DEQ
Montana Department
of Environmental Quality

August 4, 2016

Bill Bajari
Bituminous Paving, Inc.
P.O. Box 6
Ortonville, MT 56278

Dear Mr. Bajari:

Montana Air Quality Permit #5161-00 is deemed final as of August 3, 2016, by the Department of Environmental Quality (Department). This permit is for a portable drum-mix asphalt 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) 444-1277

JM:JP
Enclosure

Montana Department of Environmental Quality
Air, Energy and Mining Division

Montana Air Quality Permit #5161-00

Bituminous Paving Inc.
P.O. Box 6
Ortonville, MN 56278

August 4, 2016

MONTANA AIR QUALITY PERMIT

Issued to: Bituminous Paving Inc.
P.O. Box 6
Ortonville, MN 56278

MAQP: #5161-00
Application Complete: 06/29/2016
Preliminary Determination Issued: 07/01/2016
Department's Decision Issued: 07/18/2016
Permit Final: 08/04/2016
AFS #: 777-5161

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Bituminous Paving Inc., (BPI) 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. Permitted Equipment

BPI proposes to install and operate a portable drum mix-asphalt plant as well as associated equipment. The drum-mix asphalt plant is capable of burning Number 2 Fuel Oil (No. 2) or waste oil and has a maximum process rate of 300 tons per hour (TPY) with emissions routed to a baghouse. A complete list of permitted equipment is located in Section I.A. of the MAQP Analysis attached to this permit.

B. Plant Location

The portable asphalt plant will initially be located at NE ¼ of Section 11, Township 24 North, Range 59 East, in Richland County, Montana. However, MAQP #5161-00 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 locations in or within 10 km of certain PM_{10} nonattainment areas.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) from the asphalt drum-mix dryer exhaust (ARM 17.8.340, ARM 17.8.752, 40 Code of Federal Regulations (CFR) 60, Subpart I).

2. BPI shall install, operate, and maintain a baghouse for control of particulate matter from the asphalt drum mix drier exhaust stack. A device to measure the pressure drop (magnehelic gauge, manometer, etc.) on the control device (baghouse) must be installed and maintained. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained (ARM 17.8.752)

3. BPI shall not cause or authorize to be discharged into the atmosphere from the asphalt plant stack emissions that exhibit 20% opacity or greater averaged over 6 consecutive minutes (ARM 17.8.752, ARM 17.8.340, 40 CFR 60, Subpart I).

4. BPI shall not cause or authorize to be discharged into the atmosphere from dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart I).

5. BPI shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

6. BPI shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).

7. Asphalt production shall be limited to 470,400 tons during any rolling 12-month time period (ARM 17.8.1204).

8. The asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).

9. BPI shall not have onsite more than 1 diesel engine/generator. The maximum combined capacity of the engine that drives the generator shall not exceed 1200 horsepower (hp) (ARM 17.8.749).

10. BPI shall not have onsite more than 1 diesel engine/generator. The maximum capacity of the engine that drives the engine/generator shall not exceed 99 horsepower (ARM 17.8.749).

11. Hours of operation of the asphalt plant (including the diesel engine(s) driving the generators(s)) shall not exceed 1568 hours each during any rolling 12-month time period (ARM17.8.1204).

12. If the permitted equipment is used in conjunction with any other equipment owned or operated by BPI, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons of PM_{10}, $PM_{2.5}$, NO_X, CO, VOC, or SO_2 during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

13. BPI shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities (ARM 17.8.340 and 40 CFR 60, Subpart I).

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

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 1-5 particulate matter source test must be performed on the asphalt plant baghouse exhaust to demonstrate compliance with the emission limitations contained in Section II.A.1. An EPA Method 9 opacity test shall be performed in conjunction with all particulate tests to demonstrate compliance with the emission limitation contained in Section II.A.3. Testing shall continue on an every-four-year basis or according to another testing/monitoring schedule as may be approved by the Department. Additional testing may be required by 40 CFR 60, Subpart I (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart I).

2. Since asphalt production will be limited to the average production rate during the compliance source test, it is suggested that the test be performed at the highest practical production rate (ARM 17.8.749).

3. Temperature and pressure drop across the drier baghouse must be recorded daily and kept on site according to Section II.A.2 (ARM 17.8.749).

4. Temperature and pressure drop across the baghouse must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).

5. BPI may retest at any time in order to test a higher production rate (ARM 17.8.749).

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

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

C. Operational Reporting Requirements

1. If this portable asphalt plant is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. BPI 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, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. BPI 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. BPI 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 BPI 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. BPI shall document, by month, the asphalt production from the facility. By the 25th day of each month, BPI shall total the asphalt 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.7. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. BPI shall document, by month, the hours of operation of the asphalt plant and diesel engine(s)/generator(s). By the 25th day of each month, BPI shall total the hours of operation for the asphalt plant and diesel engine(s)/generator(s) 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).

7. BPI shall annually certify that its emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

1. Within 30 days of commencement of construction of any NSPS-affected equipment, BPI shall notify the Department of the date of commencement of construction of the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart A, and Subpart I).

2. Within 15 days of the actual start-up date of any NSPS-affected equipment, BPI shall submit written notification to the Department of the initial start-up date of the affected equipment (ARM 17.8.340, 40 CFR 60, Subpart A, and Subpart I).

3. Within 15 days of the actual start-up date of any non-NSPS-affected equipment, BPI shall submit written notification to the Department of the initial start-up date of the affected equipment (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – BPI shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if BPI fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving BPI 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 action as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA.

The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the permitted source.

G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by BPI 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. BPI shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
Bituminous Paving Inc.
MAQP #5161-00

I. Introduction/Process Description

Bituminous Paving Inc. (BPI) owns and operates a portable drum-mix asphalt plant.

A. Permitted Equipment

The following list of permitted equipment is provided for reference, as portions of MAQP #5161-00 are written de minimis-friendly, whereby operational flexibility is provided so that alternate equipment may be utilized as long as maximum permitted capacities are not exceeded. See Section II of the MAQP for specific equipment limitations and/or conditions. Equipment permitted under this action includes, but is not limited to the following:

- Drum Dryer
- 600 kilowatt (kW) Caterpillar engine-generator
- 74 kW SDMO engine-generator
- HCS-100 oil heater
- Diesel-fired Air Compressor
- 4-Bin Feeder
- 2-Bin Feeder
- 1 (one) 36"x 60' Conveyer
- 1 (one) 36"x 40' Conveyer
- Material Screen
- Slat conveyer (to silo)
- Asphalt Silo

B. Source Description

For a typical operational set-up, aggregate is taken from the on-site aggregate stockpile and dumped via a front end loader into the cold aggregate feed bins. The cold aggregate is then transferred from the cold aggregate feed bins via conveyor to a screen or rotary drum. The aggregate is sized with the larger aggregate rerouted to a crusher or stockpiles and the aggregate that passed sorting is sent to the drum.

The cold aggregate is heated and dried within the drum mixer at which time liquid asphalt cement is introduced into the aggregate. The material is further heated within the drum mixer which can be fired with No. 2 fuel or waste oil. Exhaust from the dryer vents through the primary baghouse and then to the atmosphere through a stack.

After heating and mixing is completed, the asphalt product is transferred from the drum mixer to the asphalt product silo via conveyor. The asphalt remains in the asphalt silo until it is loaded into trucks for transport to a given job location.

A primary diesel-fired generator set powers the production equipment, while a secondary diesel-fired generator set is utilized for supplemental power for recirculation pumps in the asphalt oil heater during night, and for supplying power to the Quality Control Laboratory during operating hours.

BPI's initial location is the home pit located at NE ¼ of Section 11, Township 24 North, Range 59 East, in Richland County, Montana.

C. Response to Public Comment

Person/Group Commenting	Permit Reference	Comment	Department Response
Bison Engineering, Inc.	MAQP – Section II.A.9	Section II.A.9 states that the maximum combined capacity of engines that drive generators at the site shall not exceed 1200 hp. Our permit application included emissions estimates for a large, 1200 hp unit, and a smaller 99 hp unit. We request that the maximum capacity of the engines driving generators at the site be listed as 1299 hp. This would then be consistent with our permit application and emissions calculation.	In light of the comment submitted by Bison regarding clarification of the total requested combined engine capacity as 1299 hp rather than 1200 hp, the Department has changed the way that the proposed engines are referenced in the permit. Each proposed engine is now referenced by its own permit condition and emission calculations have been updated to align with Bison's calculations.
Bison Engineering, Inc.	MAQP – Section II.A.9	Related to item 1, the emissions calculation for the diesel engine generator presented in Section IV of the permit analysis uses emission factors from AP-42, Section 3.3. The introductory paragraph for AP-42 Section 3.3 (3.3.1 General) notes that "Diesel engines greater than 600 hp are covered in Section 3.4, Large Stationary Diesel and All Stationary Dual-fuel Engines," which is why we used EPA AP-42 Section 3.4, Table .3.4-1 for the large generator emissions and Section 3.3 Table 3.3-1 for the smaller generator emissions. While the overall conclusion is not likely to change based on the different emission factors, we wanted to clarify the source of emission factors.	

Person/Group Commenting	Permit Reference	Comment	Department Response
Bison Engineering, Inc.	MAQP – Section II.A.11	Section II.A.11 states that emissions from production shall "not exceed 250 tons during any rolling 12-month period." While this may be boilerplate language, it seems it might be helpful to clarify 250 tons of which emissions. (We recognize this is related to Prevention of significant Deterioration [PSD] applicability, bit it might be helpful to clarify which emission would be considered in the 250-ton limit.	The Department has made the clarification of emissions.
Bison Engineering, Inc.	MAQP – Section II.D.2	Section II.D.2 refers to Nelcon. Please revise to BPI.	The Department has made the recommended change.
Bison Engineering, Inc.	MAQP Analysis – Section I.A	a. Please correct the "51 kW SDMO engine-generator" to "74 kW SDMO engine-generator. b. There are two 36" wide conveyors: one is 60' long and one is 40' long. If two 36"x 60' conveyors were listed for flexibility, that is okay. However, to be consistent with existing equipment and the permit application, please correct the on 36"x 60' conveyor and one 36"x 40' conveyor. c. Section IV of the Permit Analysis included cold aggregate from piles created and managed by FNF Construction (MAQP #4769-01), who owns and operates the gravel pit where the asphalt plant will be located. Therefore, we do not believe that these fugitive emissions should be attributed to the BPI facility. d. The hot oil heater is listed to consume 11 gallons of fuel per hour, not the listed 7.22 gallons per hour.	a. The Department has made the recommended change. b. The Department has made the recommended change. c. The flow diagram from the application references the use of an aggregate screen and an associated "oversized" discard pile located upstream from the conveyor supplying material to the drum dryer. The maximum potential emissions from this pile formation are what was presented in the draft permit. However, the Department recognizes that if the entire inlet material stream were routed to the oversized pile then no asphalt production would occur. Therefore, the Department has removed these emissions from the permit calculations since there should be minimal pile formation of oversized material during normal operation. d. The Department has made the recommended change.

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 locations of complete copies of all applicable rules and regulations 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).

   BPI 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
5. ARM 17.8.213 Ambient Air Quality Standard 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
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

BPI must maintain compliance with the applicable ambient air quality standards.

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

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

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, BPI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section

4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank tuck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). BPI is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

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

b. 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities. In order for an asphalt plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after June 11, 1973. Based on the information submitted by BPI, the asphalt plant equipment to be used under MAQP #5161-00 is subject to this subpart because is it considered, by definition (40 CFR 60.91(a)), a Hot Mix Asphalt Plant.

c. 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart.

Based on the information submitted by BPI, the CI ICE equipment to be used under MAQP #5161-00 are intended to be portable. Therefore, BPI is not required to comply with the applicable emission limitations and operating limitations of 40 CFR 60, Subpart IIII. However, this subpart would become applicable if BPI operated the engines at a single location for more than 12 months.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. BPI is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts.

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

b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. A RICE is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year. BPI is an area source of HAP emissions.

Since the RICE operated under MAQP #5161-00 are intended to be portable, BPI is not required to comply with the applicable emission limitations and operating limitations of 40 CFR 63, Subpart ZZZZ. This subpart would become applicable if a RICE remains in a location for more than 12 months, or a shorter period of time if 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.

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.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. BPI has a PTE greater than 15 tons per year of PM (Particulate Matter), PM_{10}, $PM_{2.5}$, NO_X, CO, VOC, and SO_2; 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. BPI submitted the required permit application for the current permit action.

   (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit.

   BPI submitted an affidavit of publication of public notice for the June 26, 2016 issue of the *Sydney Herald*, a newspaper of general circulation in the Town of Sydney in Richland County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be 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 BPI 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. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

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

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

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 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 particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #5161-00 for BPI, 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 subject to current NSPS (40 CFR 60, Subpart I and potentially IIII).

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

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

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

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

BPI requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations; the Department has determined that BPI will not be subject to the Title V Operating Permit Program. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, BPI will be required to obtain a Title V Operating Permit.

i. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.

ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

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

III. BACT Determination

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

A. Asphalt Drum-Mixer

The Department reviewed relevant control options, as well as previous BACT determinations. The following control options were reviewed by the Department in order to make the following BACT determinations:

- Fabric Filter Baghouse
- Electrostatic Precipitator
- Cyclone
- Wet Scrubber

All of the listed technologies are deemed technically feasible for this application. Technical feasible control options, in order the highest control efficiency to the lowest control efficiency base on PM control are as follows:

- Fabric Filter Baghouse (99 – 99.9% efficient) (EPA Fact Sheet EPA-452/F-03-025, 07/15/03)
- Electrostatic Precipitator (99 – 99.9% efficient) (EPA Fact Sheet EPA-452/F-03-028, 07/15/03)
- Cyclone (up to 99% efficient) (EPA Fact Sheet EPA-452/F-03-005, 07/15/03)
- Wet Scrubber (70 – greater than 99% efficient) (EPA Fact Sheet EPA-452/F-03-0017, 07/15/03)

BPI has proposed to use a baghouse for the control of PM from the exhaust of the asphalt drum mixer. Because BPI proposes to use the highest rated control device (baghouse), no further economic analysis is needed. The control option selected has control technology and a control cost comparable to other recently permitted similar sources and is capable of achieving the appropriate emissions standards.

Operating and maintaining a baghouse will constitute BACT for the asphalt drum mixer. All asphalt drum mixer PM emissions are limited to 0.04 grains per dry standard cubic foot (gr/dscf) for particulate and 20 percent opacity in accordance with 40 CFR 60, Subpart I. BPI shall install and operate a device to measure the pressure drop (magnehelic gauge, manometer, etc.) and temperature differential across the baghouse.

B. Diesel Generator

Due to the limited amount of emissions produced by the diesel-fired engines used in association with MAQP #5161-00 and the lack of cost effective add-on controls, such add-on controls would be cost prohibitive.

Therefore, the Department determined that proper operation and maintenance with no add-on controls would constitute BACT for the diesel-fired engine.

In addition, any existing and new diesel-fired engine would likely be required to comply with the federal engine emission limitations including, EPA Tiered emission standards for non-road engines (40 CFR Parts 89 and 1039), NSPS emission limitations for stationary compression ignition engines (40 CFR 60, Subpart IIII), or National Emissions Standards for Hazardous Air Pollutant Sources for Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ). Therefore, the Department has determined that compliance with applicable federal standards and proper operation and maintenance of the engines constitutes BACT for this engine.

C. Fugitive Emissions

BPI must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking lots, and the general plant area. Reasonable precautions include treating 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. Using water and/or chemical dust suppressant to comply with the reasonable precautions limitation will be considered BACT.

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

IV. Emission Inventory

Emission Inventory:

	TPY								
Emission Source	**PM**	**PM_{10}**	**$PM_{2.5}$**	**NO_X**	**CO**	**VOC**	**SO_2**	**CO_2e**	**Total HAPs**
Cold Aggregate Handling/Conveyors	2.82	1.03	0.01	--	--	--	--		
Cold Aggregate Screens	0.52	0.17	0.01	--	--	--	--		
Diesel-Fired Asphalt Oil Heater	8.62	--		1.21	0.01	0.33	1.90		
300 TPH Drum Mix Asphalt Plant Dryer	12.53	5.48	5.24	12.94	30.58	7.53	13.64	7821	2.35
Asphalt Product Silo Filling	0.14	0.14	0.14	--	0.28	2.87	--	0.05	
Plant Load-Out	0.00	0.00	0.12	--	0.32	0.92	--	1.34	
Haul Roads / Vehicle Traffic	1.02	0.28	0.03	--	--	--	--		
1200 hp Diesel Engine Generator	0.66	0.66	0.66	22.58	5.17	0.07	7.61	1091	
99 hp Diesel Engine Generator	0.17	0.17	0.17	2.41	0.52	0.20	0.16	89	
Asphalt Oil Heater	8.62	8.62	8.62	1.21	0.01	0.33	1.90	5071	
Total Emissions	**35.11**	**16.56**	**15.01**	**40.34**	**36.88**	**12.23**	**25.21**	**14074**	**2.35**

Notes:
1. Values in table reflect "controlled" cells from subsequent worksheets
2. All PM values include filterable and condesnable fractions. Filterable fractions are based on NSPS limit of 0.04 gr/dscf. Condensable fractions are based on AP-42 data.

Calculations:

Conveyor Transfer Point (SCC 3-05-02006)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Process Rate = 1,568 hrs/yr	1568	**hrs/yr**
Number of Transfers = 4 transfer (Company Information, Excludes RAP transfers)	4	**transfer**
Filterable PM Emissions:		
Emission Factor = 0.003 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.003	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.003 lb/ton) * (ton/2000 lb) * (4 transfer) = 2.82 ton/yr	2.8224	**ton/yr**
Filterable PM10 Emissions:		
Emission Factor = 0.0011 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0011	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0011 lb/ton) * (ton/2000 lb) * (4 transfer) = 1.03 ton/yr	1.03488	**ton/yr**
Filterable 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: (300 ton/hr) * (1568 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (4 transfer) = 0.01 ton/yr	0.0122304	**ton/yr**
Condensable PM2.5 Emissions:		
Emission Factor = 0 lb/ton (non-combustion source; therefore, no CPM)	0	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0 lb/ton) * (ton/2000 lb) * (4 transfer) = 0.00 ton/yr	0	**ton/yr**

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

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
Number of Screens = 1 screen(s) (Company Information, Excludes RAP screen)	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: (300 ton/hr) * (1568) * (0.0022 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.52 ton/yr	0.51744	**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: (300 ton/hr) * (1568) * (0.00074 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.17 ton/yr	0.174048	**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: (300 ton/hr) * (1568) * (0.00005 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.01 ton/yr	0.01176	**ton/yr**
Hot Oil Heater		
Production Rate = 11.00 gal/hr (Company information)	11.00	**gal/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
PM Emissions:		
Emission Factor = 1 lb/MMBtu (Manufacturer data provided in application)	1	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (1 lb/MMBtu) * (ton/2000 lb) = 8.62 ton/yr	8.624	**ton/yr**
CO Emissions:		
Emission Factor = 0.0012 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	0.0012	**lb/gal**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.0012 lb/gal) * (ton/2000 lb) = 0.01 ton/yr	0.0103	**ton/yr**
NOx Emissions:		
Emission Factor = 0.14 lb/MMBtu (Manufacturer data provided in application)	0.14	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.14 lb/MMBtu) * (ton/2000 lb) = 1.21 ton/yr	1.21	**ton/yr**
SOx Emissions:		
Emission Factor = 0.2205 lb/MMBtu (Manufacturer data provided in application)	0.2205	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.2205 lb/MMBtu) * (ton/2000 lb) = 1.90 ton/yr	1.90	**ton/yr**
VOC Emissions:		
Emission Factor = 0.038 lb/MMBtu (Manufacturer data provided in application)	0.038	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.038 lb/MMBtu) * (ton/2000 lb) = 0.33 ton/yr	0.33	**ton/yr**
CO2 Emissions:		
Emission Factor = 28 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	28	**lb/gal**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (28 lb/gal) * (ton/2000 lb) = 241.47 ton/yr	241.472	**ton/yr**
Dryer, fabric filter (SCC 3-05-002-05, -55 to -63)		
Maximum Process Rate = 300 ton/hr (Application information)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
Filterable PM Emissions:		
Emission Factor = 0.014 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.014	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.014 lb/ton) * (ton/2000 lb) = 3.29 ton/yr	3.2928	**ton/yr**
Filterable PM10 Emissions:		
Emission Factor = 0.0039 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.0039	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0039 lb/ton) * (ton/2000 lb) = 0.92 ton/yr	0.92	**ton/yr**

Filterable PM2.5 Emissions:		
Emission Factor = 0.0029 lb/ton (fabric filter, AP 42, Table 11.1-4, 3/04)	0.0029	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0029 lb/ton) * (ton/2000 lb) = 0.68 ton/yr	0.68	**ton/yr**
Condensable PM2.5 Emissions:		
Emission Factor = 0.0194 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.0194	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0194 lb/ton) * (ton/2000 lb) = 4.56 ton/yr	4.56	**ton/yr**
CO Emissions:		
Emission Factor = 0.13 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.13	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.13 lb/ton) * (ton/2000 lb) = 30.58 ton/yr	30.58	**ton/yr**
NOx Emissions:		
Emission Factor = 0.055 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.055	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.055 lb/ton) * (ton/2000 lb) = 12.94 ton/yr	12.94	**ton/yr**
SO2 Emissions:		
Emission Factor = 0.058 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.058	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.058 lb/ton) * (ton/2000 lb) = 13.64 ton/yr	13.64	**ton/yr**
TOC Emissions:		
Emission Factor = 0.044 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.044	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.044 lb/ton) * (ton/2000 lb) = 10.35 ton/yr	10.35	**ton/yr**
CH4 Emissions:		
Emission Factor = 0.012 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.012	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) *(0.012 lb/ton) * (ton/2000 lb) = 2.82 ton/yr	2.8224	**ton/yr**
CO2e = 2.82 * 21 = 2.82 ton/yr	59.27	**ton/yr**
VOC Emissions:		
Emission Factor = 0.032 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.032	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.032 lb/ton) * (ton/2000 lb) = 7.53 ton/yr	7.53	**ton/yr**
Total HAPs Emissions:		
Emission Factor = 0.01 lb/ton (Waste oil-fired dryer with fabric filter, AP 42, Table 11.1-10, 3/04)	0.01	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.01 lb/ton) * (ton/2000 lb) = 2.35 ton/yr	2.35	**ton/yr**
CO2 Emissions:		
Emission Factor = 33 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	33	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (33 lb/ton) * (ton/2000 lb) = 7,761.60 ton/yr	7761.60	**ton/yr**

Silo Filling (SCC 3-05-002-13)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
Filterable PM2.5 Emissions:		
Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.		
Condensable PM2.5 Emissions:		
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. Emission Factor = 0.000332 + 0.00105(-V)e^((0.0251)(T + 460) - 20.43) = 0.00059 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)	0.000586	**lb/ton**

Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.00059 lb/ton) * (ton/2000 lb) = 0.14 ton/yr	0.14	**ton/yr**

VOC Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0504(-V)e^((0.0251)(T + 460) - 20.43) = 0.01219 lb/ton		0.0122	**lb/ton**
Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.01219 lb/ton) * (ton/2000 lb) = 2.87 ton/yr	2.87	**ton/yr**

CO Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.00488(-V)e^((0.0251)(T + 460) - 20.43) = 0.00118 lb/ton		0.00118	**lb/ton**
Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.00118 lb/ton) * (ton/2000 lb) = 0.28 ton/yr	0.28	**ton/yr**

CH4 Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 0.26% = 0.00001 lb/ton		0.0000108	**lb/ton**
Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.00001 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.0025432	**ton/yr**
CO2e = 0.00 * 21 = 0.05 ton/yr		0.05	**ton/yr**

Plant Load-Out (SCC 3-05-002-14)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)		300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr		1568	**hrs/yr**

Filterable PM2.5 Emissions:

Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.

Condensable PM2.5 Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.000181 + 0.00141(-V)e^((0.0251)(T + 460) - 20.43) = 0.00052 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)		0.0005219 37	**lb/ton**
Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.00052 lb/ton) * (ton/2000 lb) = 0.12 ton/yr	0.12	**ton/yr**

VOC Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 94% = 0.00391 lb/ton		0.0039094 11	**lb/ton**
Where:	V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
	T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation:	(300 ton/hr) * (1568 hrs/yr) * (0.00391 lb/ton) * (ton/2000 lb) = 0.92 ton/yr	0.92	**ton/yr**

CH4 Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 6.5% = 0.00027 lb/ton		0.0002703 32	**lb/ton**

Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00027 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.000017	**ton/yr**
CO2e = 0.00 * 21 = 0.00 ton/yr	0.000361	**ton/yr**

CO Emissions:

Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.00558(-V)e^((0.0251)(T + 460) - 20.43) = 0.00135 lb/ton	0.0013492	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00135 lb/ton) * (ton/2000 lb) = 0.32 ton/yr	0.32	**ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.21	**VMT/hr**
Hours of Operation = 1,568 hrs/yr	1568	**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	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 2.04 tons/yr (Uncontrolled Emissions)	2.04	**tons/yr**
Calculation: ( ) * (0.00) * (12.46 lb/VMT) * (ton/2000 lb) * (1-50/100) = 1.02 tons/yr (Apply 50% control efficiency)	1.02	**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	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 0.56 tons/yr (Uncontrolled Emissions)	0.56	**tons/yr**
Calculation: ( ) * (0.00) * (3.43 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.28 tons/yr (Apply 50% control efficiency)	0.28	**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	

Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.06 tons/yr (Uncontrolled Emissions)	0.06	**tons/yr**
Calculation: ( ) * (0.00) * (0.34 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.03 tons/yr (Apply 50% control efficiency)	0.03	**tons/yr**

Diesel Engine Generator

Note: Emissions are based on the power output of the engine (1200 hp).		
Operational Capacity of Engine = 1,200 hp	1200	**hp**
Hours of Operation = 1,568 hours	1568	**hours**
Total PM/PM10/PM2.5 Emissions:		
Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.07 ton/yr	2.07	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0022 lbs/hp-hr) = 4,139.52 lbs/yr	4139.52	**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: (1,568 hours) * (1,200 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 29.16 ton/yr	29.16	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.031 lbs/hp-hr) = 58,329.60 lbs/yr	58329.60	**lbs/yr**
CO Emissions:		
Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00668	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 6.28 ton/yr	6.28	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00668 lbs/hp-hr) = 12,569.09 lbs/yr	12569.09	**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)	0.0025141	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.37 ton/yr	2.37	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0025141 lbs/hp-hr) = 4,730.53 lbs/yr	4730.53	**lbs/yr**
SOx Emissions:		
Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00205	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 1.93 ton/yr	1.93	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00205 lbs/hp-hr) = 3,857.28 lbs/yr	3857.28	**lbs/yr**
CO2 Emissions:		
Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,081.92 ton/yr	1081.92	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (1.15 lbs/hp-hr) = 2,163,840.00 lbs/yr	2163840.00	**lbs/yr**

Diesel Engine Generator2

Note: Emissions are based on the power output of the engine (99 hp).		
Operational Capacity of Engine = 99 hp	99	**hp**
Hours of Operation = 1,568 hours	1568	**hours**
Total PM/PM10/PM2.5 Emissions:		
Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.07 ton/yr	2.07	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.0022 lbs/hp-hr) = 4,139.52 lbs/yr	4139.52	**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: (1,568 hours) * (99 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 29.16 ton/yr	29.16	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.031 lbs/hp-hr) = 58,329.60 lbs/yr	58329.60	**lbs/yr**

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00668	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 6.28 ton/yr	6.28	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.00668 lbs/hp-hr) = 12,569.09 lbs/yr	12569.09	**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)	0.0025141	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.37 ton/yr	2.37	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.0025141 lbs/hp-hr) = 4,730.53 lbs/yr	4730.53	**lbs/yr**

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00205	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 1.93 ton/yr	1.93	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.00205 lbs/hp-hr) = 3,857.28 lbs/yr	3857.28	**lbs/yr**

CO2 Emissions:

Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,081.92 ton/yr	1081.92	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (1.15 lbs/hp-hr) = 2,163,840.00 lbs/yr	2163840.0 0	**lbs/yr**

Conveyor Transfer Point (SCC 3-05-02006)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Process Rate = 1,568 hrs/yr	1568	**hrs/yr**
Number of Transfers = 4 transfer (Company Information, Excludes RAP transfers)	4	**transfer**

Filterable PM Emissions:

Emission Factor = 0.003 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04)	0.003	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.003 lb/ton) * (ton/2000 lb) * (4 transfer) = 2.82 ton/yr	2.8224	**ton/yr**

Filterable PM10 Emissions:

Emission Factor = 0.0011 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04)	0.0011	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0011 lb/ton) * (ton/2000 lb) * (4 transfer) = 1.03 ton/yr	1.03488	**ton/yr**

Filterable 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: (300 ton/hr) * (1568 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (4 transfer) = 0.01 ton/yr	0.0122304	**ton/yr**

Condensable PM2.5 Emissions:

Emission Factor = 0 lb/ton (non-combustion source; therefore, no CPM)	0	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0 lb/ton) * (ton/2000 lb) * (4 transfer) = 0.00 ton/yr	0	**ton/yr**

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

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
Number of Screens = 1 screen(s) (Company Information, Excludes RAP screen)	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: (300 ton/hr) * (1568) * (0.0022 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.52 ton/yr	0.51744	**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: (300 ton/hr) * (1568) * (0.00074 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.17 ton/yr	0.174048	**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: (300 ton/hr) * (1568) * (0.00005 lb/ton) * (ton/2000 lb) * (1 screen(s)) = 0.01 ton/yr	0.01176	**ton/yr**

Hot Oil Heater

Production Rate = 11.00 gal/hr (Company information)	11.00	**gal/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**
PM Emissions:		
Emission Factor = 1 lb/MMBtu (Manufacturer data provided in application)	1	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (1 lb/MMBtu) * (ton/2000 lb) = 8.62 ton/yr	8.624	**ton/yr**
CO Emissions:		
Emission Factor = 0.0012 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	0.0012	**lb/gal**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.0012 lb/gal) * (ton/2000 lb) = 0.01 ton/yr	0.0103	**ton/yr**
NOx Emissions:		
Emission Factor = 0.14 lb/MMBtu (Manufacturer data provided in application)	0.14	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.14 lb/MMBtu) * (ton/2000 lb) = 1.21 ton/yr	1.21	**ton/yr**
SOx Emissions:		
Emission Factor = 0.2205 lb/MMBtu (Manufacturer data provided in application)	0.2205	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.2205 lb/MMBtu) * (ton/2000 lb) = 1.90 ton/yr	1.90	**ton/yr**
VOC Emissions:		
Emission Factor = 0.038 lb/MMBtu (Manufacturer data provided in application)	0.038	**lb/MMBtu**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (0.038 lb/MMBtu) * (ton/2000 lb) = 0.33 ton/yr	0.33	**ton/yr**
CO2 Emissions:		
Emission Factor = 28 lb/gal (AP-42, Section 11.1, Table 11.1-13, No. 2 Fuel Oil, 3/04)	28	**lb/gal**
Calculation: (11 gal/hr) * (1,568.00 hrs/yr) * (28 lb/gal) * (ton/2000 lb) = 241.47 ton/yr	241.472	**ton/yr**

Dryer, fabric filter (SCC 3-05-002-05, -55 to -63)

Maximum Process Rate = 300 ton/hr (Application information)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**

Filterable PM Emissions:		
Emission Factor = 0.014 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.014	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.014 lb/ton) * (ton/2000 lb) = 3.29 ton/yr	3.2928	**ton/yr**
Filterable PM10 Emissions:		
Emission Factor = 0.0039 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.0039	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0039 lb/ton) * (ton/2000 lb) = 0.92 ton/yr	0.92	**ton/yr**
Filterable PM2.5 Emissions:		
Emission Factor = 0.0029 lb/ton (fabric filter, AP 42, Table 11.1-4, 3/04)	0.0029	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0029 lb/ton) * (ton/2000 lb) = 0.68 ton/yr	0.68	**ton/yr**
Condensable PM2.5 Emissions:		
Emission Factor = 0.0194 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04)	0.0194	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.0194 lb/ton) * (ton/2000 lb) = 4.56 ton/yr	4.56	**ton/yr**
CO Emissions:		
Emission Factor = 0.13 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.13	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.13 lb/ton) * (ton/2000 lb) = 30.58 ton/yr	30.58	**ton/yr**
NOx Emissions:		
Emission Factor = 0.055 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.055	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.055 lb/ton) * (ton/2000 lb) = 12.94 ton/yr	12.94	**ton/yr**
SO2 Emissions:		
Emission Factor = 0.058 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	0.058	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.058 lb/ton) * (ton/2000 lb) = 13.64 ton/yr	13.64	**ton/yr**
TOC Emissions:		
Emission Factor = 0.044 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.044	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.044 lb/ton) * (ton/2000 lb) = 10.35 ton/yr	10.35	**ton/yr**
CH4 Emissions:		
Emission Factor = 0.012 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.012	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) *(0.012 lb/ton) * (ton/2000 lb) = 2.82 ton/yr	2.8224	**ton/yr**
CO2e = 2.82 * 21 = 2.82 ton/yr	59.27	**ton/yr**
VOC Emissions:		
Emission Factor = 0.032 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-8, 3/04)	0.032	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.032 lb/ton) * (ton/2000 lb) = 7.53 ton/yr	7.53	**ton/yr**
Total HAPs Emissions:		
Emission Factor = 0.01 lb/ton (Waste oil-fired dryer with fabric filter, AP 42, Table 11.1-10, 3/04)	0.01	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.01 lb/ton) * (ton/2000 lb) = 2.35 ton/yr	2.35	**ton/yr**
CO2 Emissions:		
Emission Factor = 33 lb/ton (Waste oil-fired dryer, AP 42, Table 11.1-7, 3/04)	33	**lb/ton**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (33 lb/ton) * (ton/2000 lb) = 7,761.60 ton/yr	7761.60	**ton/yr**

Silo Filling (SCC 3-05-002-13)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**

Filterable PM2.5 Emissions:
Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.

Condensable PM2.5 Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.000332 + 0.00105(-V)e^((0.0251)(T + 460) - 20.43) = 0.00059 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)	0.000586	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00059 lb/ton) * (ton/2000 lb) = 0.14 ton/yr	0.14	**ton/yr**

VOC Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0504(-V)e^((0.0251)(T + 460) - 20.43) = 0.01219 lb/ton	0.0122	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.01219 lb/ton) * (ton/2000 lb) = 2.87 ton/yr	2.87	**ton/yr**

CO Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.00488(-V)e^((0.0251)(T + 460) - 20.43) = 0.00118 lb/ton	0.00118	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00118 lb/ton) * (ton/2000 lb) = 0.28 ton/yr	0.28	**ton/yr**

CH4 Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 0.26% = 0.00001 lb/ton	0.0000108	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00001 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.00254328	**ton/yr**
CO2e = 0.00 * 21 = 0.05 ton/yr	0.05	**ton/yr**

Plant Load-Out (SCC 3-05-002-14)

Maximum Process Rate = 300 ton/hr (Maximum plant process rate)	300	**ton/hr**
Maximum Hours of Operation = 1,568 hrs/yr	1568	**hrs/yr**

Filterable PM2.5 Emissions:
Assume all PM is CPM, AP 42, Table 11.1-14, footnote b, 3/04.

Condensable PM2.5 Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.000181 + 0.00141(-V)e^((0.0251)(T + 460) - 20.43) = 0.00052 lb/ton (Total PM, AP-42, Table 11.1-14, footnote b, 3/04)	0.000521937	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00052 lb/ton) * (ton/2000 lb) = 0.12 ton/yr	0.12	**ton/yr**

VOC Emissions:
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.

Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 94% = 0.00391 lb/ton	0.003909411	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	

T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00391 lb/ton) * (ton/2000 lb) = 0.92 ton/yr	0.92	**ton/yr**
CH4 Emissions:		
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.0172(-V)e^((0.0251)(T + 460) - 20.43) * 6.5% = 0.00027 lb/ton	0.000270332	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00027 lb/ton) * (ton/2000 lb) = 0.00 ton/yr	0.000017	**ton/yr**
CO2e = 0.00 * 21 = 0.00 ton/yr	0.000361	**ton/yr**
CO Emissions:		
Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04.		
Emission Factor = 0.00558(-V)e^((0.0251)(T + 460) - 20.43) = 0.00135 lb/ton	0.00134924	**lb/ton**
Where: V = Asphalt volatility = -0.5 (Default value per AP 42, Table 11.1-14, 3/04)	-0.5	
T = HMA mix temperature = 325 F (Default value per AP 42, Table 11.1-14, 3/04)	325	**F**
Calculation: (300 ton/hr) * (1568 hrs/yr) * (0.00135 lb/ton) * (ton/2000 lb) = 0.32 ton/yr	0.32	**ton/yr**

Haul Roads

Vehicle Miles Traveled (VMT) per Day = 5 VMT/day (Estimate)	5	**VMT/day**
VMT per hour = (5 VMT/day) * (day/24 hrs) = 0.21 VMT/hr	0.21	**VMT/hr**
Hours of Operation = 1,568 hrs/yr	1568	**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	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 2.04 tons/yr (Uncontrolled Emissions)	2.04	**tons/yr**
Calculation: ( ) * (0.00) * (12.46 lb/VMT) * (ton/2000 lb) * (1-50/100) = 1.02 tons/yr (Apply 50% control efficiency)	1.02	**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	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 0.56 tons/yr (Uncontrolled Emissions)	0.56	**tons/yr**
Calculation: ( ) * (0.00) * (3.43 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.28 tons/yr (Apply 50%	0.28	**tons/yr**

control efficiency)

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	
Control Efficiency = 50% (Water spray or chemical dust suppressant)	50	**%**
Calculation: (1568 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.06 tons/yr (Uncontrolled Emissions)	0.06	**tons/yr**
Calculation: ( ) * (0.00) * (0.34 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.03 tons/yr (Apply 50% control efficiency)	0.03	**tons/yr**

Diesel Engine Generator

Note: Emissions are based on the power output of the engine (1200 hp).

Operational Capacity of Engine = 1,200 hp	1200	**hp**
Hours of Operation = 1,568 hours	1568	**hours**

Total PM/PM10/PM2.5 Emissions:

Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.07 ton/yr	2.07	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0022 lbs/hp-hr) = 4,139.52 lbs/yr	4139.52	**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: (1,568 hours) * (1,200 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 29.16 ton/yr	29.16	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.031 lbs/hp-hr) = 58,329.60 lbs/yr	58329.60	**lbs/yr**

CO Emissions:

Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00668	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 6.28 ton/yr	6.28	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00668 lbs/hp-hr) = 12,569.09 lbs/yr	12569.09	**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)	0.0025141	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.37 ton/yr	2.37	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.0025141 lbs/hp-hr) = 4,730.53 lbs/yr	4730.53	**lbs/yr**

SOx Emissions:

Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00205	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 1.93 ton/yr	1.93	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (0.00205 lbs/hp-hr) = 3,857.28 lbs/yr	3857.28	**lbs/yr**

CO2 Emissions:

Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15	**lbs/hp-hr**
Calculation: (1,568 hours) * (1,200 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,081.92 ton/yr	1081.92	**ton/yr**
Calculation: (1,568 hours) * (1,200 hp) * (1.15 lbs/hp-hr) = 2,163,840.00 lbs/yr	2163840.00	**lbs/yr**

Diesel Engine Generator2

Note: Emissions are based on the power output of the engine (99 hp).		
Operational Capacity of Engine = 99 hp	99	**hp**
Hours of Operation = 1,568 hours	1568	**hours**
Total PM/PM10/PM2.5 Emissions:		
Emission Factor = 0.0022 lbs/hp-hr (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.0022	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.0022 lbs/hp-hr) * (ton/2000 lb) = 2.07 ton/yr	2.07	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.0022 lbs/hp-hr) = 4,139.52 lbs/yr	4139.52	**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: (1,568 hours) * (99 hp) * (0.031 lbs/hp-hr) * (ton/2000 lb) = 29.16 ton/yr	29.16	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.031 lbs/hp-hr) = 58,329.60 lbs/yr	58329.60	**lbs/yr**
CO Emissions:		
Emission Factor = 0.00668 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00668	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.00668 lbs/hp-hr) * (ton/2000 lb) = 6.28 ton/yr	6.28	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.00668 lbs/hp-hr) = 12,569.09 lbs/yr	12569.09	**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)	0.0025141	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 2.37 ton/yr	2.37	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.0025141 lbs/hp-hr) = 4,730.53 lbs/yr	4730.53	**lbs/yr**
SOx Emissions:		
Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	0.00205	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 1.93 ton/yr	1.93	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (0.00205 lbs/hp-hr) = 3,857.28 lbs/yr	3857.28	**lbs/yr**
CO2 Emissions:		
Emission Factor = 1.15 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96)	1.15	**lbs/hp-hr**
Calculation: (1,568 hours) * (99 hp) * (1.15 lbs/hp-hr) * (ton/2000 lb) = 1,081.92 ton/yr	1081.92	**ton/yr**
Calculation: (1,568 hours) * (99 hp) * (1.15 lbs/hp-hr) = 2,163,840.00 lbs/yr	2163840.00	**lbs/yr**

V. Existing Air Quality

This permit is for a portable facility to be located in Section 11, Township 24N, Range 59E in Richland County, Montana. Richland 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.

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #5161-00, the Department determined that the impact from this permitting action will be minor.

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

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

IX. Environmental Assessment

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

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Bituminous Paving Inc.
P.O. Box 6
Ortonville, MN 56278

Montana Air Quality Permit number: 5161-00

Preliminary Determination Issued: July 1, 2016
Department Decision Issued: July 18, 2016
Permit Final: August 4, 2016

1. *Legal Description of Site*: NE ¼ of Section 11, Township 24 North, Range 59 East, in Richland County, Montana.

2. *Description of Project*: Bituminous Paving Inc., (BPI) proposes to install and operate a portable drum mix-asphalt plant as well as associated equipment. The drum-mix asphalt plant is capable of burning Number 2 Fuel Oil (No. 2) or waste oil and has a maximum process rate of 300 tons per hour (TPY) with emissions routed to a baghouse.

3. *Objectives of Project*: BPI plans to make asphalt cement for paving operations located in the Fairview Montana Area.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The no action alternative would mean the portable asphalt facility would not operate in the location described above, resulting in loss of revenue for BPI and loss of asphalt used for paving operations. Possible jobs created from the portable asphalt facility would also be lost. Therefore, the "no-action" alternative was eliminated from further consideration. Other alternatives considered were discussed in the BACT analysis, Section III in the MAQP Analysis.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #5161-00.

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

7. *The following section summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.*

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

There would be no impacts to terrestrial and aquatic life or habitats because the asphalt facility would be operated in an existing gravel pit.

B. Water Quality, Quantity and Distribution

There would be minor impacts on water quality, quantity, and distribution due to application of water for dust suppression.

C. Geology and Soil Quality, Stability and Moisture

There would be no impacts to the geology, soil quality, stability, or moisture because the asphalt facility would be operated in an existing gravel pit.

D. Vegetation Cover, Quantity, and Quality

There would be no impacts to the vegetative cover, quantity, or quality because the asphalt facility would operate in an existing gravel pit.

E. Aesthetics

There would be minor impacts to the aesthetics of the area with the addition of the asphalt facility because it would operate in an existing pit.

F. Air Quality

There would be minor impacts on air quality resulting from the operations of the asphalt facility. MAQP #5161-00 would include conditions limiting the facility's opacity and particulate matter emissions. The permit would also limit total emissions from the facility and any additional equipment operated at the site to 250 tons per year or less of any individual pollutant, excluding fugitive emissions.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The department contacted the Montana Natural Heritage Program in order to conduct an investigation of unique, endangered, fragile, or limited environmental resources for the project location an identified one species of concern, the Whooping Crane.

Since the project would be operated out of an existing pit, there would be only minor impacts due to an increase in emissions from the asphalt facility. MAQP #5161-00 would include conditions limiting the facility's opacity and particulate matter emissions.

H. Sage Grouse Executive Order

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

I. Demands on Environmental Resource of Water, Air and Energy

There would be only minor impacts on energy as the asphalt facility would use petroleum products for energy production. There would be no impacts on water or air resources.

J. Historical and Archaeological Sites

The Department contacted the Montana Historical Society – State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed area of operation. Search results concluded that there are no previously recorded sites within the area proposed for the project. According to correspondence from SHPO, there is a low likelihood that cultural properties will be impacted. Therefore, a recommendation for a cultural resource inventory is unwarranted. If any cultural materials should be inadvertently discovered during this project, the SHPO office must be contacted and the site investigated.

K. Cumulative and Secondary Impacts

The cumulative and secondary impacts from this project on the environment in the immediate area are expected to be minor. This facility is within a rural area and the air pollution emissions from this facility are negligible. The Department believes that this facility would be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #5161-00.

8. The following section summarizes the potential economic and social effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

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

A. Social Structures and Mores

The portable asphalt plant would not cause disruption to the social structures and mores of the area because the source would be considered a minor industrial source and emissions and would be an existing industrial site with no existing social structures or mores. The department has determined that no impact to the social structure and mores would be expected.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of this area would not be impacted by the operation of the portable asphalt plant because the facility would be a portable source, with seasonal and intermittent operations. The predominant use of this area would not change as a result of the proposed operation. Therefore, the cultural uniqueness and diversity of the area would not be impacted.

C. Local and State Tax Base and Tax Revenue

Only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Because the facility would be portable and temporary, it is unlikely that people would move to the area as a result of this project. Impacts to local tax base and revenue would be minor and short-term because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The proposed project would have a minor impact on local industrial production since the facility would increase local asphalt production and air emissions slightly. The facility would be located in an existing gravel pit on private land. Because minimal deposition of air pollutants would occur on the surrounding land (as described above in Section 7.F), only minor effects on the surrounding vegetation or agricultural production would occur. In addition, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D above. Pollutant deposition from the project would be minimal because the emissions would be well controlled, widely dispersed (from factors such as wind speed and wind direction), and would have minimal deposition on the surrounding area.

E. Human Health

Conditions would be incorporated into MAQP #5161-00 to ensure that the asphalt plant would operate in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F of this EA, the air emissions from this project would be minimized by the use of a baghouse, water spray for fugitive emissions, and other process limits that would be required by MAQP #5161-00. Furthermore, the applicant has stated that they plan to operate on an intermittent and seasonal basis and therefore only minor impacts would be expected on human health from the proposed facility.

F. Access to and Quality of Recreational and Wilderness Activities

Access to recreational opportunities would not be limited or modified by this facility. The equipment would be located within an existing industrial site that has been established for similar use. All recreational opportunities, if available in the area, would still be accessible. Noise from the facility would be minimal to surroundings because of the facility size, expected hours of operation, and rural location. The applicant has stated that the facility would operate on a seasonal and intermittent basis. The pit is on private land and the Department has determined that the project would be a minor industrial source of emissions. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at this site are expected to be minor.

G. Quantity and Distribution of Employment

The portable asphalt plant would be relatively small. Because the operation would be seasonal, no individuals would be expected to permanently relocate as a result of operating the portable asphalt plant. Therefore, there would be minor effects on the quantity and distribution of employment in this area.

H. Distribution of Population

The proposed project would be considered a portable industrial facility and would require few employees to operate. No individuals would be expected to permanently relocate to this area. Therefore, the operation would not impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

The operation of the portable asphalt plant would cause minimal demand for government services. Government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, any increase or demand for government services would be minor given the temporary and portable nature of the project.

J. Industrial and Commercial Activity

The proposed project would represent only a minor increase in the industrial activity in the proposed area of operation because the facility would be a small industrial source, portable and temporary in nature. Some additional industrial or commercial activity would be expected as a result of the proposed operation; however, these impacts to the industrial and commercial activity would be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans and goals in the proposed initial project location. MAQP #5161-00 contain conditions and limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards. Because the facility would have intermittent and seasonal operations any impacts from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

Overall, the proposed project would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be portable and the footprint of the facility would remain relatively small. Furthermore, no other industrial operations are expected to result from this permitting action. Any increase in traffic would have minor effects on local traffic in the immediate area.

This facility may be operated in conjunction with other equipment owned and operated by BPI, but any cumulative impacts or secondary impacts are expected to be minor and short-term.

In conclusion, the source is relatively small, the facility emissions would be minimal, and the project would have only minor cumulative and secondary impacts.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of portable asphalt facility. MAQP #5161-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: John P. Proulx
Date: 06/29/2016