DEQ
Montana Department
of Environmental Quality

December 1, 2015

Chris Cook
DePatco, Inc.
2205 E 200 N
St. Anthony, ID 83445

Dear Mr. Cook:

Montana Air Quality Permit #5147-00 is deemed final as of December 1, 2015, by the Department of Environmental Quality (Department). This permit is for an asphalt plant with a crusher onsite. 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

Loni Patterson
Environmental Engineer
Air Quality Bureau
(406) 444-1452

JM:LP
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

# Montana Air Quality Permit #5147-00

DePatco, Inc.
2205 E 200 N
St. Anthony, ID 83445

December 1, 2015

# MONTANA AIR QUALITY PERMIT

Issued to: DePatco, Inc.
2205 E 200 N
St. Anthony, ID 83445

MAQP: #5147-00
Application Complete: 9/16/2015
Preliminary Determination Issued: 10/7/2015
Department's Decision Issued: 11/13/2015
Permit Final: 12/1/2015
AFS #: 777-5147

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to DePatco, Inc. (DePatco) 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

DePatco proposes to install and operate a portable drum mix asphalt plant and associate equipment with a 300 tons per hour (TPH) maximum production capacity. A complete list of the permitted equipment may be found in Section I.A of the Permit Analysis.

B. Plant Location

DePatco operates a portable asphalt plant, which will initially be located at Section 11, Township 6 S, Range 1 West, Madison County, Montana. However, MAQP 5147-00 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) (ARM 17.8.752; ARM 17.8.340 and 40 Code of Federal Regulations (CFR) 60, Subpart I).

2. DePatco 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 17.8.304, ARM 17.8.340 and 40 CFR 60, Subpart I).

3. DePatco 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).

4. DePatco shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; 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 17.8.304, ARM 17.8.340 and 40 CFR 60, Subpart I).

5. All visible emissions from any 40 CFR 60, Subpart OOO-affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):

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

   - For crushers that commence construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008: 15% opacity

6. All visible emission from any other 40 CFR 60, Subpart OOO-affected equipment (such as screen and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

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

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

7. All visible emissions from any equipment not affected by Sections II.A.2, II.A.4, II.A.5 and II.A.6 shall not exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304).

8. Water and spray bars shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.5, II.A.6 and II.A.7 (ARM 17.8.749 and ARM 17.8.752).

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

10. DePatco shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.9 (ARM 17.8.749).

11. DePatco shall not operate more than four crusher(s) at any given time and the total combined maximum rated design capacity of the crusher(s) shall not exceed 1200 tons per hour (TPH) (ARM 17.8.749).

12. DePatco shall not operate more than four screen(s) at any given time and the total combined maximum rated design capacity of the screen(s) shall not exceed 1200 TPH (ARM 17.8.749).

13. DePatco may have onsite and operate one or more diesel-fired engines including generator set engines, where the combined maximum rated design capacity of the engine(s) shall not exceed 2272 hp and the engine shall be compliant with the Environmental Protection Agency (EPA) non-road compression-ignition engine Tier 2 or higher, emission standards pursuant to 40 CFR 89.112 (ARM 17.8.749).

14. Operation of the diesel engine(s) driving the generator(s) shall not exceed 3640 hours each during any rolling 12-month time period (ARM 17.8.1204).

15. DePatco shall be limited to a maximum of 1,092,000 tons of asphalt production during any rolling 12-month period (ARM 17.8.1204).

16. The asphalt hot-mix drum dryer is authorized to fire recycled waste oil, No. 2 fuel oil, propane or natural gas as fuel (ARM 17.8.749).

17. If the permitted equipment is used in conjunction with any other equipment owned or operated by DePatco, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

18. DePatco 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).

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

20. DePatco 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) Methods 1-5 particulate matter source test in conjunction with a Method 9 opacity test must be performed on the asphalt drum mix dryer exhaust stack to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2. Testing shall continue on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart I).

2. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an EPA Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all 40 CFR 60, Subpart OOO-affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.5 and II.A.6. Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

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

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

C. Operational Reporting Requirements

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

2. DePatco shall maintain on-site records showing daily hours of operation, daily production rates, and daily pressure drop and temperature reading from the baghouses for the last five years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant for inspection by the Department (ARM 17.8.749).

3. DePatco 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 (ARM17.8.505).

4. DePatco 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).

5. DePatco 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 DePatco as a permanent business record for at least five 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).

6. DePatco shall document, by month, the hours of operation of the diesel engine/generator. By the 25th day of each month, DePatco shall total the hours of operation for the diesel engine/generator for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.14. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. DePatco shall document, by month, the total asphalt production of the asphalt plant. By the 25th day of each month, DePatco shall total the asphalt production for the asphalt plant for the previous month. The monthly information will be used to demonstrate compliance with the rolling 12-month limitation in Section II.A.15. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

8. DePatco 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 New Source Performance Standards (NSPS) affected equipment, DePatco 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, Subpart I, Subpart OOO and Subpart IIII).

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

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

SECTION III: General Conditions

A. Inspection – DePatco 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 DePatco fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving DePatco 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 DePatco 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 three 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. DePatco 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
DePatco, LLC
MAQP #5147-00

## I. Introduction/Process Description

DePatco, LLC. (DePatco) proposes to install and operate a portable drum hot-mix asphalt plant with a maximum rated design capacity of 300 tons per hour (TPH) of asphalt production, diesel engine-driven electrical generators with a combined maximum rated brake-horsepower (bhp) not to exceed 2,272, gravel crushers with a combined maximum rated capacity not to exceed 1200 TPH, gravel screens with a combined maximum rated capacity not to exceed 1200 TPH, and associated equipment.

### A. Permitted Equipment

The following list of permitted equipment is provided for reference as MAQP #5147-00 is 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:

- Generator, 2006 Caterpillar 3508 800IQ, 1100 bhp, 16 gal/hr, Tier 2 engine
- Generator, 2011 Catepillar XQ800, 1105 bhp, 12 gal/hr, Tier 2 engine
- Generator, 2010 BU-4JJ2T ISUZW, 67 bhp, 2 gal/hr, Tier 2 engine
- Gencor Ultra II Burner, 2014, 100 MMBTU, 500 gal/hr
- HYCGO-100 Hy-Way storage tank with burner, 2014, 1 MBTU/hr, 30,000 gal capacity
- Gencor Ultra Portable Baghouse, 300 tph, 2014
- 70 ton silo Loadocat
- Lime silo, 3.53 cfm/4 tph capacity
- Three cone crushers, 300 tph capacity
    - Cedar Rapids, Fabtech, 54" roller cone, 2002
    - Cedar Rapids MVP 380, 48", cone, 2006
    - EL-Jay, 54", roller cone, 2002
- Trio CT Portable Jaw Crusher, 30x42, 300 tph capacity, 2007
- Virgin Screen, 300 tph
- Three Screens, 300 tph capacity
    - Cedar Rapids, 6x20 3-deck screen, 1998
    - Cedar Rapids, 6x20 3-deck screen, 2006
    - JCI, 6x20 3-deck screen, 1998
- Material handling equipment; aggregate bins, recycled pavement (RAP) bins, etc
- Wash Plant, 300 tph capacity
- Associated equipment

B. Source Description

DePatco's home pit is located at Section 11, Township 65, Range 1 West, Madison County, Montana.

Sand and gravel will be mined by open pit excavation. Following mining, the raw material will be transported to the feeder screen. The material is transported from the feeder screen to a jaw crusher for size reduction. After the initial size reduction by the jaw crusher is complete, the material is conveyed to a cone crusher to produce crushed aggregate. The material is then screened for sizing. The material that passes through the screen is transported to the stockpiles. The material that is too large is recycled back through to a cone crusher. The final material is transferred to the feed bin to start the drum mix asphalt production process.

The drum mix asphalt production process is a continuous mixing type process, using proportioning cold feed control for the process materials. A hot oil heater heats the asphalt cement in the tank with a series of internal heating coils. The aggregate, which has been proportioned by size gradations, is introduced to the drum at the burner end. As the drum rotates, the aggregates as well as the combustion productions, move toward the other end of the drum in parallel. Liquid asphalt cement flow is controlled by a variable flow pump electronically linked to the new aggregate and recycled asphalt pavement (RAP) weigh scales. The asphalt cement is introduced in the mixing zone midway down the drum in a lower temperature zone, along with any RAP and particulate matter (PM) from the collectors. The mixture is discharge at the end of the drum and is conveyed to storage silo where it is loaded into transport trucks. The exhaust gases also exit the end of the drum and pass on the baghouse collection system.

C. Response to Public Comments

| Person/Group Commenting | Permit Reference | Comment | Department Response |
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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).

   DePatco 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

DePatco 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 six 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 shall be taken to control emissions of airborne particulate matter. (2) Under this rule, DePatco 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). DePatco 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-Standard of Performance for Hot Mix Asphalt Facilities apply to any hot mix asphalt facility. Therefore, this facility is subject to this subpart.

   c. 40 CFR 60 Subpart OOO- Standard of Performance for Nonmetallic Mineral Processing Plants applies to each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging, operation, storage bin, enclosed truck or railcar loading station at fixed or portable nonmetallic mineral processing plants. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement (RAP) and subsequent affected facilities up to but not including, the first storage silo or bin are subject to the provisions of this subpart. Based on the information submitted by DePatco, the portable crushing and screening equipment to be used under MAQP #5147-00 is subject to this subpart.

d. 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 DePatco, the CI ICE equipment to be used under MAQP #5147-00 may be subject to this subpart if it stays in a location for twelve consecutive months. DePatco may substitute ignition internal combustion engine(s), therefore applicability to this subpart may apply to engines in the future and shall be dependent upon the date of the construction and/or manufacture of the diesel-fired engine utilized.

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. DePatco 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. The RICE under MAQP #5147-00 is intended to be portable; DePatco may not be subject to this subpart unless the RICE remained at a location for 12 consecutive months.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. DePatco submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department.

   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. DePatco has a PTE greater than 15 tons per year of all criteria pollutants; 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. DePatco 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. DePatco submitted an affidavit of publication of public notice for the August 13, 2015, issue of the *Madisonian Partners, Inc.*, a newspaper of general circulation in the Town of Ennis in Madison 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 DePatco 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 one 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 one 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 #5147-00 for DePatco, 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, Subpart OOO, and potentially Subpart IIII).

   e. This facility is potentially subject to current NESHAP standards (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.

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

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

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

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

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

## III. BACT Determination

A BACT determination is required for each new or modified source. DePatco 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/Dryer

The Department reviewed relevant control options, as well as previous BACT determinations for the control of particulates generated by the asphalt plant. 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. Technically feasible control options, highest control efficiency to the lowest control efficiency, based on PM control are as follows:

1. Fabric filter baghouse (99-99.9% efficient) (EPA Fact Sheet EPA-452/F-03-025, 07/15/03).
2. Electrostatic precipitator (99-99.9% efficient)(EPA Fact Sheet EPA-452/F-03-025 07/15/03).
3. Cyclone (up to 99% efficient) (EPA Fact Sheet EPA-452/F-03-025 07/15/03).
4. Wet Scrubber (70- great than 99% efficient) (EPA Fact Sheet EPA-452/F-03-025 07/15/03).

DePatco has proposed the use of the fabric filter baghouse for the control of PM from exhaust of the asphalt drum mixer, the most efficient control technology available. 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 emissions are limited to 0.04 grains per dry standard cubic foot (gr/dscf) for particulate and 20 opacity in accordance with 40 CFR 60, Subpart I. DePatco shall install and operate a device to measure the pressure drop magnehelic guage, manometer, etc.) across the fabric filter system, as well as temperature indicators at the baghouse inlet and outlet.

B. Diesel Engine(s)/Generator(s)

Any new diesel-fired engine would likely be required to comply with federal engine emission limitations including, for example, EPA Tiered emission standards for non-road engines (40 CFR Part 89 or 1039), *New Source Performance Standard 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). The Department has determined that compliance with any applicable federal standards, with no additional requirements, constitutes BACT for these engines.

C. Fugitive Emissions

DePatco must take reasonable precautions to limit the fugitive emissions of airborne particulate matter on haul roads, access roads, parking lots, and general plant area. Reasonable precautions include treating all unpaved portions of the haul roads, parking lots or the general plants are with water, as necessary. Chemical dust suppressant could be used on the area surrounding the crushing/screening operation, and for emissions from the crushing/screening operation itself. However, because water is more readily available, is more cost effective, is often equally effective as chemical dust suppressant, and is more environmentally friendly, water has been identified as the most appropriate method of pollution control of particulate emissions. Using water to comply with the reasonable precaution 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**

| CONTROLLED | tons/year | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emission Source** | **PM** | **PM10** | **PM2.5** | **NOx** | **CO** | **VOC** | **SO2** |
| Cold Aggregate Storage Piles | 10.43 | 4.93 | 0.75 | -- | -- | -- | -- |
| Cold Aggregate Handling/Conveyors | 1.47 | 0.48 | 0.14 | -- | -- | -- | -- |
| Cold Aggregate Screens | 18.92 | 11.56 | 0.26 | -- | -- | -- | -- |
| Diesel-Fired Asphalt Oil Heater | -- | -- | -- | -- | 0.01 | -- | -- |
| 300 TPH Drum Mix Asphalt Plant Dryer | 18.02 | 12.56 | 12.18 | 30.03 | 70.98 | 17.47 | 31.67 |
| Asphalt Product Silo Filling | 0.77 | 0.77 | 0.77 | -- | 1.55 | -- | -- |
| Batch Mix Plant Load-Out | 0.86 | 0.26 | 0.38 | -- | 0.89 | -- | -- |
| Lime Silo | 0.01 | 0.00 | 0.00 | -- | -- | -- | -- |
| Haul Roads / Vehicle Traffic | 5.68 | 1.57 | 0.16 | -- | -- | -- | -- |
| 2205 hp Diesel Engine Generator | 1.32 | 1.32 | 1.32 | 42.22 | 23.09 | 10.09 | 8.23 |
| 67 hp Night Diesel Engine Generator | 0.06 | 0.06 | 0.06 | 0.95 | 1.02 | 0.31 | 0.25 |
| Jaw Crusher | 1.58 | 0.71 | 0.13 | -- | -- | -- | -- |
| Cone Crushers | 4.73 | 2.13 | 0.39 | -- | -- | -- | -- |
| Wash Plant | 2.89 | 0.97 | 0.07 | -- | -- | -- | -- |
| | | | | | | | |
| **Total Emissions** | **66.74** | **37.33** | **16.60** | **73.21** | **97.54** | **27.87** | **40.14** |

Footnotes:

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

**** CO = carbon monoxide**
HAPs = hazardous air pollutants
hp = horsepower
lb = pound
N/A = not applicable
ND = no data available
NOx = oxides of nitrogen

**Cold Aggregate Storage Piles**

| | | |
|---|---|---|
| Maximum Process Rate = 300 ton/hr (Maximum plant process rate) | 300 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |
| Number of Piles = 1 piles | 1 | piles |

**PM Emissions:**

| | | |
|---|---|---|
| Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06. | | |
| Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00794 lb/ton | 0.00794 | lb/ton |
| Where: k = particle size multiplier = 0.74 (Value for PM < 30 microns per AP 42, Sec. 13.2.4.3, 11/06) | 0.74 | |
| U = mean wind speed = 9.3 mph (11-3 Aggreegate Pile Forming 8/15) | 9.3 | mph |
| M = material moisture content = 1.5% (11-3 Aggreegate Pile Forming 8/15) | 1.5 | % |
| Control Efficiency = 0% (Water or chemical spray) | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00794 lb/ton) * (ton/2000 lb) * (1 piles) = 10.43 ton/yr | **10.43** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00794 lb/ton) * (ton/2000 lb) * (1 piles) * (1 - 0/100) = 10.43 ton/yr | **10.43** | ton/yr |

**$PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06. | | |
| Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00375 lb/ton | 0.00375 | lb/ton |
| Where: k = particle size multiplier = 0.35 (Value for PM < 10 microns per AP 42, Sec. 13.2.4.3, 11/06) | 0.35 | |
| U = mean wind speed = 9.3 mph (11-3 Aggreegate Pile Forming 8/15) | 9.3 | mph |
| M = material moisture content = 1.5% (11-3 Aggreegate Pile Forming 8/15) | 1.5 | % |

| | | |
|---|---|---|
| Control Efficiency = 0% (Water or chemical spray) | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00375 lb/ton) * (ton/2000 lb) * (1 piles) = 4.93 ton/yr | **4.93** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00375 lb/ton) * (ton/2000 lb) * (1 piles) * (1 - 0/100) = 4.93 ton/yr | **4.93** | ton/yr |

**$PM_{2.5}$ Emissions:**

| | | |
|---|---|---|
| Predictive equation for emission factor provided per AP 42, Sec. 13.2.4.3, 11/06. | | |
| Emission Factor = k (0.0032) * (U/5)^1.3 * (M / 2)^-1.4 = 0.00024 lb/ton | 0.00057 | lb/ton |
| Where: k = particle size multiplier = 0.053 (Value for PM < 2.5 microns per AP 42, Sec. 13.2.4.3, 11/06) | 0.053 | |
| U = mean wind speed = 8.2 mph (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) | 9.3 | mph |
| M = material moisture content = 2.5% (Average from values provided in AP 42, Sec. 13.2.4.3, 11/06) | 1.5 | % |
| Control Efficiency = % (Water or chemical spray) | | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00057 lb/ton) * (ton/2000 lb) * (1 piles) = 0.75 ton/yr | **0.75** | ton/yr |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00024 lb/ton) * (ton/2000 lb) * (1 piles) * (1 - /100) = 0.16 ton/yr | **0.75** | ton/yr |

**Conveyor Transfer Point (SCC 3-05-02006)**

| | | |
|---|---|---|
| Maximum Process Rate = 300 ton/hr (Maximum plant process rate) | 300 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |
| Number of Transfers = 8 transfer (Company Information, Excludes RAP transfers) | 8 | transfer |

**Total PM Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.00014 lb/ton (0.0030 uncontrolled, 0.00014 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.00014 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00014 lb/ton) * (ton/2000 lb) * (8 transfer) = 1.47 ton/yr | **1.47** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00014 lb/ton) * (ton/2000 lb) * (8 transfer) * (1 - 0/100) = 1.47 ton/yr | **1.47** | ton/yr |

**Total $PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.000046 lb/ton (0.00110 uncontrolled, 0.000046 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.000046 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000046 lb/ton) * (ton/2000 lb) * (8 transfer) = 0.48 ton/yr | **0.48** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000046 lb/ton) * (ton/2000 lb) * (8 transfer) * (1 - 0/100) = 0.48 ton/yr | **0.48** | ton/yr |

**Total $PM_{2.5}$ Emissions**

| | | |
|---|---|---|
| Emission Factor = 0.000013 lb/ton (0.000013 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.000013 | lb/ton |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (8 transfer) = 0.14 ton/yr | **0.14** | 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 = 8,760 hrs/yr | 8,760 | hrs/yr |
| Number of Screens = 4 screen(s) (Company Information, Excludes RAP screen) | 4 | screen(s) |

**Total PM Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0036 lb/ton (0.30 uncontrolled, 0.0036 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.0036 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0036 lb/ton) * (ton/2000 lb) * (4 screen(s)) = 18.92 ton/yr | **18.92** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0036 lb/ton) * (ton/2000 lb) * (4 screen(s)) * (1 - 0/100) = 18.92 ton/yr | **18.92** | ton/yr |

**Total $PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0022 lb/ton (0.072 uncontrolled, 0.0022 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.0022 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) * (4 screen(s)) = 11.56 ton/yr | **11.56** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) * (4 screen(s)) * (1 - 0/100) = 11.56 ton/yr | **11.56** | ton/yr |

**Total $PM_{2.5}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.00005 lb/ton (0.00005 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.00005 | lb/ton |
| Control Efficiency = 50% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) * (4 screen(s)) = 0.26 ton/yr | **0.26** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) * (4 screen(s)) * (1 -0/100) = 0.13 ton/yr | **0.26** | ton/yr |

**Hot Oil Heater**

| | | |
|---|---|---|
| Production Rate = 2.80 gal/hr (Company information) | 2.80 | gal/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (8760 hrs/yr) * (2.80 gal/hr) * (0.0012 lb/gal) * (ton/2000 lb) = 0.01 ton/yr | **0.01** | ton/yr |
| Calculation: (8760 hrs/yr) * (2.80 gal/hr) * (0.0012 lb/gal) * (ton/2000 lb) * (1 - 0/100) = 0.01 ton/yr | **0.01** | 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 = 3,640 hrs/yr | 3,640 | hrs/yr |

**PM Emissions:**

*Based on Emission Limit*

| | | |
|---|---|---|
| Emission Factor = 0.04 gr/dscf (permit limit) | 0.04 | gr/dscf |
| Calculation: (0.04 gr/dscf) * (28,882 dscfm) * (1 lb / 7000 gr) * (60 min/hr) = 9.90 lb/hr | **9.90** | lb/hr |
| Calculation: (9.90 lb/hr) * (3640 hrs/yr) * (0.0005 ton/lb) = 18.02 ton/yr | **18.02** | ton/yr |

**$PM_{10}$ Emissions:**

*Based on AP-42*

| | | |
|---|---|---|
| Emission Factor = 0.023 lb/ton (fabric filter, AP 42, Table 11.1-3, 3/04) | 0.023 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.023 lb/ton) * (ton/2000 lb) = 12.56 ton/yr | **12.56** | ton/yr |

**Filterable $PM_{2.5}$ 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) * (3640 hrs/yr) * (0.0029 lb/ton) * (ton/2000 lb) = 1.58 ton/yr | **1.58** | ton/yr |

**Condensable $PM_{2.5}$ 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) * (3640 hrs/yr) * (0.0194 lb/ton) * (ton/2000 lb) = 10.59 ton/yr | **10.59** | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.13 lb/ton) * (ton/2000 lb) = 70.98 ton/yr | **70.98** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.13 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 70.98 ton/yr | **70.98** | ton/yr |

**$NO_x$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.055 lb/ton (waste oil-fired dryer, AP 42, Table 11.1-7, 3/04) | 0.055 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.055 lb/ton) * (ton/2000 lb) = 30.03 ton/yr | **30.03** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.055 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 30.03 ton/yr | **30.03** | ton/yr |

**$SO_2$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.058 lb/ton (waste oil-fired dryer, AP 42, Table 11.1-7, 3/04) | 0.058 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.058 lb/ton) * (ton/2000 lb) = 31.67 ton/yr | **31.67** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.058 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 31.67 ton/yr | **31.67** | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.044 lb/ton) * (ton/2000 lb) = 24.02 ton/yr | **24.02** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.044 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 24.02 ton/yr | **24.02** | ton/yr |

**$CH_4$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.012 lb/ton (waste oil-fired dryer, AP 42, Table 11.1-8, 3/04) | 0.012 | lb/ton |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.012 lb/ton) * (ton/2000 lb) = 6.55 ton/yr | **6.55** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.012 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 6.55 ton/yr | **6.55** | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.032 lb/ton) * (ton/2000 lb) = 17.47 ton/yr | **17.47** | ton/yr |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.032 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 17.47 ton/yr | **17.47** | 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 |
| Control Efficiency = 0% 39% efficienct without baghouse | 0 | % |
| Calculation: (300 ton/hr) * (3640 hrs/yr) * (0.01 lb/ton) * (ton/2000 lb) = 5.46 ton/yr | **5.46** | ton/yr |
| Emission Factor = 18.1818 ton/yr | **5.46** | 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 = 8,760 hrs/yr | 8,760 | hrs/yr |

**Total PM 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 | 0.00059 | 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 |

| | | |
|---|---|---|
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00059 lb/ton) * (ton/2000 lb) = 0.77 ton/yr | **0.77** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00059 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.77 ton/yr | **0.77** | ton/yr |

** Total PM is assumed to be predominately $PM_{2.5}$ since emissions consist of condensed vapors.

**Organic PM Emissions:**

| | | |
|---|---|---|
| Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. | | |
| Emission Factor = 0.00105(-V)e^((0.0251)(T + 460) - 20.43) = 0.00025 lb/ton | 0.00025 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00025 lb/ton) * (ton/2000 lb) = 0.33 ton/yr | **0.33** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00025 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.33 ton/yr | **0.33** | ton/yr |

**TOC 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 | 0.01219 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.01219 lb/ton) * (ton/2000 lb) = 16.01 ton/yr | **16.01** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.01219 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 16.01 ton/yr | **16.01** | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00118 lb/ton) * (ton/2000 lb) = 1.55 ton/yr | **1.55** | ton/yr |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00118 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 1.55 ton/yr | **1.55** | ton/yr |

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

| | | |
|---|---|---|
| Maximum Process Rate = 150 ton/hr (Maximum plant process rate) | 150 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |

**Total PM 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 | 0.00052 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00052 lb/ton) * (ton/2000 lb) = 0.34 ton/yr | **0.34** | ton/yr |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00052 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.34 ton/yr | **0.34** | ton/yr |

**Organic PM Emissions:**

| | | |
|---|---|---|
| Predictive equation for emission factor provided per AP 42, Table 11.1-14, 3/04. | | |
| Emission Factor = 0.00141(-V)e^((0.0251)(T + 460) - 20.43) = 0.00034 lb/ton | 0.00034 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00034 lb/ton) * (ton/2000 lb) = 0.22 ton/yr | **0.22** | ton/yr |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00034 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.22 ton/yr | **0.22** | ton/yr |

**TOC 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) = 0.00416 lb/ton | 0.00416 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00416 lb/ton) * (ton/2000 lb) = 2.73 ton/yr | **2.73** | ton/yr |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00416 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 2.73 ton/yr | **2.73** | 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 | 0.00135 | 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 |
| Control Efficiency = 0% | 0 | % |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00135 lb/ton) * (ton/2000 lb) = 0.89 ton/yr | **0.89** | ton/yr |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.00135 lb/ton) * (ton/2000 lb) * (1 - 0/100) = 0.89 ton/yr | **0.89** | ton/yr |

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

| | | |
|---|---|---|
| Maximum Process Rate = 150 ton/hr (Maximum plant process rate) | 150 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |
| Number of loads = 25 loads (Estimate) | 25 | loads |

**Total PM Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0000314 lb/ton (PM=PM10 / 51%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90) | 3.14E-05 | lb/ton |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.0000314 lb/ton) * (ton/2000 lb) * (25 loads) = 0.52 ton/yr | **0.52** | ton/yr |

**Total $PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.000016 lb/ton (PM10=1.6E-05, AP 42, Table 11.19.2-2, 8/04) | 1.60E-05 | lb/ton |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.000016 lb/ton) * (ton/2000 lb) * (25 loads) = 0.26 ton/yr | **0.26** | ton/yr |

**Total $PM_{2.5}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0000024 lb/ton (PM2.5=1.6E-05 * 15%, AP-42, Appendix B.2, Table B.2.2, Category 3, 9/90) | 2.40E-06 | lb/ton |
| Calculation: (150 ton/hr) * (8760 hrs/yr) * (0.0000024 lb/ton) * (ton/2000 lb) * (25 loads) = 0.04 ton/yr | **0.04** | ton/yr |

**Lime Silo**

| | | |
|---|---|---|
| Flow Capacity = 4 cfm (Company information) | 4 | cfm |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |
| 6 tph=3.53 cfm | | |

**Total PM Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.04 gr/dscf (Permit limit per NSPS) | 0.04 | gr/dscf |
| Control Efficiency = 0% | 0 | % |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.04 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) = 0.01 ton/yr | **0.01** | ton/yr |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.04 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) * (1 - 0/100) = 0.01 ton/yr | **0.01** | ton/yr |

**Total $PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.02 gr/dscf (Department Policy) | 0.02 | gr/dscf |
| Control Efficiency = 0% | 0 | % |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.02 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) = 0.00 ton/yr | **0.00** | ton/yr |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.02 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) * (1 - 0/100) = 0.00 ton/yr | **0.00** | ton/yr |

**Total $PM_{2.5}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.012 gr/dscf (Assume PM2.5 = 30% of PM, AP-42, Appendix B-2, Category 4) | 0.012 | gr/dscf |
| Control Efficiency = 0% | 0 | % |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.012 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) = 0.00 ton/yr | **0.00** | ton/yr |
| Calculation: (3.53 cfm) * (8760 hrs/yr) * (0.012 gr/dscf) * (lb/7000 gr) * (ton/2000 lb) * (60 min/hr) * (1 - 0/100) = 0.00 ton/yr | **0.00** | 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 = 8,760 hrs/yr | 8,760 | 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: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) = 11.37 tons/yr (Uncontrolled Emissions) | **11.37** | tons/yr |
| Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (12.46 lb/VMT) * (ton/2000 lb) * (1-50/100) = 5.68 tons/yr (Apply 50% control efficiency) | **5.68** | tons/yr |

**$PM_{10}$ 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: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) = 3.13 tons/yr (Uncontrolled Emissions) | **3.13** | tons/yr |
| Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (3.43 lb/VMT) * (ton/2000 lb) * (1-50/100) = 1.57 tons/yr (Apply 50% control efficiency) | **1.57** | tons/yr |

**$PM_{2.5}$ Emissions:**

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

| | | |
|---|---|---|
| Emission Factor = k * (s / 12)^a * (W / 3)^b = 0.34 lb/VMT | 0.34 | 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: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) = 0.31 tons/yr (Uncontrolled Emissions) | **0.31** | tons/yr |
| Calculation: (8760 hrs/yr) * (0.21 VMT/hr) * (0.34 lb/VMT) * (ton/2000 lb) * (1-50/100) = 0.16 tons/yr (Apply 50% control efficiency) | **0.16** | tons/yr |

**Diesel Engine Generator**

| | | |
|---|---|---|
| Note: Emissions are based on the power output of the engine (2205 hp). | | |
| Operational Capacity of Engine = 2,205 hp | 2,205 | hp |
| Hours of Operation = 3,640.00 hours | 3,640.00 | hours |

**PM Emissions:**

| | | |
|---|---|---|
| PM Emissions = 1.32 ton/yr (Assume PM = PM10) | **1.32** | ton/yr |
| PM Emissions = 2,638.98 lbs/yr (Assume PM = PM10) | **2638.98** | lbs/yr |

**$PM_{10}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.000328796 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine) | 3.29E-04 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.000328796 lbs/hp-hr) * (ton/2000 lb) = 1.32 ton/yr | **1.32** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.000328796 lbs/hp-hr) = 2,638.98 lbs/yr | **2638.98** | lbs/yr |

**$PM_{2.5}$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.000328796 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine) | 3.29E-04 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.000328796 lbs/hp-hr) * (ton/2000 lb) = 1.32 ton/yr | **1.32** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.000328796 lbs/hp-hr) = 2,638.98 lbs/yr | **2638.98** | lbs/yr |

**$NO_x$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.010521472 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine) | 0.010521 472 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.010521472 lbs/hp-hr) * (ton/2000 lb) = 42.22 ton/yr | **42.22** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.010521472 lbs/hp-hr) = 84,447.44 lbs/yr | **84447.44** | lbs/yr |

**CO Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.00575393 lbs/hp-hr (40 CFR 89 Table 1 7/2005-- Tier 2 engine) | 5.75E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.00575393 lbs/hp-hr) * (ton/2000 lb) = 23.09 ton/yr | **23.09** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.00575393 lbs/hp-hr) = 46,182.19 lbs/yr | **46182.2** | 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) | 2.51E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 10.09 ton/yr | **10.09** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.0025141 lbs/hp-hr) = 20,178.67 lbs/yr | **20178.67** | lbs/yr |

**$SO_x$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96) | 2.05E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 8.227 ton/yr | **8.23** | ton/yr |
| Calculation: (3,640 hours) * (2,205 hp) * (0.00205 lbs/hp-hr) = 16,453.71 lbs/yr | **16453.71** | lbs/yr |

**67 hp Night Diesel Engine Generator**

| | | |
|---|---|---|
| Note: Emissions are based on the power output of the engine (67 hp). | | |
| Operational Capacity of Engine = 67 hp | 67 | hp |
| Hours of Operation = 3,640.00 hours | 3,640.00 | hours |

**PM Emissions:**

| | | |
|---|---|---|
| PM Emissions = 0.06 ton/yr (Assume PM = PM10) | **0.06** | ton/yr |
| PM Emissions = 119.93 lbs/yr (Assume PM = PM10) | **119.93** | lbs/yr |

**PM-10 Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.000491744 lbs/hp-hr (engine spec sheet, interim tier 4 limits) | 4.92E-04 | lbs/hp-hr |
| Calculation: (3,640 hours) * (67 hp) * (0.000491744 lbs/hp-hr) * (ton/2000 lb) = 0.06 ton/yr | **0.06** | ton/yr |
| Calculation: (3,640 hours) * (67 hp) * (0.000491744 lbs/hp-hr) = 119.93 lbs/yr | **119.93** | lbs/yr |

**$NO_x$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0078232 lbs/hp-hr (engine spec sheet, interim tier 4 limits) | 0.0078232 | lbs/hp-hr |
| Calculation: (3,640 hours) * (67 hp) * (0.0078232 lbs/hp-hr) * (ton/2000 lb) = 0.95 ton/yr | **0.95** | ton/yr |
| Calculation: (3,640 hours) * (67 hp) * (0.0078232 lbs/hp-hr) = 1,907.92 lbs/yr | **1907.92** | lbs/yr |

**CO Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.008337296 lbs/hp-hr (engine spec sheet, interim tier 4 limits) | 8.34E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (67 hp) * (0.008337296 lbs/hp-hr) * (ton/2000 lb) = 1.02 ton/yr | **1.02** | ton/yr |
| Calculation: (3,640 hours) * (67 hp) * (0.008337296 lbs/hp-hr) = 2,033.30 lbs/yr | **2033.30** | 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) | 2.51E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (67 hp) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) = 0.31 ton/yr | **0.31** | ton/yr |
| Calculation: (3,640 hours) * (67 hp) * (0.0025141 lbs/hp-hr) = 613.14 lbs/yr | **613.14** | lbs/yr |

**$SO_x$ Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.00205 lbs/hp-hr (AP-42, Sec. 3.3, Table 3.3-1, 10/96) | 2.05E-03 | lbs/hp-hr |
| Calculation: (3,640 hours) * (67 hp) * (0.00205 lbs/hp-hr) * (ton/2000 lb) = 0.250 ton/yr | **0.25** | ton/yr |
| Calculation: (3,640 hours) * (67 hp) * (0.00205 lbs/hp-hr) = 499.95 lbs/yr | **499.95** | lbs/yr |

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

Jaw Crusher

| | | |
|---|---|---|
| Maximum Process Rate = 300 ton/hr (Maximum plant process rate) | 300 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | 8,760 | hrs/yr |

**PM Emissions:**

*Based on AP-42*

| | | |
|---|---|---|
| Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | 0.0012 | lb/ton |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) = 1.58 ton/yr | **1.58** | ton/yr |

**$PM_{10}$ Emissions:**

*Based on AP-42*

| | | |
|---|---|---|
| Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | 0.00054 | lb/ton |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) = 0.71 ton/yr | **0.71** | ton/yr |

**PM2.5 Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | 0.0001 | lb/ton |
| Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) = 0.13 ton/yr | **0.13** | ton/yr |

**Crushing [Jaw Crusher] (SCC 3-05-020-05) AS APPLIED TO CONE CRUSHER(S)**
**Cone Crushers**

| | | |
|---|---|---|
| Maximum Process Rate = 900 ton/hr (Maximum plant process rate) | **900** | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr | **8,760** | hrs/yr |

**PM Emissions:**

| | | |
|---|---|---|
| Based on AP-42 | | |
| Emission Factor = 0.0012 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | **0.0012** | lb/ton |
| Calculation: (900 ton/hr) * (8760 hrs/yr) * (0.0012 lb/ton) * (ton/2000 lb) = 4.73 ton/yr | **4.73** | ton/yr |
| | | |
| Based on Emission Limit | | |
| Emission Factor = 0.04 gr/dscf (permit limit) | **0.04** | gr/dscf |
| Calculation: (0.04 gr/dscf) * (21,119 dscfm) * (1 lb / 7000 gr) * (60 min/hr) = 7.24 lb/hr | **7.24** | lb/hr |
| Calculation: (7.24 lb/hr) * (8760 hrs/yr) * (0.0005 ton/lb) = 31.71 ton/yr | **31.71** | ton/yr |

**PM10 Emissions:**

| | | |
|---|---|---|
| Based on AP-42 | | |
| Emission Factor = 0.00054 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | **0.00054** | lb/ton |
| Calculation: (900 ton/hr) * (8760 hrs/yr) * (0.00054 lb/ton) * (ton/2000 lb) = 2.13 ton/yr | **2.13** | ton/yr |

**PM2.5 Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0001 lb/ton (crushing, AP 42, Table 11.19.2-2, 8/04) | **0.0001** | lb/ton |
| Calculation: (900 ton/hr) * (8760 hrs/yr) * (0.0001 lb/ton) * (ton/2000 lb) = 0.39 ton/yr | **0.39** | ton/yr |

**Wash Plant**

| | | |
|---|---|---|
| Maximum Process Rate = 300 ton/hr (Maximum plant process rate) | 300 | ton/hr |
| Maximum Hours of Operation = 8,760 hrs/yr 2628000 tons/year | 8,760 | hrs/yr |
| Number of Wash Plants = 1 plant(s) (Company Information) | 1 | plant(s) |

**Total PM Emissions:**

| | | |
|---|---|---|
| Emission Factor = 0.0022 lb/ton (0.0022 controlled, AP 42, Table 11.19.2-2, 8/04) | 0.0022 | lb/ton |
| Calculation: (8,760 hrs/yr) * (1 plant(s)) * (0.0022 lb/ton) * (ton/2000 lb) * ( ) = 2.89 ton/yr | **2.89** | 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: (8,760 hrs/yr) * (1 plant(s)) * (0.00074 lb/ton) * (ton/2000 lb) * ( ) = 0.97 ton/yr | **0.97** | 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: (8,760 hrs/yr) * (1 plant(s)) * (0.00005 lb/ton) * (ton/2000 lb) * ( ) = 0.07 ton/yr | **0.07** | ton/yr |

## V. Existing Air Quality

This permit is for a portable facility to be located in Section 11, Township 6 S, Range 1 West in Madison County, Montana. Madison 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 #5147-00, the Department determined that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

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

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

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

IX. Environmental Assessment

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

**DEPARTMENT OF ENVIRONMENTAL QUALITY**
**Permitting and Compliance Division**
**Air Resources Management Bureau**
**P.O. Box 200901, Helena, MT 59620**
**(406) 444-3490**

# FINAL ENVIRONMENTAL ASSESSMENT (EA)

*Issued To*: DePatco, Inc.
2205 E 200 N
St. Anthony, ID 83445

*Montana Air Quality Permit number (MAQP):* 5147-00
*Preliminary Determination Issued:* 10/7/2015
*Department Decision Issued:* 11/13/2015
*Permit Final:* 12/1/2015

1. *Legal Description of Site*: DePatco, Inc. (DePatco) proposes to install and operate a portable crushing, screening and drum mix asphalt plant that would initially be located in Section 11, Township 6 S, Range 1 West, Madison County, MT. Montana Air Quality Permit (MAQP) #5147-00 would apply while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department) approved permitting program or areas considered tribal lands.

2. *Description of Project*: DePatco would operate a crushing, screening and hot drum mix asphalt plant and associated equipment with a 300 ton per hour (TPH) maximum capacity. The facility would be powered by diesel-fired engines or generators with a combined capacity of up to 2205 brake-horsepower (bhp)

3. *Objectives of Project*: The objective of this project would be to produce revenue for DePatco through the sale and use of asphalt. The issuance of the permit would allow DePatco to operate the permitted equipment at various locations throughout Montana, including the initial site location.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the No-Action alternative to be appropriate because DePatco has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the No-Action alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #5147-00.

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

| | | Major | Moderate | Minor | None | Unknown | Comments Included |
|---|---|---|---|---|---|---|---|
| A | Terrestrial and Aquatic Life and Habitats | | | x | | | Yes |
| B | Water Quality, Quantity, and Distribution | | | x | | | Yes |
| C | Geology and Soil Quality, Stability and Moisture | | | x | | | Yes |
| D | Vegetation Cover, Quantity, and Quality | | | x | | | Yes |
| E | Aesthetics | | | x | | | Yes |
| F | Air Quality | | | x | | | Yes |
| G | Unique Endangered, Fragile, or Limited Environmental Resources | | | x | | | Yes |
| H | Demands on Environmental Resource of Water, Air and Energy | | | x | | | Yes |
| I | Historical and Archaeological Sites | | | | x | | Yes |
| J | Cumulative and Secondary Impacts | | | x | | | Yes |

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

The permitting action would be expected to have minor effect terrestrial and aquatic life and habitats, as the proposed initial location is within an existing industrial site. The air emissions would likely only have minor effects on terrestrial and aquatic life because facility emission would be well dispersed in the area of the operation (see Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water would be required for dust suppression on the aggregate processing equipment and surrounding facility areas, including haul roads. This water use would be expected to only cause minor, if any, impacts to water resources because the facility is small and only a small volume of water would be required to be used. In addition, the facility would emit air pollutants and corresponding deposition of pollutants would occur, as described in Section 7.F. The Department determined that due to dispersion characteristics of pollutants and conditions that would be placed in MAQP #5147-00, any impacts from deposition of pollutants on water quality, quantity, and distribution expected would be minor.

C. Geology and Soil Quality, Stability and Moisture

Only minor impacts from deposition of air pollutants on soils would likely result (as described in Section 7.F) and only minor amounts of water would be used for pollution control and only as necessary, in controlling particulate emissions. Thus, only minimal water runoff would likely occur. Since only minor amount of pollution would be expected and corresponding emission would be widely dispersed before settling upon the surrounding soils and vegetation (Section 7.D), impacts would be minor. Therefore, any effects upon geology and soil quality, stability and moisture from air pollutant emission from equipment operations would likely minor and short-lived.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would be expected to occur with respect to vegetative cover, quality and quantity because the facility would operate in an area where vegetation has been previously disturbed. The facility would likely be relatively minor source of emission and pollutants widely dispersed (Section 7.F) during operations. Deposition on vegetation from the proposed project would expect to minor. Corresponding vegetative impact would likely minor due to limited water usage (Section 7.F) and minimal associate soil disturbance from the application of water and water runoff (Section 7.B).

E. Aesthetics

The permitted equipment would be initially located in a property of 9.3 acres. Activity within the facility would create noise while operating at the proposed site. The application state the nearest home is 0.25 mile from the initial proposed project site. Visual and noise impacts would be minor and short-lived.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would be relatively small and operate on an intermittent and temporary basis. MAQP#5147-00 includes conditions requiring reasonable precautions to minimize particulate emissions and to limit the facility's productions capacity. These limitations to reduce the potential to emit to below the major source threshold level of 100 tons per year (tpy) for any pollutant. Pollutant deposition form the facility would expect to be minimal because the pollutants emitted are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts form operating the crushing, screening and hot drum mix asphalt facility in the area would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department contacted the Natural Resource Information System-Montana Natural Heritage Program in an effort to assess any potential impacts to any unique endangered, fragile or limited environmental requires in the initial proposed area of operation. The three species of concern: Great Blue Heron, Bald Eagle and Western Pearlshell. The area considered is defined by the section, township and range of the proposed site, with an additional one mile buffer. The Department determined that no impact to unique endangered, fragile or limited environmental resources would be expected form this permit action as the initial proposed site is within an existing industrial site.

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

Due to the relatively small size of the project, only small demand on environmental resources would likely be required for proper operation. Only small quantities of water are required for dust suppression of particulate emission being generated at the site. In addition, impacts to air resources would be expected to be minor because the source would be considered a minor industrial source of emissions, with intermittent and seasonal operations and air pollutants generated by the facility would be widely dispersed as described in Section 7.F. Energy requirements would also be small, as the diesel engines would use a small amount of fuel. Impacts of water, air and energy resources would likely be minor.

I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society State Prevention Office (SHPO) in an effort to identity any historical and/or archaeological sites that may be present in the proposed area of construction and operation. According to SHPO records, there has been one previously recorded historic site within the designated search locale. Site 24MA0491 is the historic O'Dell Irrigation Ditch. The absence of cultural properties in the area does not mean that they do not exist, but rather may reflect the absence of any previous cultural resource inventory in the area, as SHPO records indicate none.

State Historical Preservation Office maintains the position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are to be altered and are over fifty years old, they would recommend that they be recorded and a determination of their eligibility be made. As long as there would be no disturbance or alternation to structures over fifty years of age, SHPO states there is a low likelihood cultural properties will be impacted.

J. Cumulative and Secondary Impacts

The operation of the proposed project would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environmental because the facility would generate air emissions. Noise would be generated from the site. Emissions and noise would cause minimal disturbance as the facility would be expected to operate in areas designated and used for such operations on a temporary and seasonal basis. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP#5147-00. Overall, any cumulative and/secondary impacts to the physical and biological aspects of the human environment would be minor.

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

| | | Major | Moderate | Minor | None | Unknown | Comments Included |
|---|---|---|---|---|---|---|---|
| A | Social Structures and Mores | | | x | | | Yes |
| B | Cultural Uniqueness and Diversity | | | x | | | Yes |
| C | Local and State Tax Base and Tax Revenue | | | x | | | Yes |
| D | Agricultural or Industrial Production | | | x | | | Yes |
| E | Human Health | | | x | | | Yes |
| F | Access to and Quality of Recreational and Wilderness Activities | | | | x | | Yes |
| G | Quantity and Distribution of Employment | | | x | | | Yes |
| H | Distribution of Population | | | | x | | Yes |
| I | Demands for Government Services | | | x | | | Yes |
| J | Industrial and Commercial Activity | | | x | | | Yes |
| K | Locally Adopted Environmental Plans and Goals | | | x | | | Yes |
| L | Cumulative and Secondary Impacts | | | x | | | Yes |

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

A. Social Structures and Mores

The operation of the proposed project would be expected to cause minor disruption to the social structures and mores in the area because the source would be a minor industrial source in a relatively remote location. The facility would only have intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP#5147-00. Therefore, the existing social structures and mores would not be affected as a result of the permitting action.

B. Cultural Uniqueness and Diversity

The impact to cultural uniqueness and diversity of these areas would be minor from the proposed equipment because the site will be located in an area that is an existing industrial site owned by DePatco, Inc. (DePatco) where access is secure and controlled. Additionally, the facility would be considered a portable source with seasonal and intermittent operations. Therefore, the Department determined that there would be minor effects to cultural uniqueness and diversity.

C. Local and State Tax Base and Tax Revenue

The proposed project would have little, if any impact on the local and state tax base and tax revenue. The facility would be a minor industrial source of emissions and would have seasonal intermittent operations. Thus, only minor impacts to local and state tax base and

revenue would be expected from the employees and facility production. The impacts to local tax base and revenue would be expected to be minor as the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The operation of the proposed project would have only a minor impact on local industrial production since the facility would be a minor source of air emission (by industrial standards). There would be minimal air pollution deposition on the surrounding land (as described in Section 7.F), only minor and temporary effects on the surrounding vegetation would occur. In addition, the facility operations would be temporary in nature and would be permitted with operational conditions that would minimize impacts upon surrounding vegetation, as described in Section 7.D.

E. Human Health

MAQP#5147-00 would incorporate conditions to ensure the crushing/screening/asphalt production facility would operate in compliance will all applicable air quality rules and standards. These rules and standards are designed to be protective in regards to human health. As described in Section 7.F, the air emissions from the facility would be minimized by the use of water spray and other conditions established in MAQP#5147-00. Therefore, only minor impacts would be expected upon human health from proposed crushing/screening/asphalt production facility.

F. Access to and Quality of Recreational and Wilderness Activities

Based on the information received from DePatco, no recreational activities or wilderness areas are near the proposed project site. No access to the public is available on the land privately owned by DePatco where the proposed project would be located. Therefore, no impacts to the access to and quality of the recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The portable operation would only require a few employees to operate and would have seasonal and intermittent operations. The operation would be considered a portable source and would not be expected to have long-term impacts upon the quantity and distribution of employment in any given area of operation. The application states the three employees would be employed as a result of the proposed project. Therefore, minor effects upon the quantity and distribution of employment in these areas would be expected.

H. Distribution of Population

The operation is a portable industrial facility that would only require a limited number of employees. No individuals would be expected to permanently relocate to this area as a result of operating the crushing/screening facility. Therefore, the proposed project would not likely impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

There would be increased heavy truck traffic from the asphalt trucks carrying the asphalt to the paving site and then returning to the plant site. Government services would be required for acquiring the appropriate permits from governmental agencies. Demand for government services would be minor.

J. Industrial and Commercial Activity

The operation of the new equipment would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature. Furthermore, the industrial activity associated with this plant will occur within an existing industrial site. Therefore, only limited additional industrial or commercial activity would be expected as a result of the proposed operation.

K. Locally Adopted Environmental Plans and Goals

DePatco would be allowed, by MAQP # 5147-00, to operate in areas designated by United States Environmental Protection Agency as attainment or unclassified for ambient air quality. The Department is not aware of any locally adopted environment plans and goals within the initial project area. Any impacts to any locally adopted environmental plans form the project would be expected to be minor and temporary the proposed equipment would be portable source with only minor emissions.

L. Cumulative and Secondary Impacts

The operation of the facility would cause only minor cumulative and secondary impacts to the social economic aspects of the human environment in the immediate area of operation because the source would be a portable and temporary source. Minor economic impacts to the local economy would be expected from operating the facility because the source is relatively small and temporary. This facility may be operated in conjunction with other equipment owned be DePatco, but any cumulative impacts upon the social and economic aspects of the human environment would likely be minor and short-lived. Thus, only minor and temporary cumulative effects would be expected to the local economy.

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

The current permitting action is for the construction and operation of crusher, screen and hot drum mix asphalt facility. MAQP #5147-00 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 Quality Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Loni Patterson
Date: 9/24/2015