April 27, 2017

Jenifer Rather, GPHR
Kenyon Noble Ready-Mix
P.O. Box 1387
Bozeman, MT 59771

Dear Ms. Rather:

Montana Air Quality Permit #4064-01 is deemed final as of April 27, 2017, by the Department of Environmental Quality (Department). This permit is for a Portable Concrete Ready-Mix Facility. 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
Environmental Science Specialist
Air Quality Bureau
(406) 444-5391

JM:JP
Enclosure

MONTANA AIR QUALITY PERMIT

Issued To: Kenyon Noble Ready-Mix
P.O. Box 1387
Bozeman, MT 59771

MAQP: #4064-01
Administrative Amendment (AA)
Request Received: 3/21/2017
Department's Decision on AA: 4/11/2017
Permit Final: 4/27/2017
AFS #: 777-4064

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Kenyon Noble Ready-Mix (Kenyon Noble) 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

MAQP #4064-01 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for operating in locations in or within 10 km of certain PM_{10} nonattainment areas.

The initial operating site is 889 Valley Center Road West, which is approximately 2 miles south of Belgrade, Montana, and approximately 1 mile west of Jackrabbit Lane. The legal description of the site is Section 23, Township 1 South, Range 4 East, in Gallatin County, Montana.

B. Current Permit Action

On March 21, 2017, the Department of Environmental Quality (Department) received an administrative amendment request from Kenyon Noble to transfer equipment from Montana Air Quality Permit (MAQP) #2715, which is also held by Kenyon Noble, to MAQP #4064. A complete list of the permitted equipment can be seen in Section I.A. of the permit analysis.

SECTION II: Conditions and Limitations

A. Operational and Emission Limitations

1. Kenyon Noble shall not cause or authorize to be discharged into the atmosphere from the portable concrete batch plant and general plant operations:

   a. Any vent emissions which exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and 17.8.752); and

b. Any fugitive emissions from the facility including, but not limited to, emissions from truck loading and unloading operations or any material handling and transfer operations, which exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304, ARM 17.8.308, and ARM 17.8.752).

2. Kenyon Noble shall install, operate, and maintain a fabric filter dust collection system for the control of particulate matter emissions from the Erie Strayer MPII-T Low Profile Transit Mix concrete batch plant (ARM 17.8.752).

3. All visible emissions from any non-Standards of Performance for New Stationary Sources (NSPS) affected equipment shall not exhibit an opacity of 20% or greater, averaged over 6 consecutive minutes (ARM 17.8.304).

4. Kenyon Noble shall not operate more than one (1) screen at any given time with a maximum rated design capacity of 250 tons per hour (TPH) (ARM 17.8.749).

5. Kenyon Noble shall not have on site more than one (1) diesel fired generator and may only use the generator as a backup source of electricity during periods when utility power is unavailable. The generator's maximum rated design capacity shall not exceed 125 horsepower (hp) and shall be limited to 500 hours of operation per year, to include operation and maintenance (ARM 17.8.749).

6. Kenyon Noble shall install, operate, and maintain a fabric filter dust collection system for the control of particulate matter emissions from each cement silo (ARM 17.8.752).

7. A warning device must be installed, operated, and maintained on each cement storage silo to avoid overfilling and fabric filter damage (ARM 17.8.749).

8. 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(b) (ARM 17.8.749) and II.A.3 (ARM 17.8.752).

9. Kenyon Noble 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).

10. Kenyon Noble 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.9 (ARM 17.8.749).

11. Kenyon Noble shall use only pipeline quality natural gas fuel to fire the 4.5 million British thermal unit per hour (MMBtu/hr) heat input capacity boiler used to heat process water (ARM 17.8.752).

12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Kenyon Noble, 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).

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

B. Testing Requirements

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

2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If any permitted equipment is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).

2. Kenyon Noble shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis. Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Kenyon Noble shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include a 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 or the addition of a new emission unit.

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. Kenyon Noble 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 Kenyon Noble 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. Kenyon Noble shall inspect the C&W fabric filter dust collection system, cement silo fabric filter dust collection system, and associated vents and collection systems, which are used for controlling emissions from the cement storage silos and the batch plant, on an every 6 month of operation basis, to ensure that each dust collection system is operating in a manner to minimize emissions (ARM 17.8.749).

6. Kenyon Noble shall maintain on-site records of inspections, repairs, and maintenance conducted in accordance with Section II.C.5. All inspection records compiled in accordance with this permit shall be maintained by Kenyon Noble as a permanent business record for at least 5 years following the date of measurement, shall be submitted to the Department upon request, and shall be available at the plant for inspection by the Department (ARM 17.8.749).

D. Notification

Kenyon Noble shall provide the Department with written notification of the actual start-up date of the portable concrete batch plant within 15 days after the actual startup date (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – Kenyon Noble 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 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 Kenyon Noble fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Kenyon Noble 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, as amended by the 1991 Legislature, failure to pay the annual operation fee by Kenyon Noble may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Construction Commencement – Construction must be begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (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. Kenyon Noble 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.

Montana Air Quality Permit (MAQP) Analysis
Kenyon Noble Ready-Mix, Inc.
Permit #4064-01

I. Introduction/Process Description

A. Permitted Equipment

Kenyon Noble Ready-Mix, Inc. (Kenyon Noble) owns and operates a portable cement/concrete ready-mix plant. Permitted equipment includes a Erie Strayer MPII-T Low Profile Transit Mix Plant with a cement batcher (12 cubic yard (yd^3) capacity), a cement silo (200 ton per hour (ton/hr) capacity), an aggregate batcher (200 ton/hr capacity), an aggregate bin (200 ton/hr capacity), a fly-ash silo (45 ton storage capacity), a C & W dust collection system, and associated material handling and processing equipment.

Aggregate Screening Plant

- 1999 JCI 6'x20' 3-Deck Screen [250 TPH]
- 1995 Westec Wash Plant [180 TPH]
- Associated material handling equipment - (6) transfer conveyors, (3) field conveyors, and (1) stacking conveyor, (1) 125 horsepower backup generator

B. Source Description

Wash Plant – Kenyon Noble will utilize this portable wash plant to wash and sort sand and small diameter materials for use in various construction projects. For a typical operational setup, unprocessed materials are loaded into the feed hopper where the materials are then fed into the water filled reservoir where a bucket wheel provides agitation to remove silts, slimes, and clays from saleable sand.

A fines screen and centrifugal action is employed to separate materials. Sand exiting the system is stockpiled while undesirable material is entrained in wash water and discharged to a settling pond. The Department does not assign any particulate matter emissions to wash plant activities because the process materials are fully saturated with water at all times and do not generate particulate emissions during the material handling.

Screening Plant – A screening plant is a device for separating material according to size by utilizing vibrating mesh screens.

Cement/Concrete Ready-Mix Plant – For a typical operational set up, raw materials are loaded into an overhead storage bin (200 ton storage capacity) via a material handling conveyor(s). The storage bin is separated into 4 storage compartments – two compartments for concrete graded course aggregate and two compartments for concrete graded fine aggregate. The materials are then weighed and dropped into a single batch scale/holding area (up to 12 cubic yards per batch). The material is then conveyed to a mixer truck where water is added to the process.

Cement and/or fly ash from the overhead silos (200 ton and 50 ton capacity) is then delivered via gravity feed (200 ton silo) or auger (50 ton silo) to the mixer truck. Admixtures (chemicals used to control various aspects of the finished concrete product) are then pneumatically pumped to the mixer truck and added to the process simultaneously with water. Particulate emissions resulting from product loading activities are controlled by a vacuum-powered dust collector with associated 4000 pound capacity storage hopper.

When hot water is required for concrete processing, water is heated by a 4.5 million British thermal unit per hour (MMBtu/hr) capacity natural gas-fired boiler. All facility operations are powered by electricity from land-line power provided by a power utility.

C. Permit History

On May 23, 2007, Kenyon Noble was issued **MAQP #4064-00** for the operation of a portable cement/concrete ready-mix plant.

D. Current Permit Action

On March 21, 2017, the Department received an administrative amendment request from Kenyon Noble to remove equipment from MAQP #2715. Kenyon Noble requested that the 1999 JCI 6'x20' 3-Deck Screen (250 tons per hour (tph)), the 1995 Westec Wash Plant (180 tph), and all associated handling equipment be transferred to MAQP #4064. **MAQP #4064-01** replaces MAQP #4064-00.

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 of Environmental Quality (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).

   Kenyon Noble 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
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standards for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (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 Particulate Matter with an Aerodynamic Diameter of 10 microns or less (PM_{10})

Kenyon Noble must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Kenyon Noble 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 17.8.310 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.

4. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.

5. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility may be a NESHAP-affected source because some of the equipment could meet the definition of an NSPS-affected emissions unit as defined in 40 CFR 60.

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

   b. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. Based on the information submitted by Kenyon Noble, the CI ICE's to be used under MAQP #4064-01 are non-road CI ICE associated with a portable facility and therefore may not be subject to this regulation for stationary CI ICE. However, a non-road engine would become regulated as a stationary engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Therefore, this subpart would become applicable if Kenyon Noble operated the CI ICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.

6. 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. This facility may be a NESHAP-affected source because some of the equipment could meet the definition of a NESHAP-affected emissions unit as defined in 40 CFR Part 63.

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

b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. Based on the information submitted by Kenyon Noble, the RICE to be used under MAQP #4064-01 is a non-road RICE associated with a portable facility and therefore may not be subject to this regulation for stationary RICE.

However, a non-road engine would become regulated as a stationary engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Therefore, this subpart would become applicable if Kenyon Noble operated the RICE at a single location for more than 12 months or a shorter period of time for an engine located at a seasonal source.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This 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; 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 alteration to construct, alter, or use any asphalt plant, crusher or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Kenyon Noble has a PTE greater than 15 tons per year of PM and particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}); 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, alteration, 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 Kenyon Noble 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 altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

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

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

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

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

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

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

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

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

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

   a. PTE > 100 tons/year of any pollutant

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

   c. PTE > 70 tons/year of 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 Air Quality Permit #4064-01 for Kenyon Noble, the following conclusions were made:

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

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

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

   f. This source is not a Title IV affected source or a solid waste combustion unit.

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

   Based on these facts, the Department has determined that Kenyon Noble is a minor source of emissions as defined under Title V; therefore, a Title V Operating Permit is not required for proposed operations.

III. BACT Determination

A BACT determination is required for each new or altered source. Kenyon Noble shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change. The incorporation of equipment into MAQP #4064 during this action included any associated BACT requirements.

IV. Emission Inventory

Total Emissions (tpy)						
PM	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**	**SO_2**
71.27	26.23	0.94	2.72	1.83	0.19	0.26

Concrete Batch Plant Emission Inventory

Emitting Unit/Process	**PM**	**PM_{10}**	**NO_x**	**CO**	**VOC**	**SO_x**
Aggregate Delivery to Ground Storage	4.91	2.38	0.00	0.00	0.00	0.00
Sand Delivery to Ground Storage	1.15	0.54	0.00	0.00	0.00	0.00
Aggregate Transfer to Conveyor	4.91	2.38	0.00	0.00	0.00	0.00
Sand Transfer to Conveyor	1.15	0.54	0.00	0.00	0.00	0.00
Aggregate Transfer to Elevated Storage	4.91	2.38	0.00	0.00	0.00	0.00
Sand Transfer to Elevated Storage	1.15	0.54	0.00	0.00	0.00	0.00
Cement Delivery to Storage Silo	0.15	0.08	0.00	0.00	0.00	0.00
Cement Supplement Delivery to Storage Silo	0.23	0.15	0.00	0.00	0.00	0.00
Weigh Hopper Loading of Sand/Aggregate	6.06	2.91	0.00	0.00	0.00	0.00
Truck Loading (Truck Mix)	12.28	3.46	0.00	0.00	0.00	0.00
Haul Roads	12.68	3.60	0.00	0.00	0.00	0.00
Natural Gas-Fired Boiler (4.5 MMBtu/hr)	0.15*	0.15	1.97	1.66	0.11	0.01
Total Emissions	**49.72**	**19.09**	**1.97**	**1.66**	**0.11**	**0.01**
* Assume PM emissions resulting from natural gas combustion are equal to PM_{10} emissions						

Concrete Plant Emissions Calculations:

<u>Aggregate delivery to ground storage</u>

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0064 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0064 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 4.91 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0031 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0031 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 2.38 ton/yr

Sand delivery to ground storage

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0015 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0015 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 1.15 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0007 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0007 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.54 ton/yr

Aggregate transfer to conveyer

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0064 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0064 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 4.91 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0031 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0031 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 2.38 ton/yr

Sand transfer to conveyor

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0015 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0015 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 1.15 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0007 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0007 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.54 ton/yr

Aggregate transfer to elevated storage

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0064 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0064 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 4.91 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0031 lb/yd^3 (AP-42, Table 11.12-6, 6/06)

Calculations: 0.0031 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 2.38 ton/yr

Sand transfer to elevated storage

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0015 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0015 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 1.15 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0007 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0007 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.54 ton/yr

Cement delivery to silo

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0002 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0002 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.15 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0001 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0001 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.08 ton/yr

Cement supplement delivery to silo

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0003 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0003 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.23 ton/yr

PM_{10} Emissions:
Emission Factor: 0.0002 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0002 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 0.15 ton/yr

Weigh hopper loading of sand and aggregate

Process Rate: 175 yd^3/hr
Hours of operation: 8760 hr/yr

PM Emissions:
Emission Factor: 0.0079 lb/yd^3 (AP-42, Table 11.12-6, 6/06)
Calculations: 0.0079 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 6.06 ton/yr

PM_{10} Emissions:

Emission Factor: 0.0038 lb/yd^3 (AP-42, Table 11.12-6, 6/06)

Calculations: 0.0038 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 2.91 ton/yr

Truck Loading (Truck Mix)

Process Rate: 175 yd^3/hr

Hours of operation: 8760 hr/yr

PM Emissions:

Emission Factor: 0.282(0.0568) = 0.016 lb/yd^3 (AP-42, Table 11.12-6, 6/06)

Calculations: 0.016 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 12.28 ton/yr

PM_{10} Emissions:

Emission Factor: 0.282(0.0160) = 0.005 lb/yd^3 (AP-42, Table 11.12-6, 6/06)

Calculations: 0.005 lb/yd^3 * 175 yd^3/hr * 8760 hr/yr * 0.0005 ton/lb = 3.46 ton/yr

Haul Roads

Vehicle miles traveled: 5 VMT/day {Estimated}

Assumption: Rated Load Capacity < 50 tons

Haul Road Use: 365 day/yr

PM Emissions:

Emission Factor: 13.90 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)

Calculations: 5.0 VMT/day * 13.90 lb/VMT = 69.50 lb/day

69.50 lb/day * 365 day/yr * 0.0005 ton/lb = 12.68 ton/yr

PM_{10} Emissions:

Emission Factor: 3.95 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)

Calculations: 5 VMT/day * 3.95 lb/VMT = 19.75 lb/day

19.75 lb/day * 365 day/yr * 0.0005 ton/lb = 3.60 ton/yr

Natural Gas-Fired Boiler (4.5 MMBtu/hr)

Heat Input Capacity: 4.5 MMBtu/hr (Company Information)

Hours of Operation: 8760 hr/yr (Annual Capacity)

Fuel Heating Value: 0.001 MMscf/MMBtu (AP-42, Fifth Edition, Appendix A)

PM Emissions

Assume all PM emissions resulting from the combustion of natural gas are equal to PM_{10}

PM_{10} Emissions

Emission Factor: 7.6 lb/MMscf (AP-42, Section 1.4, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMscf * 0.001 MMscf/MMBtu * 4.5 MMBtu/hr = 0.03 lb/hr
0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.15 ton/yr

NOx Emissions

Emission Factor: 100.0 lb/MMscf (AP-42, Section 1.4, Table 1.4-2, 7/98)
Calculations: 100.0 lb/MMscf * 0.001 MMscf/MMBtu * 4.5 MMBtu/hr = 0.45 lb/hr
0.45 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.97 ton/yr

CO Emissions

Emission Factor: 84.0 lb/MMscf (AP-42, Section 1.4, Table 1.4-2, 7/98)
Calculations: 84.0 lb/MMscf * 0.001 MMscf/MMBtu * 4.5 MMBtu/hr = 0.38 lb/hr
0.38 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.66 ton/yr

VOC Emissions

Emission Factor: 5.5 lb/MMscf (AP-42, Section 1.4, Table 1.4-2, 7/98)
Calculations: 5.5 lb/MMscf * 0.001 MMscf/MMBtu * 4.5 MMBtu/hr = 0.02 lb/hr
0.02 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.11 ton/yr

SOx Emissions

Emission Factor: 0.6 lb/MMscf (AP-42, Section 1.4, Table 1.4-2, 7/98)
Calculations: 0.6 lb/MMscf * 0.001 MMscf/MMBtu * 4.5 MMBtu/hr = 0.003 lb/hr
0.003 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

Aggregate Wash Plant Emissions:

CONTROLLED	**tons/year**						
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**	**SO_2**
Cold Aggregate Storage Piles	3.61	1.71	0.26	--	--	--	--
Cold Aggregate Handling/Conveyors	1.53	0.50	0.14	--	--	--	--
Cold Aggregate Screens	2.41	0.81	0.05	--	--	--	--
Wash Plant	1.73	0.58	0.04	--	--	--	--
Plant Load-Out	0.83	0.42	0.06	--	--	--	--
Haul Roads / Vehicle Traffic	11.37	3.13	0.31	--	--	--	--
125 hp Diesel Engine Generator	0.07	0.07	0.07	0.75	0.17	0.08	0.25
Total Emissions	**21.55**	**7.23**	**0.94**	**0.75**	**0.17**	**0.08**	**0.25**

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

Aggregate Wash Plant Emissions Calculations:

Cold Aggregate Storage Piles

Maximum Process Rate = 250 ton/hr (Maximum plant process rate)	250	**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 = 0.00330 lb/ton	0.0033	**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 = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.0032961326585007 lb/ton) = 3.61 ton/yr	3.61	**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 = 0.00156 lb/ton	0.00156	**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 = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.00155898166280438 lb/ton) = 1.71 ton/yr	1.71	**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 = 0.00024 lb/ton	0.000236	**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 = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	8.2	**mph**
M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06)	2.5	**%**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (1 piles) * (ton/2000 lb) * (0.000236074366081807 lb/ton) = 0.26 ton/yr	0.26	**ton/yr**

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

Maximum Process Rate = 250 ton/hr (Maximum plant process rate)	250	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of Transfers = 10 transfer (Company Information)	10	**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: (250 ton/hr) * (8760 hrs/yr) * (10 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 1.53 ton/yr	1.53	**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: (250 ton/hr) * (8760 hrs/yr) * (10 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.50 ton/yr	0.50	**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: (250 ton/hr) * (8760 hrs/yr) * (10 transfer) * (ton/2000 lb) * (0.00014 lb/ton) = 0.14 ton/yr	0.14	**ton/yr**

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

Maximum Process Rate = 250 ton/hr (Maximum plant process rate)	250	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr 2190000 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: (250 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 2.41 ton/yr	2.41	**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: (250 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.81 ton/yr	0.81	**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: (250 ton/hr) * (8760 hrs/yr) * (1 screen(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 0.05 ton/yr	0.05	**ton/yr**

Wash Plant

Maximum Process Rate = 180 ton/hr (Maximum plant process rate)	180	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr 1576800 tons/year	8760	**hrs/yr**
Number of Wash Plants = 1 plant(s) (Company Information)	1	**plant(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: (180 ton/hr) * (8760 hrs/yr) * (1 plant(s)) * (ton/2000 lb) * (0.0022 lb/ton) = 1.73 ton/yr	1.73	**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: (180 ton/hr) * (8760 hrs/yr) * (1 plant(s)) * (ton/2000 lb) * (0.00074 lb/ton) = 0.58 ton/yr	0.58	**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: (180 ton/hr) * (8760 hrs/yr) * (1 plant(s)) * (ton/2000 lb) * (0.00005 lb/ton) = 0.04 ton/yr	0.04	**ton/yr**

Truck Unloading (SCC 3-05-020-31)

Maximum Process Rate = 250 ton/hr (Maximum plant process rate)	250	**ton/hr**
Maximum Hours of Operation = 8,760 hrs/yr	8760	**hrs/yr**
Number of loads = 24 loads (Estimate)	24	**loads**
Total PM Emissions:		
Emission Factor = 0.0000314 lb/ton (PM=PM10 / 51%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90)	0.0000314	**lb/ton**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (0.0000314 lb/ton) * (ton/2000 lb) * (24 loads) = 0.83 ton/yr	0.83	**ton/yr**
Total PM10 Emissions:		
Emission Factor = 0.000016 lb/ton (PM10=1.6E-05, AP 42, Table 11.19.2-2, 8/04)	0.000016	**lb/ton**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) * (24 loads) = 0.42 ton/yr	0.42	**ton/yr**
Total PM2.5 Emissions:		
Emission Factor = 0.0000024 lb/ton (PM2.5=1.6E-05 * 15%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90)	0.0000024	**lb/ton**
Calculation: (250 ton/hr) * (8760 hrs/yr) * (0.0000024 lb/ton) * (ton/2000 lb) * (24 loads) = 0.06 ton/yr	0.06	**ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
	0.2083333	
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	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 (Uncontrolled 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 Engine Generator

Note: Emissions are based on the power output of the engine (125 hp).

Operational Capacity of Engine = 125 hp	125	**hp**
Hours of Operation = 500.00 hours	500	**hours**

PM Emissions:

PM Emissions = 0.07 ton/yr (Assume all PM < 1.0 um)	0.07	**ton/yr**
PM Emissions = 137.50 lbs/yr (Assume all PM < 1.0 um)	137.5	**lbs/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: (125 hp) * (500 hours) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 0.07 ton/yr	0.07	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.0022 lbs/hp-hr) = 137.50 lbs/yr	137.5	**lbs/yr**

PM2.5 Emissions

Emission Factor = 0.0022 lbs/hp-hr (Assume all PM < 1.0 um)	0.0022	**lbs/hp-hr**
Calculation: (125 hp) * (500 hours) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 0.07 ton/yr (Assume all PM < 1.0 um)	0.07	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.0022 lbs/hp-hr) = 137.50 lbs/yr	137.5	**lbs/yr**

NOx Emissions:

Emission Factor = 0.031 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.031	**lbs/hp-hr**
Calculation: (125 hp) * (500 hours) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 0.97 ton/yr	0.97	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.031 lbs/hp-hr) = 1,937.50 lbs/yr	1937.5	**lbs/yr**

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	6.68E-03	**lbs/hp-hr**
Calculation: (125 hp) * (500 hours) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 0.21 ton/yr	0.21	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.00668 lbs/hp-hr) = 417.50 lbs/yr	417.5	**lbs/yr**

VOC Emissions:

Emission Factor = 0.0025141 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)	0.00251	**lbs/hp-hr**
Calculation: (125 hp) * (500 hours) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 0.08 ton/yr	0.08	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.0025141 lbs/hp-hr) = 157.13 lbs/yr	157.13125	**lbs/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: (125 hp) * (500 hours) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 0.06 ton/yr	0.06	**ton/yr**
Calculation: (125 hp) * (500 hours) * (0.00205 lbs/hp-hr) = 128.13 lbs/yr	128.125	**lbs/yr**

V. Existing Air Quality

This permit is for a portable facility to be initially located Section 23, Township 1 South, Range 4 East, in Gallatin County, and in those areas for which this facility is permitted to operate, have been designated unclassified/attainment with all ambient air quality standards, and where there are no major air pollution sources in the surrounding area. MAQP #4064-01 applies to Kenyon Noble while operating at any location within Montana excluding those areas that have a Department-approved permitting program, areas considered tribal lands, or areas in or within 10 km of certain PM_{10} nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.*

In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard while operating in any area classified as attainment or unclassified for the ambient air quality standards. An addendum to MAQP #4064-01 will be required for operating in locations in or within 10 km of certain PM_{10} nonattainment areas in Montana.

VI. Air Quality Impacts

The Department determined that there will be no air quality impacts from this permitting action because this permitting action is considered an administrative action. Therefore, the Department believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #4064-01, the Department determined that there will be no impacts from this administrative permitting action. The Department believes it will not cause or contribute to a violation of any ambient air quality 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 not required for this permit action because the change is considered administrative.

Permit Analysis Prepared By: John P. Proulx
Date: March 23, 2017