29 North, Range 22 West, Flathead County, Montana) through September 30, 1998. The Department of Environmental Quality (Department) conducted modeling for the winter locations and determined that LHC would not adversely affect the Thompson Falls, Columbia Falls, or Kalispell NAAs. **MAQP #2615-09** replaced MAQP #2615-08, and **Addendum #9** replaced Addendum # 8.

On November 5, 1998, LHC requested that MAQP #2615-09 be modified to allow the permitted facility to operate at the Kalispell home pit located in Sections 25 and 26, Township 29 North, Range 22 West, Flathead County, Montana through March 31, 1999. **MAQP #2615-10** and **Addendum #10** also allowed the plant to operate in or within 10 km of certain PM_{10} NAAs from April 1, 1999, through September 30, 1999. MAQP #2615-10 replaced MAQP #2615-09 and Addendum #10 replaced Addendum #9.

On October 6, 1999, LHC requested that MAQP #2615-10 be modified to allow the permitted facility to operate at the following locations during the winter months of October 1, 1999, through March 31, 2000: 1) the Kalispell home pit located at Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County, Montana; and 2) the Thompson Falls pit located at Section 13, Township 21 North, Range 29 West, in Sanders County, Montana. The plant initially located at the Kalispell home pit. Because the Kalispell home pit is located within 10 km of the Kalispell PM_{10} NAA and the Thompson Falls pit is located within 10 km of the Thompson Falls PM_{10} NAA, SCREEN VIEW modeling was conducted to establish site-specific conditions to demonstrate compliance with ambient standards. **MAQP #2615-11** replaced MAQP #2615-10, and **Addendum #11** replaced Addendum #10.

On February 7, 2001, LHC requested that MAQP #2615-11 be modified to allow the permitted facility to operate at the following locations during the winter months of October 1, 2000, through March 31, 2001: 1) the Kalispell home pit located at Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County, Montana; and 2) the Whitefish pit located at the SW ¼ of the NW ¼ of Section 1, Township 30 North, Range 22 West, in Flathead County, Montana. The plant initially located at the Kalispell home pit. Because both the Kalispell home pit and the Whitefish pit are located within 10 km of the PM_{10} NAA, SCREEN VIEW modeling was conducted to establish site specific conditions to demonstrate compliance with ambient standards for operating at the two wintertime locations. **MAQP #2615-12** and **Addendum #12** replaced MAQP #2615-11 and Addendum #11.

On January 16, 2001, the Department received correspondence from LHC which requested that Addendum #12 be amended to allow LHC to operate in or within 10 km of the Kalispell, Libby, Whitefish, Columbia Falls, Thompson Falls, and Butte PM_{10} NAAs during the summer months (April 1 through September 30) and the Kalispell and Whitefish NAAs during the winter months. Wintertime operations would be limited to the Kalispell home pit located at Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County, Montana and the Whitefish pit located at the SW ¼ of the NW ¼ of Section 1, Township 30 North, Range 22 West, in Flathead County, Montana. **MAQP #2615-13** and **Addendum #13** replaced MAQP #2615-12 and Addendum #12.

On June 14, 2006, the Department received a request from LHC for a modification to MAQP #2615-13. The modification requested the replacement of the 206-kilowatt (kW) diesel generator with a 455-kW diesel generator. **MAQP #2615-14** and **Addendum #14** replaced MAQP #2615-13 and Addendum #13.

On July 31, 2013, the Department received a de minimis change request from LHC to increase the crushing and screening production throughput capacity to 300 tons per hour (TPH). In addition to the proposed administrative amendment changes, the permit action updated the permit language and rule references used by the Department, as well as adjusted the emission inventory to reflect the increase in production capacity. **MAQP #2615-15** and **Addendum #15** replaced MAQP #2615-14 and Addendum #14.

D. Current Permit Action

On January 18, 2018, the Department received a permit modification application from LHC to increase the crushing and screening production throughput capacity of the plant to 800 tons per hour (TPH) and well as increase the diesel-fired generator horsepower (hp) to capacity 1600 hp with an operational limit of 4000 hours per year.

In addition to the permit modification changes, the permit action updates the permit language and rule references used by the Department, as well as adjusts the emission inventory to reflect the increase in production and engine capacity. **MAQP #2615-16** and **Addendum #16** replaces MAQP #2615-15 and Addendum #15.

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 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide (SO_2)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO_2)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O_3)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H_2S)
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standards for Lead
10. ARM 17.8.223 Ambient Air Quality Standards for PM_{10}

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 are 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 Code of Federal Regulation (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by LHC the portable crushing/screening operation and associated equipment are applicable to NSPS (40 CFR 60), as follows:

   a. 40 CFR, 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 Plant. 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 #2615-16 is subject to this subpart as equipment 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. 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. As the permit is written de minimis-friendly, LHC may substitute compression ignition internal combustion engine(s), therefore applicability to this subpart shall be dependent upon the date of construction and/or manufacture of the diesel engine utilized and the nature, location, and duration of operations at a given location.

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. Based on the information submitted by LHC the associated diesel engines are applicable to NESHAP (40 CFR 63), as follows:

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment of facilities subject to a NESHAP Subpart as listed below:

   b. 40 CFR 63, Subpart ZZZZ – NESHAPs 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 hazardous air pollutant (HAP) emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. As LHC is considered an area source of HAP emissions and operates RICE equipment, the engine(s) are potentially subject to this subpart depending upon the operation of the engine(s).

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 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 pro-rate 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 a PTE greater than 15 tpy of any pollutant. LHC has the PTE greater than 15 tpy of PM, PM_{10}, CO, and oxides of nitrogen (NO_x); 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 January 9, 2018 issue of *The Daily Interlake,* a newspaper of general circulation in the Town of Kalispell in Flathead County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by 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 used. 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 Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 tpy of any pollutant (excluding fugitive emissions).

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

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

   a. PTE > 100 tpy of any pollutant;

   b. PTE > 10 tpy of any single HAP, PTE > 25 tpy of combined HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tpy of PM_{10} in a serious PM_{10} 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 MAQP #2615-16 for LHC, the following conclusions were made:

   a. The facility's PTE is below 100 tpy.

   b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy of combined HAPs.

   c. This source is not located in a serious PM10 nonattainment area.

   d. This facility is subject to current NSPS (40 CFR 60, Subpart OOO and potentially Subpart IIII).

   e. This facility is potentially subject to a current NESHAP (40 CFR 63, Subpart ZZZZ).

   f. This source is not a Title IV affected source.

   g. This source is not a solid waste combustion unit.

   h. This source is not an EPA designated Title V source.

   LHC 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.

   i. 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 each new or modified source. LHC shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

Previous BACT determinations have identified the use of water spray bars as sufficient particulate matter control for screening and crushing operations as well as compliance with applicable federal standards and proper operation and maintenance for the use of diesel-fired engines. LHC currently utilizes water spray bars for particulate matter suppression and proper operation and maintenance practices as well as compliance with applicable federal regulations for the diesel-fired engines. Therefore, the Department has determined that BACT is being utilized and no further analysis is needed.

IV. Emission Inventory

CONTROLLED	**tons/year**						
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**	**SO_2**
Cold Aggregate Storage Piles	13.60	6.43	0.97	--	--	--	--
Cold Aggregate Handling/Conveyors	2.45	0.81	0.23	--	--	--	--
Cold Aggregate Screens	7.71	2.59	0.18	--	--	--	--
800 TPH Crushing Circuit	4.20	1.89	0.35	--	--	--	--
Haul Roads / Vehicle Traffic	11.37	3.13	0.31	--	--	--	--
Diesel Generator (Large)	7.04	7.04	7.04	76.80	17.60	8.05	6.56
Total Emissions	**46.38**	**21.90**	**9.08**	**76.80**	**17.60**	**8.05**	**6.56**

Notes:
1. Values in table reflect "controlled" cells from subsequent worksheets

Cold Aggregate Storage Piles

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of Piles = 1 piles	1	**piles**
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 = 0.00388 lb/ton	0.0039	**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 (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	9.3	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.00388216962566822 lb/ton) = 13.60 ton/yr	13.60	**ton/yr**
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 = 0.00184 lb/ton	0.00184	**lb/ton**
Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.35	
U = mean wind speed = 9.3 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	9.3	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.00183616130943767 lb/ton) = 6.43 ton/yr	6.43	**ton/yr**

PM2.5 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 = 0.00028 lb/ton	0.000278	**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)	0.053	
U = mean wind speed = 9.3 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	9.3	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.000278047284000562 lb/ton) = 0.97 ton/yr	0.97	**ton/yr**

Conveyor Transfer Point (SCC 3-05-020-06)

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of Transfers = 5 transfer (Company Information)	5	**transfer**
Total PM Emissions:		
Emission Factor = 0.00014 lb/ton (0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00014	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (5 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 2.45 ton/yr	2.45	**ton/yr**
Total PM10 Emissions:		
Emission Factor = 0.000046 lb/ton (0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000046	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (5 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.81 ton/yr	0.81	**ton/yr**
Total PM2.5 Emissions		
Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)	0.000013	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (5 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.23 ton/yr	0.23	**ton/yr**

Screening (SCC 3-05-020-02, 03)

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr 7008000 tons/year	8760	**hrs/yr**
Number of Screens = 1 screen(s) (Company Information)	1	**screen(s)**
Total PM Emissions:		
Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 7.71 ton/yr	7.71	**ton/yr**
Total PM10 Emissions:		
Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00074	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 2.59 ton/yr	2.59	**ton/yr**
Total PM2.5 Emissions		
Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.00005	**lb/ton**
Calculation: (800 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.18 ton/yr	0.18	**ton/yr**

Crushing Circuit (SCC 3-05-020-05)

Maximum Process Rate = 800 ton/hr (Application information)	800	**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: (800 ton/hr) * (8760 ton/hr) * (0.0012 lb/ton) * (ton/2000 lb) = 4.20 ton/yr	4.20	**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) * ( ) * (0.00054 lb/ton) * (ton/2000 lb) = 1.89 ton/yr	1.89	**ton/yr**
PM2.5 Emissions		
Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0001	**lb/ton**
Calculation: (800 ton/hr) * (8760 ton/hr) * (0.0001 lb/ton) * (ton/2000 lb) = 0.35 ton/yr	0.35	**ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.2083333 33	**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 lb/VMT	12.46	**lb/VMT**
Where: k = constant = 4.9 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	4.9	**lbs/VMT**
s = 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 = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.7	
b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 11.37 tons/yr (Unontrolled Emissions)	11.37	**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 lb/VMT	3.43	**lb/VMT**
Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.5	**lbs/VMT**
s = 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 = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 3.13 tons/yr (Uncontrolled Emissions)	3.13	**tons/yr**
PM2.5 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 lb/VMT	0.34	**lb/VMT**
Where: k = constant = 0.15 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.15	**lbs/VMT**
s = 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 = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54	**tons**
a = constant = 0.9 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.9	
b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.31 tons/yr (Uncontrolled Emissions)	0.31	**tons/yr**

Diesel Generator (Large)

Note: Emissions are based on the power output of the engine (1600 hp).		
Operational Capacity of Engine = 1,600 hp	1600	**hp**
Hours of Operation = 4,000.00 hours	4000	**hours**
PM Emissions:		
PM Emissions = 7.04 ton/yr (Assume all PM < 1.0 um)	7.04	**ton/yr**
PM-10 Emissions:		
Emission Factor = 0.0022 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (1,600 hp) * (4,000 hours) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 7.04 ton/yr	7.04	**ton/yr**
PM2.5 Emissions		
Emission Factor = 0.0022 lbs/hp-hr (Assume all PM < 1.0 um)	0.0022	**lbs/hp-hr**
Calculation: (1,600 hp) * (4,000 hours) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 7.04 ton/yr (Assume all PM < 1.0 um)	7.04	**ton/yr**
NOx Emissions:		
Emission Factor = 0.024 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.024	**lbs/hp-hr**
Calculation: (1,600 hp) * (4,000 hours) * (0.024 lbs/hp-hr) * (ton/2000 lb) = 76.80 ton/yr	76.80	**ton/yr**
CO Emissions:		
Emission Factor = 0.0055 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	5.50E-03	**lbs/hp-hr**
Calculation: (1,600 hp) * (4,000 hours) * (0.0055 lbs/hp-hr) * (ton/2000 lb) = 17.60 ton/yr	17.60	**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: (1,600 hp) * (4,000 hours) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 8.05 ton/yr	8.05	**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: (1,600 hp) * (4,000 hours) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 6.56 ton/yr	6.56	**ton/yr**

V. Existing Air Quality

The designed home-pit (Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County, Montana) for this portable operation is located in an area designated as nonattainment for PM_{10} and attainment or unclassified for all other National Ambient Air Quality Standards.

VI. Air Quality Impacts

MAQP #2615-16 covers operation of the crushing and screen plant while operating in areas within Montana that are classified as attainment or unclassifiable with federal ambient air quality standards, excluding counties that have a Department-approved permitting program and areas that are considered tribal lands. This permit contains conditions and limitations that would protect air quality, and would limit the facility's emissions below the major source threshold. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

While the source is located in or within 10 km of a PM_{10} NAA, LHC will be required to operate in accordance with MAQP #2615-16 and Addendum #16, which includes more stringent limits and conditions to ensure that the proposed operation does not result in additional degradation of air quality in the affected nonattainment area. A more detailed discussion and analysis of ambient impacts from operations locating in or within 10 km of certain PM_{10} nonattainment areas is contained in the Addendum Analysis to Addendum #16 of MAQP #2615-16.

VII. Ambient Air Impact Analysis

The Department determined that there will be no significant impact from this permit action. Furthermore, the Department believes that the amount of emissions generated by this project will not markedly degrade air quality nor contribute to an exceedance of any set ambient standard.

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 completer for this project. A copy is attached.

Addendum #16
LHC, Inc.
Montana Air Quality Permit (MAQP) #2615-16

An addendum to Montana Air Quality Permit (MAQP) #2615-16 is hereby granted to LHC Contacting, Inc. (LHC), pursuant to Sections 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

LHC owns a portable crushing and screening plant with a combined maximum rated design capacity of 800 tons per hour (TPH) crushing production and 800 TPH of screening production. The production equipment and associated equipment are powered by a 1600 brake-horsepower (bhp) diesel-fired engine or generator set.

II. Seasonal and Site Restrictions – **Winter and Summer Seasons**

Addendum #16 applies to the LHC facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

A. During the summer season (April 1-September 30) – LHC may operate at any location in or within 10 km of the Butte, Columbia Falls, Libby, Kalispell, Thompson Falls, and Whitefish PM_{10} nonattainment areas.

B. During the winter season (October 1-March 31) – The only location(s) in or within 10 km of certain PM_{10} nonattainment area where LHC may operate is:

- Kalispell home pit located at the NE ¼ of Section 26 and the NW ¼ of Section 25, Township 29 North, Range 22 West, in Flathead County;
- Thompson Falls pit located at Section 13, Township 21 North, Range 29 West, in Sanders County;
- Whitefish pit located at the SW ¼ of the NW ¼ of Section 1, Township 30 North, Range 22 West, in Flathead County; and
- Any site that may be approved, in writing, by the Department of Environmental Quality (Department).

C. LHC shall comply with the limitations and conditions contained in Addendum #16 to MAQP #2615-16 while operating in or within 10 km of any of the previously identified PM_{10} nonattainment areas. Addendum #16 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #16 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 Limitations and Conditions – **Summer Season (April 1 – September 30)**

1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749).

2. LHC shall not cause or authorize to be discharged into the atmosphere from any equipment, any visible emissions that 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).

3. 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 (ARM 17.8.749).

4. 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 (ARM 17.8.749).

5. The total combined maximum crusher production shall not exceed 19,200 tons per day (ARM 17.8.749).

6. The total combined maximum crusher production shall not exceed 19,200 tons per day (ARM 17.8.749).

7. LHC may operate one or more diesel-fired engines, including generator set engines, where the combined maximum capacity of the diesel-fired engines shall not exceed 1600 bhp (ARM 17.8.749).

B. Operational Limitations and Conditions – **Winter Season (November 1 – March 31)**

1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749).

2. LHC shall not cause or authorize to be discharged into the atmosphere from any equipment, any visible emissions that 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).

3. 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 (ARM 17.8.749).

4. 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 (ARM 17.8.749).

5. The total combined maximum crusher production shall not exceed 9,600 tons per day (ARM 17.8.749).

6. The total combined maximum screen production shall not exceed 9,600 tons per day (ARM 17.8.749).

7. LHC may operate one or more diesel-fired engines, including generator set engines, where the combined maximum capacity of the diesel-fired engines shall not exceed 1600 bhp (ARM 17.8.749).

8. Operation the associated diesel-engine(s), including generator set engine(s), shall not exceed 12 hours per day (ARM 17.8.749).

C. 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 five years and submitted to the Department upon request. The information must include (ARM 17.8.749):

   a. Daily tons of production by each crusher at each site (including amount of recirculated/rerun material). LHC shall document, by day, the total crushing production. LHC shall sum the total crushing production for the previous day to demonstrate compliance with the limitations in Sections III.A.5 and III.B.5.

   b. Daily tons of material screened by each screen at each site (including amount of recirculated/rerun material). LHC shall document, by day, the total screening production. LHC shall sum the total screening production for the previous day to demonstrate compliance with the limitations in Sections III.A.6 and III.A.6.

   c. Daily hours of operation and bhp rating for each diesel engine, including generator set engines, at each site. LHC shall document, by day, the total hours of operation and the bhp rating of each diesel-fired engine to demonstrate compliance with the limitations in Sections III.A.7, III.B.7 and III.B.8.

   d. Daily hours of operation at each site.

e. Daily tons of bulk material loaded at each site (production).

f. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum #16 Analysis
LHC, Inc.
Montana Air Quality Permit (MAQP) #2615-16

I. Permitted Equipment

LHC owns a portable crushing and screening plant with a combined maximum rated design capacity of 800 tons per hour (TPH) crushing production and 800 TPH of screening production. The production equipment and associated equipment are powered by a 1600 brake-horsepower (bhp) diesel-fired engine or generator set.

II. Source Description

LHC uses this crushing/screening plant and associated equipment to crush sand and gravel materials for use in various construction operations. For a typical operational setup, materials are loaded into the crushing/screening plant by a hopper and transferred via conveyor and passed through the crusher. Materials are crushed and sent to the screens. Materials are screened, separated, and sent to stockpile for sale and use in construction operations.

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 of Environmental Quality (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 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.

B. 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. 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.

IV. Emission Inventory

CONTROLLED (Summer)	pounds/day						
Emission Source	**PM**	**PM10**	**PM2.5**	**NOx**	**CO**	**VOC**	**SO2**
Cold Aggregate Storage Piles	63.46	30.01	4.55	--	--	--	--
Cold Aggregate Handling/Conveyors	13.44	4.42	1.25	--	--	--	--
Cold Aggregate Screens	42.24	14.21	0.96	--	--	--	--
800 ton/hr Crushing Circuit	23.04	10.37	1.92	--	--	--	--
Haul Roads/Vehicle Traffic	62.30	17.17	1.72	--	--	--	--
1600 hp Diesel Engine Generator	84.48	84.48	84.48	1190.40	256.51	96.54	78.72
Total Emissions	**288.96**	**160.66**	**94.87**	**1190.40**	**256.51**	**96.54**	**78.72**

<547 lb/day

Notes:

1. Values in table reflect "controlled" cells from subsequent worksheets

CONTROLLED (Winter)	pounds/day						
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**CO**	**VOC**	**SO_2**
Cold Aggregate Storage Piles	31.73	15.01	2.27	--	--	--	--
Cold Aggregate Handling/Conveyors	6.72	2.21	0.62	--	--	--	--
Cold Aggregate Screens	21.12	7.10	0.48	--	--	--	--
800 ton/hr Crushing Circuit	11.52	5.18	0.96	--	--	--	--
Haul Roads/Vehicle Traffic	31.15	8.59	0.86				
1600 hp Diesel Engine Generator	42.24	42.24	42.24	595.20	128.26	48.27	39.36
Total Emissions	**144.48**	**80.33**	**47.44**	**595.20**	**128.26**	**48.27**	**39.36**

<82 lb/day

Notes:

1. Values in table reflect "controlled" cells from subsequent worksheets

Note: Limitations were placed on the diesel generator to keep NO_x emissions below the 100 tpy Title V threshold

Cold Aggregate Storage Piles

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 24 hrs/day (summer hours)	24	**hrs/day**
Maximum Hours of Operation = 12 hrs/day (winter hours)	12	**hrs/day**
Number of Piles = 1 piles	1	**piles**
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 = 0.00331 lb/ton	0.0033 1	**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 = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10.00	**mph**
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.00	**%**

Calculation: (800 ton/hr) * (24 hrs/day) * (1 piles) * (0.00331 lb/ton) = 63.46 lb/day (Summer hours)	63.46	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 piles) * (0.00331 lb/ton) = 31.73 lb/day (Winter hours)	31.73	**lb/day**

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 = 0.00156 lb/ton*	0.0015 6	**lb/ton**
Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)	0.35	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10.00	**mph**
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.00	**%**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 piles) * (0.00331 lb/ton) = 30.01 lb/day (Summer hours)	30.01	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 piles) * (0.00331 lb/ton) = 15.01 lb/day (Winter hours)	15.01	**lb/day**

PM2.5 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 = 0.00024 lb/ton	0.0002 37	**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)	0.05	
U = mean wind speed = 10 mph (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	10.00	**mph**
M = material moisture content = 3% (Estimate based on values provided in AP 42, Sec. 13.2.4.3, 11/06)	3.00	**%**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 piles) * (0.00331 lb/ton) = 4.55 lb/day (Summer hours)	4.55	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 piles) * (0.00331 lb/ton) = 2.27 lb/day (Winter hours)	2.27	**lb/day**

Conveyor Transfer Point (SCC 3-05-02006)

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 24 hrs/day	24	**hrs/day**
Maximum Hours of Operation = 12 hrs/day	12	**hrs/day**
Number of Transfers = 1 transfer (Company Information)	1	**transfer**

Total PM Emissions:

Emission Factor = 0.00014 lb/ton (0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0001 4	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 transfer) * (0.00014 lb/ton) = 2.69 lb/day (Summer Hours)	2.69	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 transfer) * (0.00014 lb/ton) = 1.34 lb/day (Winter Hours)	1.34	**lb/day**

Total PM10 Emissions:

Emission Factor = 0.000046 lb/ton (0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0000 46	**lb/ton**

Calculation: (800 ton/hr) * (24 hrs/day) * (1 transfer) * (0.00005 lb/ton) = 0.88 lb/day (Summer Hours)	0.88	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 transfer) * (0.00005 lb/ton) = 0.44 lb/day (Winter Hours)	0.44	**lb/day**

PM2.5 Emissions:

Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0000 13	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 transfer) * (0.00001 lb/ton) = 0.25 lb/day (Summer Hours)	0.25	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 transfer) * (0.00001 lb/ton) = 0.12 lb/day (Winter Hours)	0.12	**lb/day**

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

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 24 hrs/day (Summer Hours)	24	**hrs/day**
Maximum Hours of Operation = 12 hrs/day (Winter Hours)	12	**hrs/day**
Number of Screens = 1 screen(s) (Company Information)	1	**screen(s)**

Total PM Emissions:

Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0022	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 screen(s)) * (0.00220 lb/ton) = 42.24 lb/day (Summer Hours)	42.24	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 screen(s)) * (42.24000 lb/day) = 21.12 lb/day (Winter Hours)	21.12	**lb/day**

Total PM10 Emissions:

Emission Factor = 0.00074 lb/ton (0.00074 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0007 4	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 screen(s)) * (0.00074 lb/ton) = 14.21 lb/day (Summer Hours)	14.21	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 screen(s)) * (14.21 lb/day) = 7.10 lb/day (Winter Hours)	7.10	**lb/day**

PM2.5 Emissions:

Emission Factor = 0.00005 lb/ton (0.000050 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0000 50	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (1 screen(s)) * (0.00005 lb/ton) = 0.96 lb/day (Summer Hours)	0.96	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1 screen(s)) * (0.96 lb/day) = 0.48 lb/day (Winter Hours)	0.48	**lb/day**

Crushing Circuit (SCC 3-05-020-05)

Maximum Process Rate = 800 ton/hr (Maximum plant process rate)	800	**ton/hr**
Maximum Hours of Operation = 24 hrs/day (Summer Hours)	24	**hrs/day**
Maximum Hours of Operation = 12 hrs/day (Winter Hours)	12	**hrs/day**

Total PM Emissions:

Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0012	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (0.0012 lb/ton) = 23.04 lb/day (Summer Hours)	23.04	**lb/day**

Calculation: (800 ton/hr) * (12 hrs/day) * (23.04 lb/day) = 11.52 lb/day (Winter Hours)	11.52	**lb/day**
Total PM10 Emissions:		
	0.0005	
Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	4	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (0.00054 lb/ton) = 10.37 lb/day (Summer Hours)	10.37	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (10.368 lb/day) = 5.18 lb/day (Winter Hours)	5.18	**lb/day**
PM2.5 Emissions		
Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04)	0.0001	**lb/ton**
Calculation: (800 ton/hr) * (24 hrs/day) * (0.0001 lb/ton) = 1.92 lb/day (Summer Hours)	1.92	**lb/day**
Calculation: (800 ton/hr) * (12 hrs/day) * (1.92 lb/day) = 0.96 lb/day (Winter Hours)	0.96	**lb/day**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.21	**VMT/hr**
Hours of Operation = 24 hrs/day (Summer Hours)	24	**hrs/day**
Hours of Operation = 12 hrs/day (Winter Hours)	12	**hrs/day**
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 lb/VMT	12.46	**lb/VMT**
Where: k = constant = 4.9 lbs/VMT (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	4.90	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.10	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54.00	**tons**
a = constant = 0.7 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.70	
b = constant = 0.45 (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (24 hrs/day) * (0.21 VMT/hr) * (12.46 lb/VMT) = 62.30 lb/day (Uncontrolled Emissions, Summer Hours)	62.30	**lb/day**
Calculation: (12 hrs/day) * (0.21 VMT/hr) * (4.90 lbs/VMT) = 31.15 lb/day (Uncontrolled Emissions, Winter Hours)	31.15	**lb/day**
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 lb/VMT	3.43	**lb/VMT**
Where: k = constant = 1.5 lbs/VMT (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	1.50	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.10	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54.00	**tons**
a = constant = 0.9 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.90	
b = constant = 0.45 (Value for PM10, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (24 hrs/day) * (0.21 VMT/hr) * (3.43 lb/VMT) = 17.17 lb/day (Uncontrolled Emissions, Summer Hours)	17.17	**lb/day**

Calculation: (12 hrs/day) * (0.21 VMT/hr) * (1.50 lbs/VMT) = 8.59 lb/day (Uncontrolled Emissions, Winter Hours)	8.59	**lb/day**

PM2.5 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 lb/VMT	0.34	**lb/VMT**
Where: k = constant = 0.15 lbs/VMT (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.15	**lbs/VMT**
s = surface silt content = 7.1 % (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)	7.10	**%**
W = mean vehicle weight = 54 tons (1994 average loaded/unloaded or a 40 ton truck)	54.00	**tons**
a = constant = 0.9 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.90	
b = constant = 0.45 (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)	0.45	
Calculation: (24 hrs/day) * (0.21 VMT/hr) * (0.34 lb/VMT) = 1.72 lb/day (Uncontrolled Emissions, Summer Hours)	1.72	**lb/day**
Calculation: (12 hrs/day) * (0.21 VMT/hr) * (0.15 lbs/VMT) = 0.86 lb/day (Uncontrolled Emissions, Winter Hours)	0.86	**lb/day**

Diesel Engine Generator

Note: Emissions are based on the power output of the engine (1600 hp).

Operational Capacity of Engine = 1,600 hp	1600	**hp**
Hours of Operation = 24.00 hrs/day (Summer Hours)	24	**hrs/day**
Hours of Operation = 12.00 hrs/day (Winter Hours)	12	**hrs/day**

PM Emissions:

PM Emissions = 84.48 lbs/day (Assume PM = PM10, Summer Hours)	84.48	**lbs/day**
PM Emissions = 42.24 lbs/day (Assume PM = PM10, Winter Hours)	42.24	**lbs/day**

PM-10 Emissions:

Emission Factor = 0.0022 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (24 hrs/day) * (1,600 hp) * (0.0022 lbs/hp-hr) = 84.48 lb/day (Summer Hours)	84.48	**lb/day**
Calculation: (12 hrs/day) * (1,600 hp) * (84.48 lb/day) = 42.24 lb/day (Winter Hours)	42.24	**lb/day**

PM2.5 Emissions:

Emission Factor = 0.0022 lbs/hp-hr (Assume all PM < 1.0 um)	0.0022	**lbs/hp-hr**
Calculation: (24 hrs/day) * (1,455 hp) * (0.0022 lbs/hp-hr) = 76.82 lb/day (Summer Hours)	84.48	**lb/day**
Calculation: (12 hrs/day) * (1,455 hp) * (76.824 lb/day) = 38.41 lb/day (Winter Hours)	42.24	**lb/day**

NOx Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.03	**lbs/hp-hr**
	1190.4	
Calculation: (24 hrs/day) * (1,600 hp) * (0.031 lbs/hp-hr) = 1,190.40 lb/day (Summer Hours)	0	**lb/day**
Calculation: (12 hrs/day) * (1,600 hp) * (1190.4 lb/day) = 595.20 lb/day (Winter Hours)	595.20	**lb/day**

CO Emissions:

	0.0066	**lbs/hp**
Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	8	**-hr**
Calculation: (24 hrs/day) * (1,600 hp) * (0.00668 lbs/hp-hr) = 256.51 lb/day (Summer Hours)	256.51	**lb/day**
Calculation: (12 hrs/day) * (1,600 hp) * (256.512 lb/day) = 128.26 lb/day (Winter Hours)	128.26	**lb/day**

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)	0.0025 141	**lbs/hp** **-hr**
Calculation: (24 hrs/day) * (1,600 hp) * (0.0025141 lbs/hp-hr) = 96.54 lb/day (Summer Hours)	96.54	**lb/day**
Calculation: (12 hrs/day) * (1,600 hp) * (96.54144 lb/day) = 48.27 lb/day (Winter Hours)	48.27	**lb/day**

SOx Emissions:

	0.0020	**lbs/hp**
Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	5	**-hr**
Calculation: (24 hrs/day) * (1,600 hp) * (0.00205 lbs/hp-hr) = 78.72 lb/day (Summer Hours)	78.72	**lb/day**
Calculation: (12 hrs/day) * (1,600 hp) * (78.72 lb/day) = 39.36 lb/day (Winter Hours)	39.36	**lb/day**

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}). Due to exceedance of the national standards for PM_{10}, 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 PM_{10}. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM_{10} 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 identified these sources to be the major contributors to PM_{10} emissions.

MAQP #2615-16 and Addendum #16 are for a portable crushing/screening plant that will locate at sites in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. 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 #2615-16 and Addendum #16 will cover the operations of this portable crushing/screening plant, while operating in or within 10 km of a PM_{10} nonattainment area during the summer months (April 1 through September 30).
The Department has determined that no significant impact to air quality will result from this permit action.

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 and determined there are no taking or damaging implications.

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?
		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.

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy & Mining Division
Air Quality Bureau
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ENVIRONMENTAL ASSESSMENT (EA)

Issued To: LHC, Inc.

Montana Air Quality Permit number (MAQP): #2615-16

EA Draft: March 14, 2018
EA Final: April 4, 2018
Permit Final: April 20, 2018

1. *Legal Description of Site*: LHC, Inc. (LHC) operates a portable crushing/screening facility. However, MAQP #2615-16 would apply while operating at any location in Montana, except within those areas having a Department-approved permitting program or those areas considered tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum #16 applies to the LHC facility while operating at any location in or within 10 km of certain PM_{10} 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).

2. *Description of Project:* LHC proposes to increase production capacity from 300 tons per hour (tph) to 800 tph as well as increase the size of the diesel-fired generator from 638 horsepower (hp) to 1600 hp.

3. *Objectives of Project:* By increasing the production capacity and the size of the diesel generator, LHC would be able to provide more crushed aggregate as well as an increase in power to the crushing and screening equipment.

4. *Alternatives Considered:* In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality permit to the proposed facility which would result in lost revenue due to decreased production capacity. However, the Department does not consider the "no-action" alternative to be appropriate because LHC 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 listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in Permit #2615-16.

6. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would not unduly restrict private property rights.

7. *SUMMARY OF COMMENT ON POTENTIAL PHYSICAL AND BIOLOGICAN EFFECTS:* The following comments have been prepared by the Department.

A. *Terrestrial and Aquatic Life and Habitats*

An increase in production capacity and the size of the diesel generator would have only minor impacts upon the terrestrial and aquatic life and habitats in areas where the generator may operate. Although air pollutant deposition would occur in the areas where the equipment operates, the size and temporary nature of the operation, dispersion characteristics of pollutants, and conditions placed in MAQP #2615-16 and Addendum #16 would result in minor impacts. Therefore, the operation of the equipment would present only minor impacts to the terrestrial and aquatic life and habitats in areas of potential operation.

B. *Water Quality, Quantity, and Distribution*

Although there would be an increase in air emissions from the increased production capacity as well as the portable diesel generator, there would only be minor impacts on water quality, quantity, and distribution because of the temporary nature, size, operational requirements, and conditions placed in MAQP #2615-16 and Addendum #16 for the facility. Further, as described in Section 7.F. of this EA, the Department determined that any impacts from deposition of pollutants would be minor. In addition, any accidental spills or leaks from equipment would be required to be handled according to the appropriate environmental regulations in an effort to minimize any potential adverse impact on the immediate and surrounding area. Overall, the increase in production capacity and generator size would have minor impacts to water quality, quantity, and distribution in the area of operations.

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

As a result of the increased production and size of the generator, there would be minor impacts to the geology and soil quality, stability, and moisture near the equipment's operational area because of the increased vehicle traffic and deposition of pollutants from the generator operations. As explained in Section 7.F. of this EA, the facility's size, operational requirements, temporary nature of the operation, and conditions placed in MAQP #2615-16 and Addendum #16 would minimize the impacts from deposition.

D. *Vegetation Cover, Quantity, and Quality*

Minor impacts would occur on vegetative cover, quality, and quantity because the increased production capacity and larger generator would operate in an area where vegetation has been previously disturbed. Pollutants would be greatly dispersed and corresponding deposition on vegetation from the proposed project would be minor (see Section 8.F of this EA). Also, water would be used for pollution control, as necessary. Therefore, because water use and corresponding water runoff would be minimal, only minimal amounts of vegetation exists within the pit, and minimal vegetation outside the pit would be impacted, the associated impacts upon vegetation would be minimal.

E. *Aesthetics*

This larger generator and crushing/screening facility would be visible and would create noise while operating at the existing gravel pit site. However, MAQP #2615-16 would include conditions to control emissions, including visible emissions, from the plant. Also, permit limitations and conditions from Addendum #16 would apply when the facility is operating in nonattainment areas. Since this is an existing portable crushing/screening facility and would operate on an intermittent and seasonal basis, any visual aesthetic impacts would be minor and short-lived.

F. *Air Quality*

Air quality impacts from the proposed project would be minor because this is an existing facility that would operate on an intermittent and temporary basis and would be located at previously disturbed sites. MAQP #2615-16 would include conditions limiting the facility's opacity and the facility's crushing/screening production. MAQP #2615-16 would also require water and water spray bars be available on site and used to control emissions. MAQP #2615-16 would also limit total emissions from the crushing/screening facility and any additional LHC equipment operated at the site to 250 tons/year or less, excluding fugitive emissions. Additionally, Addendum #16 would apply while the facility is operating in or within 10 km of a certain PM_{10} nonattainment areas and would impose more stringent requirements for operations within those areas.

Further, the Department determined that this existing crushing/screening facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's PTE was limited below the major source threshold level of 100 tons per year for any regulated pollutant. Pollutant deposition from the facility 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 (due to site topography of the area and minimal vegetative cover in the area). Therefore, air quality impacts from operating the crushing/screening equipment in this area would be minor.

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

Issuance of this permit would increase emissions to the atmosphere near the location proposed for the operation. However, because of the relatively small size and temporary nature of the diesel generator, operating in previously disturbed areas, and conditions placed in MAQP #2615-16 and Addendum #16, any impacts to unique endangered, fragile, or limited environmental resources from the deposition of pollutants would be minor.

H. *Sage Grouse Executive Order*

The Department recognizes that the site is not within the Greater Sage Grouse habitat as defined by Executive Order No. 12-2015.

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

The diesel generator would be used to provide power to LHC's crushing and screening equipment. Water would be used on haul roads, access roads, parking lots, or the general

plant property, as necessary, to control dust resulting from indirect use of the diesel generator and increased production capacity. Generally, the operations are seasonal and would result in smaller demands on environmental resources. Therefore, any impacts on the demands of the environmental resources of water, air, and energy would be minor.

J. *Historical and Archaeological Sites*

The Department previously contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed area of construction/operation. Search results concluded that there are no previously recorded historical or archaeological resources of concern within the area proposed for initial operations. According to past correspondence from the Montana State Historic Preservation Office, there would be a low likelihood of adverse disturbance to any known archaeological or historic site given previous industrial disturbance to an area. Therefore, no impacts upon historical or archaeological sites would be expected as a result of the current permit action.

K. *Cumulative and Secondary Impacts*

The increased in production capacity and size of the diesel generator would cause minor effects to the physical and biological environment because other operations may potentially locate at the same site. However, any operations would have to apply for and receive the appropriate permits from the Department prior to operation. The permits would address the environmental impacts associated with the operations at the proposed sites.

The diesel generator and crushing/screening operation would be limited by MAQP #2615-16 to total emissions of 250 tons/year or less from non-fugitive diesel generator operations and any other additional equipment used at any given site.

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 increase in production capacity and size of the diesel generator 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 only have temporary and intermittent operations.

B. *Cultural Uniqueness and Diversity*

The cultural uniqueness and diversity of this area would not be impacted by the increase in production capacity and size of the diesel generator because the facility is an existing portable source, with seasonal and intermittent operations.

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

The proposed increase in production capacity and size of the diesel generator would have little, if any, effect on local and state tax base and tax revenue. The facility is a relatively small and temporary source; therefore, it would not remain at any individual site for any

extended time period. No full time, permanent employees would be added as a result of issuing MAQP #2615-16, and any revenue created by the increased production capacity and operation of the diesel generator would be widespread and for a relatively short time period.

D. *Agricultural or Industrial Production*

Under normal circumstances, the increase in production capacity and operation of the diesel generator would take place in a previously disturbed industrial area. Therefore, the Department does not expect that the operation of the equipment would affect or displace any agricultural land. Further, the operation is small by industrial standards and would have only a minor impact on any local industrial production.

E. *Human Health*

MAQP #2615-16 would incorporate conditions to ensure that the increased production capacity and larger diesel generator would be operated in compliance with all applicable 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 Department determined that any impacts from additional deposition of pollutants associated with the increased production capacity and generator size would be minor due to dispersion characteristics and conditions placed in MAQP #2615-16. The air emissions from this facility would be minimized by opacity limitations on the diesel generator and the surrounding area of operation.

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

The increased production capacity and larger generator would be located on previously disturbed property and would not impact access to recreational and wilderness activities. However, minor impact on the quality of recreational activities might be created by the noise from the generator. Emissions from the generator would be minimized as a result of limitations placed in MAQP #2615-16 and the temporary and portable nature of the operation.

G. *Quantity and Distribution of Employment*

This portable crushing/screening operation would only require a few existing employees to operate and would have seasonal and intermittent operations. No individuals would be expected to permanently relocate to this area of operation as a result of increasing the production capacity and size of the generator. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. *Distribution of Population*

The portable crushing/screening operation is a portable industrial facility that would require only a few existing employees to operate. No individuals would be expected to permanently relocate to this area of operation as a result of increasing the production capacity and size of the generator. Therefore, the crushing/screening facility would not impact the normal population distribution in the area of operation or any future operating site.

I. *Demands of Government Services*

Government services would be required for acquiring the appropriate permits and ensuring compliance with the permits that are issued; however, the government services required would be minor.

J. *Industrial and Commercial Activity*

No additional industrial or commercial activity would result from an increased production capacity or the operation of the larger diesel generator.

K. *Locally Adopted Environmental Plans and Goals*

LHC would be allowed, by MAQP #2615-16, to operate in areas designated by EPA as attainment or unclassified for ambient air quality. Addendum #16 to MAQP #2615-16 would allow for summertime operations (April 1- September 30) in or within 10 km of certain PM10 nonattainment areas. MAQP #2615-16 would contain limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. Because this is an existing portable facility and would have intermittent and seasonal operations, any impacts from the facility would be minor and short-lived.

L. *Cumulative and Secondary Impacts*

Overall, the cumulative and secondary social and economic impacts from this project would be minor because the larger diesel generator would originally locate at an existing gravel pit. New businesses would not be drawn to the area and permanent jobs would not be created or lost due to the operation of the larger diesel generator or the increased production capacity. Because no new employees would be hired due to the operation of the larger diesel generator, there would be no economic impacts from new employees. In addition, any social and economic impacts that are created would be minor and short-lived because of the relatively small size and temporary nature of the operation.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Department of Environmental Quality - Permitting and Compliance Division (Industrial and Energy Minerals Bureau); 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 and Industrial and Energy Minerals Bureau), Montana State Historic Preservation Office (Montana Historical Society).

EA prepared by: John P. Proulx
Date: 3/2/2018