

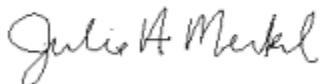
January 3, 2019

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

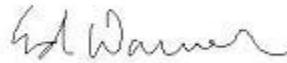
Dear Mr. Tabish:

Montana Air Quality Permit #3047-03 is deemed final as of January 3, 2019, by the Department of Environmental Quality (Department). This permit is for a portable gravel screen and concrete batch 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



Ed Warner
Lead Engineer – Permitting Services Section
Air Quality Bureau
(406) 444-2467

JM:EW
Enclosure

Montana Department of Environmental Quality
Air, Energy & Mining Division

Montana Air Quality Permit #3047-03

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

January 3, 2019



MONTANA AIR QUALITY PERMIT

Issued To: LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904-0338

MAQP: #3047-03
Administrative Amendment (AA) Request
Received: 12/5/2018
Department's Decision on AA: 12/18/2018
Permit Final: 01/03/2019

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to LHC, Inc. (LHC) pursuant to Section 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. Location: LHC is permitted to operate a portable scalping screen with a maximum production rate of 300 tons per hour (TPH) or less, and a concrete batch plant with a maximum production rate of 100 cubic yards per hour (yd^3/hr) or less, at various locations throughout the State of Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County.* A complete list of the permitted equipment is located in Section I.A of the permit analysis.
- B. Current Permit Action: On December 5, 2018, LHC requested that a concrete batch plant with a maximum production rate of 100 yd^3/hr be added to the permit in accordance with the de minimis provisions of ARM 17.8.745(1)(a)(i). To meet the criteria of the de minimis rule, LHC proposed that a federally enforceable limitation on annual hours of operation be added to the MAQP in accordance with ARM 17.8.745(2). When considering the limitation on annual hours of operation, the permit allows for less emissions than accounted for in MAQP #3047-02. MAQP #3047-03 makes the requested change, as well as updates the emissions inventory, rule references and permit conditions to reflect current practices.

Section II: Limitations and Conditions

- A. Operational Requirements
 1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
 - b. For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity

2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - a. For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
 - b. For equipment that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 10% opacity
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
4. 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).
5. 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.3 (ARM 17.8.752).
6. Water spray bars and a fogging/mist system 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 17.8.752).
7. The concrete batch plant shall control particulate matter emissions at all times using the following (ARM 17.8.749):
 - a. A fabric filter dust collector or equivalent on each cement storage silo, weigh hopper, or auxiliary storage bin, and
 - b. A particulate containment boot or equivalent on every product loadout opening.
8. 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 time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
9. Any piece of equipment operating under this permit shall not exceed 3,000 hours during any rolling 12-month time period (ARM 17.8.749).
10. The maximum cumulative production from any screen covered by this permit shall be less than or equal to 900,000 tons during any rolling 12-month time period (ARM 17.8.749).

11. The maximum production from the concrete batch plant shall be less than or equal to 1,000,000 cubic yards during any rolling 12-month time period (ARM 17.8.749).
12. LHC shall comply with all applicable standards, limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart OOO for the scalping screen, as appropriate (ARM 17.8.340 and 40 CFR Part 60, Subpart OOO).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start up, an EPA Method 9 opacity test and/or other methods and procedures as specified in 40 CFR Part 60.675 must be performed on any scalping screen manufactured after August 31, 1983, which is used in conjunction with any crushing or grinding equipment having a capacity greater than 150 tons per hour, to demonstrate compliance with the emission limitations contained in Section II.A.2 (ARM 17.8.340, 40 CFR Part 60, General Provisions and Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Reporting Requirements

1. If the screening plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area where the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and 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 emissions inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in Section I.A of 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 units as required by the Department (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. All 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, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).
5. LHC shall document, by month, the hours of operation from each piece of equipment. By the 25th day of each month, LHC shall total the hours for each piece of equipment for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. LHC shall document, by month, the screening production from the facility. By the 25th day of each month, LHC shall total the screening production from the facility for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. LHC shall document, by month, the concrete production from the batch plant. By the 25th day of each month, LHC shall total the concrete production from the batch plant for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.11. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

D. Notification

The make, model, size, and year of manufacture of the scalping screen shall be submitted to the Department according to the following schedule (ARM 17.8.340 and ARM 17.8.749).

1. Commencement of construction of the scalping screen within 30 days after commencement of construction.
2. Anticipated start-up date of the scalping screen between 30 and 60 days prior to the anticipated start-up date.

3. Actual start-up date of the scalping screen within 30 days after the actual start-up date.
4. Actual start-up date of the concrete batch plant within 30 days after the actual start-up date.

Section III: Addendum

LHC shall comply with all conditions in Addendum 4 to this permit, as appropriate (ARM 17.8.749).

Section IV: General Conditions

- A. Inspection - LHC shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as continuous emission monitoring systems (CEMS) or continuous emission rate monitoring systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and 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 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 therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755 Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

- G. Air Quality Operation Fees - Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by LHC may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered 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 the State of Montana, except within those areas having a Department approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
LHC, Inc.
MAQP #3047-03

I. Introduction/Process Description

A. Permitted Equipment

LHC, Inc. (LHC) is permitted to operate a portable scalping screen (maximum capacity of 300 tons per hour or less) and a concrete batch plant (maximum capacity of 100 cubic yards per hour or less) at various locations throughout the State of Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County.* The make and model of the equipment is not limited and may change over time.

B. Source Description

The scalping screen will be used to sort sand and gravel materials for sale and use in construction operations. The concrete batch plant will convert raw materials into concrete for similar operations. Typically, these sources will operate in conjunction with other permitted sand and gravel processing equipment.

C. Permit History

On April 6, 1999, LHC, Inc. (LHC) submitted a complete permit application for the operation of a scalping screen (maximum production 300 tons per hour). LHC requested the permit be general enough in nature to allow for the use of any make or model of scalping screen as long as the production never exceeds 300 tons per hour. **MAQP #3047-00** and **Addendum 1** were issued on May 30, 1999.

On February 26, 2001, LHC requested that Addendum 1 to MAQP #3047-00 be updated to operate within 10 kilometers (km) of the Kalispell, Libby, Whitefish, Columbia Falls, Butte, and Thompson Falls PM₁₀ nonattainment areas (NAA) during the summer months (April 1, 2001 through September 30, 2001). In addition, LHC also requested Addendum 1 to MAQP #3047-00 be updated to operate within 10 km of the Kalispell, Libby, Whitefish, Columbia Falls, Butte, and Thompson Falls PM₁₀ nonattainment areas during the winter months (October 1, 2001 through March 31, 2002), but LHC later rescinded the wintertime request. Furthermore, the permit format and rule references were updated. **MAQP #3047-01** replaced MAQP #3047-00 and **Addendum 2** replaced Addendum 1.

On December 3, 2001, LHC requested that MAQP #3047-01 be modified to allow the permitted facility to operate in or within 10 km of certain PM₁₀ NAA's during the summer months (April 1 through September 30) and the Kalispell and Thompson Falls PM₁₀ NAA's during the winter months (October 1 through March 31). Wintertime operations would be at Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County and Section 13, Township 21 North, Range 29 West, in Sanders County, Montana. **MAQP #3047-02** replaced MAQP #3047-01 and **Addendum 3** replaced Addendum 2.

D. Current Permit Action

On December 5, 2018, LHC requested that a concrete batch plant with a maximum production rate of 100 yd³/hr be added to the permit in accordance with the de minimis provisions of ARM 17.8.745(1)(a)(i). To meet the criteria of the de minimis rule, LHC proposed that a federally enforceable limitation on annual hours of operation be added to the MAQP in accordance with ARM 17.8.745(2). When considering the limitation on annual hours of operation, the permit allows for less emissions than accounted for in MAQP #3047-02. MAQP #3047-03 makes the requested change, as well as updates the emissions inventory, rule references and permit conditions to reflect current practices. **MAQP #3047-03** replaces MAQP #3047-02 and **Addendum 4** replaces Addendum 3.

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 permit 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 locations of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This 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 all 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 which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.
- B. ARM 17.8, Subchapter 2, Ambient Air Quality, including, but not limited to:
1. [ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide](#)
 2. [ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide](#)
 3. [ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide](#)
 4. [ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter](#)
 5. [ARM 17.8.223 Ambient Air Quality Standard for PM₁₀](#)
- LHC must comply 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 to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
 2. [ARM 17.8.308 Particulate Matter, Airborne](#). (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, LHC shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
 3. [ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources](#). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60. Based on the information submitted by LHC, the possibility exists that rented scalping screens may be NSPS affected sources. If the scalping screen used with this permit was manufactured after August 31, 1983, and is used in conjunction with any crushing or grinding equipment with a capacity of greater than 150 tons per hour, then the screen is subject to NSPS requirements (40 CFR Part 60, Subpart A General Provisions, and Subpart OOO Non-Metallic Mineral Processing Plants).

- D. ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:
1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.
 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. This operation fee is based on the actual or estimated amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, as described above, shall take place on a calendar-year basis. 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 which 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 the uncontrolled potential to emit (PTE) greater than 15 tons per year of any pollutant. LHC has an uncontrolled PTE greater than 15 tons per year of particulate matter; therefore, an air quality permit is required.
 3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
 4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
 5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (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. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving LHC of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility

may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an MAQP 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. 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 sub-chapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this sub-chapter would otherwise allow.

This facility is not a major stationary source because it is not listed and does not have the potential to emit more than 250 tons per year (excluding fugitive emissions) of any air pollutant. Therefore, the New Source Review (NSR) program does not apply.

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. Potential to Emit (PTE) > 100 tons/year of any pollutant.
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule.
 - c. Sources with the PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ non-attainment 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 #3047-03 for LHC, the following conclusions were made.
- a. The facility's PTE is less than 100 tons/year for all criteria pollutants.
 - b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 ton/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ non-attainment area.
 - d. This facility is potentially subject to current NSPS (40 CFR 60, Subpart OOO).
 - e. This facility is not subject to any current NESHAP.
 - f. This source is not a Title IV affected source nor a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

This facility is not subject to the Title V Operating Permit requirements because the potential emissions are less than the Title V threshold. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, LHC may be required to obtain an Operating Permit.

III. Emission Inventory

Emission Source	TPY		
	PM	PM₁₀	PM_{2.5}
Cold Aggregate Storage Piles	4.83	1.69	0.26
Cold Aggregate Handling	0.13	0.04	0.01
Cold Aggregate Screens	0.99	0.33	0.02
Concrete Batch Plant	8.99	3.55	3.55*
Haul Roads / Vehicle Traffic	1.95	0.54	0.05
Total Emissions	16.89	6.15	3.89

Notes:

Limited to 3000 hrs/yr for any equipment and 300 TPH for screen-related material handling

*PM2.5 emissions are not calculated and conservatively presumed to be equivalent to PM10

Cold Aggregate Storage Piles

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 3,000 hrs/yr

Number of Piles = 1 pile

Filterable PM Emissions:

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

$$\text{Emission Factor} = k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.01073 \text{ lb/ton}$$

Where: k = particle size multiplier = 1 (All PM; no multiplier applied, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 9.3 mph (Montana statewide average, Permit Manual Section 11-3, 6/26/15)

M = material moisture content = 1.5% (Assumes water spray applied, Permit Manual Section 11-3, 6/26/15)

Control Efficiency = 0% (Control accounted for in assumed moisture %)

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.01073 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ piles}) = 4.83 \text{ ton/yr}$$

Filterable PM₁₀ Emissions:

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

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

Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06)

U = mean wind speed = 9.3 mph (Montana statewide average, Permit Manual Section 11-3, 6/26/15)

M = material moisture content = 1.5% (Assumes water spray applied, Permit Manual Section 11-3, 6/26/15)

Control Efficiency = 0% (Control accounted for in assumed moisture %)

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.00375 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) = 1.69 \text{ ton/yr}$$

Filterable PM_{2.5} Emissions:

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

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

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

U = mean wind speed = 9.3 mph (Montana statewide average, Permit Manual Section 11-3, 6/26/15)

M = material moisture content = 1.5% (Assumes water spray applied, Permit Manual Section 11-3, 6/26/15)

Control Efficiency = 0% (Control accounted for in assumed moisture %)

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.00057 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) = 0.26 \text{ ton/yr}$$

Conveyor Transfer Point Crushing/Screening

Maximum Process Rate = 300 ton/hr (Maximum single screen process rate estimate)

Maximum Hours of Operation = 3,000 hrs/yr

Number of Transfers = 2 transfers

Filterable PM Emissions:

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

Control Efficiency = 0%

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.00014 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ transfers}) = 0.13 \text{ ton/yr}$$

Filterable PM₁₀ Emissions:

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

Control Efficiency = 0%

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.000046 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ transfers}) = 0.04 \text{ ton/yr}$$

Filterable PM_{2.5} Emissions:

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

Control Efficiency = 0% (built into emission factor)

$$\text{Calculation: } (300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.000013 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (2 \text{ transfers}) = 0.01 \text{ ton/yr}$$

Screening Telesmith

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)

Maximum Hours of Operation = 3,000 hrs/yr

Number of Screens = 1 screen(s)

Total PM Emissions:

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

Control Efficiency = 0%

Calculation: $(300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.0022 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.99 \text{ ton/yr}$

Total PM₁₀ Emissions:

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

Control Efficiency = 0%

Calculation: $(300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.00074 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.33 \text{ ton/yr}$

Total PM_{2.5} Emissions:

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

Control Efficiency = 0% (built into emission factor)

Calculation: $(300 \text{ ton/hr}) * (3000 \text{ hrs/yr}) * (0.00005 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ screen(s)}) = 0.02 \text{ ton/yr}$

CONCRETE BATCH PLANT EMISSIONS

Based on 1 yd³ = 4024 lbs and the following avg material composition (AP 42, Chapter 11.12, 6/06)

1865 lb/yd³ coarse aggregate per yd³

1428 lb/yd³ sand per yd³

491 lb/yd³ cement per yd³

73 lb/yd³ cement supplement per yd³

167 lb/yd³ water (~20 gal) per yd³

Maximum Process Rate = 100 yd³/hr (max concrete capacity)

Maximum Hours of Operation = 3,000 hrs/yr

Truck Mix Loading (3-05-011-10)

Controlled

Aggregate delivery to ground storage (3-05-011-21)

PM Emissions:

Based on AP-42

Emission Factor = 0.0069 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0069 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.97 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0033 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0033 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.46 \text{ ton/yr}$

Sand delivery to ground storage (3-05-011-22)

PM Emissions:

Based on AP-42

Emission Factor = 0.0021 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0021 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.22 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00099 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.00099 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.11 \text{ ton/yr}$

Aggregate transfer to conveyor (3-05-011-23)

PM Emissions:

Based on AP-42

Emission Factor = 0.0069 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0069 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.97 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0033 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0033 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.46 \text{ ton/yr}$

Sand transfer to conveyor (3-05-011-24)

PM Emissions:

Based on AP-42

Emission Factor = 0.0021 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0021 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.22 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00099 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.00099 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.11 \text{ ton/yr}$

Aggregate transfer to elevated storage (3-05-011-04)

PM Emissions:

Based on AP-42

Emission Factor = 0.0069 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0069 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.97 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0033 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1865 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0033 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.46 \text{ ton/yr}$

Sand transfer to elevated storage (3-05-011-05)

PM Emissions:

Based on AP-42

Emission Factor = 0.0021 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0021 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.22 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00099 lb/ton (uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (1428 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.00099 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.11 \text{ ton/yr}$

Cement delivery to silo (3-05-011-07)

PM Emissions:

Based on AP-42

Emission Factor = 0.00099 lb/ton (controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (491 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.00099 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.04 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.00034 lb/ton (controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (491 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.00034 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.01 \text{ ton/yr}$

Cement supplement delivery to silo (3-05-011-17)

PM Emissions:

Based on AP-42

Emission Factor = 0.0089 lb/ton (controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (73 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0089 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.05 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0049 lb/ton (controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (73 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0049 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.03 \text{ ton/yr}$

Weigh hopper loading (3-05-011-08)

PM Emissions:

Based on AP-42

Emission Factor = 0.0048 lb/ton (aggregate & sand, uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (3293 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0048 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 1.19 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0028 lb/ton (aggregate & sand, uncontrolled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (3293 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0028 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.69 \text{ ton/yr}$

Central Mix Loading (3-05-011-09)

PM Emissions:

Based on AP-42

Emission Factor = 0 lb/ton 0

Calculation: $(100 \text{ yd}^3/\text{hr}) * (564 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.00 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0 lb/ton 0

Calculation: $(100 \text{ yd}^3/\text{hr}) * (564 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 0.00 \text{ ton/yr}$

Truck Mix Loading (3-05-011-10)

PM Emissions:

Based on AP-42

Emission Factor = 0.098 lb/ton (cement & supplement, controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (564 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.098 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 4.15 \text{ ton/yr}$

PM₁₀ Emissions:

Based on AP-42

Emission Factor = 0.0263 lb/ton (cement & supplement, controlled, AP 42, Table 11.12-2, 6/06)

Calculation: $(100 \text{ yd}^3/\text{hr}) * (564 \text{ lb/yd}^3) * (\text{ton}/2000 \text{ lb}) * (3000 \text{ hrs/yr}) * (0.0263 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) = 1.11 \text{ ton/yr}$

Haul Roads

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

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

Hours of Operation = 3,000 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.

$$\text{Emission Factor} = k * (s / 12)^a * (W / 3)^b = 12.46 \text{ lb/VMT}$$

Where: $k = \text{constant} = 4.9 \text{ lbs/VMT}$ (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)

$s = \text{surface silt content} = 7.1\%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)

$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)

$a = \text{constant} = 0.7$ (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)

$b = \text{constant} = 0.45$ (Value for PM30/TSP, AP 42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 3.89 \text{ tons/yr}$ (Uncontrolled Emissions)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 1.95 \text{ tons/yr}$ (Apply 50% control efficiency)

PM₁₀ Emissions:

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

$$\text{Emission Factor} = k * (s / 12)^a * (W / 3)^b = 3.43 \text{ lb/VMT}$$

Where: $k = \text{constant} = 1.5 \text{ lbs/VMT}$ (Value for PM10, AP 42, Table 13.2.2-2, 11/06)

$s = \text{surface silt content} = 7.1\%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)

$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)

$a = \text{constant} = 0.9$ (Value for PM10, AP 42, Table 13.2.2-2, 11/06)

$b = \text{constant} = 0.45$ (Value for PM10, AP 42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 1.07 \text{ tons/yr}$ (Uncontrolled Emissions)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 0.54 \text{ tons/yr}$ (Apply 50% control efficiency)

PM_{2.5} Emissions:

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

$$\text{Emission Factor} = k * (s / 12)^a * (W / 3)^b = 0.34 \text{ lb/VMT}$$

Where: $k = \text{constant} = 0.15 \text{ lbs/VMT}$ (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)

$s = \text{surface silt content} = 7.1\%$ (Mean value, sand/gravel processing, material storage area, AP 42, Table 13.2.2-1, 11/06)

$W = \text{mean vehicle weight} = 54 \text{ tons}$ (1994 average loaded/unloaded or a 40 ton truck)

$a = \text{constant} = 0.9$ (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)

$b = \text{constant} = 0.45$ (Value for PM2.5, AP 42, Table 13.2.2-2, 11/06)

Control Efficiency = 50% (Water spray or chemical dust suppressant)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) = 0.11 \text{ tons/yr}$ (Uncontrolled Emissions)

Calculation: $(3000 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) = 0.05 \text{ tons/yr}$ (Apply 50% control efficiency)

IV. BACT Analysis

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 best available control technology shall be utilized. A BACT analysis was not required for the current permit action because it is an administrative action in accordance with ARM 17.8.745(1)(a)(i), ARM 17.8.745(2), and ARM 17.8.764(1)(b).

V. 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	
		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.

VI. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an environmental assessment is not required.

Analysis Prepared By: Ed Warner

Date: 12/17/2018

Addendum 4
LHC, Inc.
Montana Air Quality Permit (MAQP) #3047-03

An addendum to MAQP #3047-03, with conditions, is issued to LHC, Inc. (LHC) pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, *et. seq.*, as amended, for the following:

I. Permitted Equipment

MAQP #3047-03 authorizes LHC to operate a screening plant with a maximum rated capacity not to exceed 300 tons per hour (TPH) and concrete batch plant with a maximum rated capacity not to exceed 100 cubic yards per hour (yd^3/hr) in or within 10 kilometers (km) of the following PM_{10} nonattainment areas (NAAs): Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte.

II. Seasonal and Site Restrictions

Addendum 4 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 winter season (October 1-March 31) - The only location(s) in or within 10 km of a PM_{10} NAAs where LHC may operate is Sections 25 and 26, Township 29 North, Range 22 West, Flathead County and Section 13, Township 21 North, Range 29 West, in Sanders County, Montana.
- B. During the summer season (April 1-September 30) – LHC may operate at any location within 10 kilometers of certain PM_{10} NAAs, including, but not limited to Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte.
- C. LHC shall comply with the limitations and conditions contained in Addendum 4 to MAQP #3047-03 while operating in or within 10 km of any of the previously listed PM_{10} NAAs. Addendum 4 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum 4 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 Conditions (April 1 – September 30)
 1. Water spray bars and a fogging/mist system must be available and operated, as necessary, on the scalping screen whenever the scalping screen 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. The LHC screen shall be limited to 7,200 tons during any rolling 24-hour time period (ARM 17.8.749).
 4. The LHC concrete batch plant shall be limited to 2,400 cubic yards during any rolling 24-hour time period (ARM 17.8.749).
 5. 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).
 6. 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).
- B. Operational Limitations and Conditions – Winter Season Conditions (October 1 – March 31)
1. Water spray bars and a fogging/mist system must be available and operated, as necessary, on the scalping screen whenever the scalping screen 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. The LHC screen shall be limited to 6,000 tons during any rolling 24-hour time period (ARM 17.8.749).
 4. The LHC concrete batch plant shall be limited to 2,000 cubic yards during any rolling 24-hour time period (ARM 17.8.749).
 5. 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).

6. 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).

B. 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).
 - a. 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.3 and III.B.3.
 - b. Daily cubic yards of concrete produced at each site. LHC shall document, by day, the total concrete production. LHC shall sum the total concrete production for the previous day to demonstrate compliance with the limitations in Sections III.A.4 and III.B.4.
 - c. Tons of bulk gravel loaded at each site.
 - d. Daily hours of operation at each site.
 - e. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum 4 Analysis
LHC, Inc.
Montana Air Quality Permit (MAQP) #3047-03

I. Permitted Equipment: LHC, Inc. (LHC) is permitted to operate a portable scalping screen (maximum capacity of 300 tons per hour or less) and a concrete batch plant (maximum capacity of 300 cubic yards per hour or less) at various locations throughout the State of Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program. *A Missoula County air quality permit will be required for locations within Missoula County.* The make and model of the equipment is not limited and may change over time.

II. Permit History

On April 6, 1999, LHC submitted a complete permit application for the operation of a scalping screen (maximum production 300 tons per hour). The scalping screen is to be used in conjunction with various sand and gravel operations currently performed by LHC. LHC requested the permit be general enough in nature to allow for the use of any make or model of scalping screen as long as the production never exceeds 300 tons per hour.

LHC proposed to operate within 10 kilometers (km) of the Libby, Whitefish, Kalispell, Columbia Falls, Thompson Falls, and Butte PM₁₀ non-attainment areas (NAAs) during the summer months (April 1, 2001, through September 30, 2001). Addendum 1 to MAQP #3047-00 will allow summer operation in or within 10 km of these NAAs. *A Missoula County air quality permit will be required for locations within Missoula County.*

On February 26, 2001, LHC requested that Addendum 1 to MAQP #3047-00 be updated to operate within 10 km of the Kalispell, Libby, Whitefish, Columbia Falls, Butte, and Thompson Falls PM₁₀ NAAs during the summer months (April 1, 2001 through September 30, 2001). In addition, LHC also requested Addendum 1 to MAQPP #3047-00 be updated to operate within 10 km of the Kalispell, Libby, Whitefish, Columbia Falls, Butte, and Thompson Falls PM₁₀ NAAs during the winter months of October 1, 2001 through March 31, 2002, but LHC later rescinded the wintertime request. Furthermore, the permit format and rule references were updated. MAQP **#3047-01** replaced MAQP #3047-00 and **Addendum 2** replaced Addendum 1.

On December 3, 2001, LHC requested that MAQP #3047-01 be modified to allow the permitted facility to operate in or within 10 km of certain PM₁₀ NAAs during the summer months (April 1 through September 30) and the Kalispell and Thompson Falls PM₁₀ NAAs during the winter months (October 1 through March 31). Wintertime operations would be at Sections 25 and 26, Township 29 North, Range 22 West, in Flathead County and Section 13, Township 21 North, Range 29 West, in Sanders County, Montana. MAQP **#3047-02** replaced MAQP #3047-01 and **Addendum 3** replaced Addendum 2.

III. Current Permit Action

On December 5, 2018, LHC requested that a concrete batch plant with a maximum production rate of 100 yd³/hr be added to the permit in accordance with the de minimis provisions of ARM 17.8.745(1)(a)(i). In order to meet the criteria of the de minimis rule, LHC proposed that a federally enforceable limitation on annual hours of operation be added to the MAQP in accordance with ARM 17.8.745(2). When taking into account the limitation

on annual hours of operation, the permit allows for less emissions than accounted for in MAQP #3047-02. MAQP #3047-03 makes the requested change, as well as updates the emissions inventory, rule references and permit conditions to reflect current practices. **MAQP #3047-03** replaces MAQP #3047-02 and **Addendum 4** replaces Addendum 3.

IV. 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.

LHC will have to submit proof of compliance with the transfer and public notice requirements when they transfer to any of the locations covered by this addendum and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and controls in Addendum 4 will keep LHC from having a significant impact on certain PM₁₀ NAAs.

V. Emission Inventory

Summer Operation Emission Source	pounds/day		
	PM	PM₁₀	PM_{2.5}
Cold Aggregate Storage Piles	77.23	27.03	4.09
Cold Aggregate Handling	2.02	0.66	0.19
Cold Aggregate Screens	15.84	5.33	0.36
Concrete Batch Plant	143.78	56.74	56.74
Haul Roads / Vehicle Traffic	31.15	8.59	0.86
Total Emissions	270.01	98.34	62.24

Notes:

PM_{2.5} emissions are not calculated and conservatively presumed to be equivalent to PM₁₀

Hourly emissions are estimated based on the annual emission calculations scaled to 24 hours per day

Winter Operation Emission Source	pounds/day		
	PM	PM₁₀	PM_{2.5}
Cold Aggregate Storage Piles	64.35	22.52	3.41
Cold Aggregate Handling	1.68	0.55	0.16
Cold Aggregate Screens	13.20	4.44	0.30
Concrete Batch Plant	119.82	47.28	47.28
Haul Roads / Vehicle Traffic	25.96	7.15	0.72
Total Emissions	225.01	81.95	51.87

Notes:

PM_{2.5} emissions are not calculated and conservatively presumed to be equivalent to PM₁₀

Hourly emissions are estimated based on the annual emission calculations scaled to 20 hours per day

so that daily emissions do not exceed 82 pounds per day of PM₁₀

VI. 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 (PM₁₀). Due to exceedances of the national standards for PM₁₀, the cities of Libby, Whitefish, Kalispell, Columbia Falls, Thompson Falls, and Butte were designated by EPA as non-attainment for PM₁₀. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies determined these sources to be the major contributors to PM₁₀ emissions.

MAQP #3047-03 and Addendum 4 are for a portable screening plant and concrete batch plant that will locate at sites in or within 10 kilometers (km) of certain PM₁₀ 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.

VII. Air Quality Impacts:

MAQP #3047-03 and Addendum 4 will cover the operations of this portable screening plant and concrete batch plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum 4 will cover the operations of this portable crushing/screening plant, while operating in or within 10 km of the Kalispell and Thompson Falls PM₁₀ nonattainment areas during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of any PM₁₀ nonattainment areas during the summer months (April 1 through September 30).

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted 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.

VIII. Environmental Assessment

The current permit action is an administrative amendment and does not constitute a state action; therefore, an environmental assessment is not required for the proposed project.

Addendum Analysis Prepared by: Ed Warner
Date: 12/17/2018