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February 16, 2012

Tracy Hodik  
Century Construction Company, Inc.  
P.O. Box 739  
Lewistown, MT 59457

Dear Ms. Hodik:

Montana Air Quality Permit #2839-04 is deemed final as of February 16, 2012, by the Department of Environmental Quality (Department). This permit is for the operation of an asphalt batch plant. All conditions of the Department's decision remain the same. Enclosed is a copy of your permit with the final date attached.

For the Department,

Vickie Walsh  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-9741

Craig Henrikson, PE  
Environmental Engineer  
Air Resources Management Bureau  
(406)-444-6711

VW:CH  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #2839-04

Century Construction Company, Inc.  
P.O. Box 739  
Lewistown, MT 59457

February 16, 2012



## MONTANA AIR QUALITY PERMIT

Issued To:	Century Construction Company, Inc. 39 Industrial Way P.O. Box 579 Lewiston, MT 59457	Permit #2839-04 Administrative Amendment Request Received: 01/06/12 Department's Decision on AA: 01/31/2012 Permit Final: 02/16/2012 AFS #: 777-2839
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A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Century Construction Company, Inc. (Century) pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM), 17.8.740, *et seq.* as amended, for the following:

### Section I: Permitted Facilities

#### A. Plant Location

Century operates a portable drum mix asphalt plant with venturi scrubber utilizing two diesel generators for power. The original location of the permitted facility was at the SW¼ of Section 23, Township 32 North, Range 2 West, in Toole County, Montana.

MAQP #2839-04 applies while operating in any location in the state of Montana, except within those areas having a Department of Environmental Quality (Department) approved permitting program, areas considered tribal lands, or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County.* An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas. A list of the permitted equipment can be found in Section I.A. of the permit analysis.

#### B. Current Permit Action

On January 6, 2012, the Department received an application for administrative amendment under the Department's S source project, indicating Century's participation in the program as described within Section I.C of the permit analysis. Century's MAQP was amended to incorporate limits and conditions to maintain permit allowable emissions below 80 tons per year (tpy). In addition, the permit updates the rule references, permit format, and the emissions inventory. **MAQP #2839-04** replaces MAQP #2839-03.

### Section II: Limitations and Conditions

#### A. Emission Limitations

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf) (ARM 17.8.749, ARM 17.8.752 and 40 CFR 60, Subpart I).
2. Century shall not cause or authorize emissions to be discharged into the atmosphere from the asphalt plant stack any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).

3. Century shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems any visible emissions that exhibit opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and ARM 17.8.752).
4. Century shall not cause or authorize the use of any street, road, or parking area without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
5. Century shall treat all unpaved portions of the haul roads, access roads, parking lots and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with reasonable precautions limitation in Section II.A.4 (ARM 17.8.749 and ARM 17.8.752).
6. Century shall install and maintain a device to measure the pressure drop (magnehelic gauge, manometer, etc.) on the control device (venturi scrubber). Pressure drop shall be measured in inches of water. Century must install and maintain temperature indicators at the control device inlet and outlet (ARM 17.8.749 and ARM 17.8.752).
7. Once a stack test is performed, Century shall limit the asphalt production rate to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
8. Asphalt plant production shall not exceed 847,500 tons during any rolling 12-month time period (ARM 17.8.749).
9. Century shall not operate more than two diesel-powered engines/generators at any given time and the combined maximum rated capacity shall not exceed 642 hp (ARM 17.8.749).
10. The hours of operation of the asphalt plant and associated equipment (including each of the diesel-powered generators) shall not exceed 5,650 hours during any rolling 12-month time period (ARM 17.8.1204).
11. If the permitted equipment is used in conjunction with any other equipment owned or operated by Century, 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 calculation used to establish production levels shall be approved by the Department (ARM 17.8.749).
12. Century shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR Part 60, Subpart I, *Standards of Performance for Hot Mix Asphalt Facilities* (ARM 17.8.340 and 40 CFR 60, Subpart I).
13. Century shall comply with all applicable standards and limitations, and the reporting, recordkeeping, testing, 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 III; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. An EPA Methods 1 through 5 and 9 source test must be performed on the asphalt plant on an every 4 year basis after the initial source test or according to another test schedule as may be approved by the Department to demonstrate compliance with the conditions in Sections II.A.1, II.A.2 and II.A.3 (ARM 17.8.106 and ARM 17.8.749).
2. Pressure drop on the control device and temperatures must be recorded during the last source test and reported as part of the test results specified in Section II.A.6 (ARM 17.8.749).
3. Since asphalt production will be limited to the average production rate during the last source test demonstrating compliance, it is suggested the source testing be performed at the highest production rate practical (ARM 17.8.749).
4. Century may retest at any time in order to achieve a higher allowable production rate (ARM 17.8.749).
5. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
6. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this asphalt plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form of Change of Location must be published in a newspaper of general circulation in the area to where the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).
2. Century shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. All records compiled in accordance with this permit shall be maintained by Century as a permanent business record for at least 5 years following the date of measurement, shall be available at the plant site for inspection by the Department, and shall be submitted to the Department upon request (ARM 17.8.749).
3. Century shall supply the Department with annual production information for all emission points, as required by the Department in the annual emissions inventory request. The request will include, but is not limited to, all sources of emissions identified in Section I of the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request.

Information shall be in units as required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Century 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*, a change in the control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emissions unit. This notice must be submitted to the Department, in writing, 10 days prior to start up 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 (1)(d) (ARM 17.8.745).
5. Century shall document, by month, the asphalt production of the facility. By the 25<sup>th</sup> day of each month, Century shall total the asphalt production of the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Century shall document, by month, the hours of operation of the asphalt plant and each associated generator engine. By the 25<sup>th</sup> day of each month, Century shall total the hours of operation of the asphalt plant for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. Century shall annually certify that its emissions are less than those that would require the facility 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 and the annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

### Section III: General Conditions

- A. Inspection – Century 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 (CEMS, 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 Century fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Century of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756).

- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Air Quality Operation Fees– Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Century may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Century 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  
Century Construction Company, Inc.  
Permit #2839-04

I. Introduction/Process Description

A. Permitted Equipment

- 1994 Al Mix drum mix asphalt plant (150 tons per hour (TPH));
- 1994 Al Mix venturi scrubber 22,000 cubic feet per minute (cfm) high-pressure with automatic damper control;
- 1996 Caterpillar diesel generator (192 horsepower (hp));
- 1985 Detroit diesel generator (450 hp); and
- Associated equipment.

B. Source Description

This asphalt plant and associated equipment produces asphalt for use in construction, repair, and maintenance of roads and highways. The asphalt production process begins with virgin aggregate material loaded into three 8' X 10' bins. The material is fed onto a 24" conveyor, weighed, and then transferred to a slinger conveyor via a receiving hopper. As the aggregate is fed into the drum dryer from the slinger conveyor, hot asphalt oil that is stored in an electrically heated 15,000-gallon storage tank is added and mixed with the aggregate. After the oil and aggregate are completely mixed, a drag slat conveyor moves the asphalt to a 40-ton asphalt storage silo. Finally, the finished product is dumped into trucks to be transported to market.

C. Permit History

On August 11, 1994, Century Construction Company, Inc. (Century) submitted a permit application to operate a portable 1994 Al Mix drum mix asphalt plant (150 TPH) and associated equipment. Emissions from the drum mixer are controlled by a 1994 Al Mix venturi scrubber. **Permit #2839-00** was issued on November 4, 1994.

In 1999, EPA informed the Department of Environmental Quality (Department) that any condition in an air quality preconstruction permit would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding preconstruction permits that they could request deletion of those conditions based on ARM 17.8.717 and 17.8.315. The removal of either of these conditions did not relieve the facility from complying with the rule upon which the permit condition was based; removal only ensured that enforcement of the condition remained solely with the Department. The current permit action removed the condition, based on ARM 17.8.717, from Century's permit. **Permit #2839-01** replaced Permit #2839-00.

On December 16, 2002, Century submitted a complete air quality permit application to the Department to add a portable 100 kilowatt (kW) diesel generator. This new equipment provided additional power for the asphalt plant, conveyors, and associated equipment. Permit #2839-02 was updated to reflect current permit language and rule references used by the Department. **Permit #2839-02** replaced Permit #2839-01.

On October 15, 2008, the Department received a complete application from Century requesting Permit #2839-02 be modified to include the hp rating of the diesel-powered engine/generators. This permit action changed the engine ratings of 100 and 300 kW to

192 hp and 450 hp, respectively. The emission inventory was updated to reflect these changes. This permit action also updated the permit to reflect permit language and rule references used by the Department. **Permit #2839-03** replaces Permit #2839-02.

D. Current Permit Action

On January 6, 2012, the Department received an application for administrative amendment under the Department's S source project. The Department undertook this project in the last quarter of 2011 to reduce the number of sources subject to the Compliance Monitoring Strategy (CMS) program; thereby reducing the Department's burden associated with maintaining the CMS program. Sources eligible for participation in this program were those with MAQP's containing federally enforceable permit limitations to remain a minor source of emissions with respect to Title V and that had permit allowable emissions at or above 80 tpy. These sources were provided the option to amend their permits to allow incorporation of permit limits to maintain allowable emissions below 80 tpy. The current permit action amends Century's MAQP to incorporate these limits, additionally this action updates rule references, permit format, and the emissions inventory. **MAQP #2839-04** replaces MAQP #2839-03.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

XXX 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:

The following ambient air quality standards or requirements may apply, 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 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
7. ARM 17.8.221 Ambient Air Quality Standard for Visibility
8. ARM 17.8.222 Ambient Air Quality Standard for Lead
9. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

Century 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 exhibits an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this section, Century 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 section requires that no person shall cause, allow, or permit 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, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
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 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.

Based on the information submitted by Century, the portable asphalt plant and associated equipment are subject to NSPS (40 CFR Part 60), as follows:

- a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
- b. 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities. Owners and operators of hot mix asphalt facilities that commence construction or modification after June 11, 1973, are subject to the requirements of this subpart. Based on the information submitted by Century, the portable asphalt plant is currently subject to provisions of this subpart as the plant meets the definition of an affected facility under 40 CFR Part 60, Subpart I.
- c. 40 CFR 60, Subpart III - 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 information provided by Century, the engines associated used in conjunction with MAQP #2526-03 are potentially subject to 40 CFR 60, Subpart III, as the secondary engine must be Tier 3 certified and therefore likely manufactured after April 1, 2006. Applicability of the primary diesel engine generator is dependent upon the engine utilized.

7. 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. Century is considered an 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. Based on the information submitted by Century, the RICE equipment to be used under MAQP #2526-03 is potentially subject to this subpart as the engines powering the generators are reciprocating internal combustion engines operating at an area source of HAP emissions.
- 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. However, in this case, the Department waived the permit application fee because the Department requested that the facility update their equipment specifications of previously permitted equipment (that changed overall facility emissions) and modify their permit.
  2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated amount of air pollutants emitted during the previous calendar year.  
  
An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit, issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which prorate the required fee amount.
- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
  2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Century has the potential to emit more than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), carbon monoxide (CO), and sulfur oxides (SO<sub>x</sub>) from their asphalt plant; therefore, a permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Century 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 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition

providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. 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).
14. 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.
15. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of intent to transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications-- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

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

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

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

- a. PTE > 100 tons/year of any pollutant;
  - b. PTE >10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule, or
  - c. PTE > 70 tons/year of PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2839-04 for Century, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for all criteria pollutants.
- b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 tons/year of all HAPs.
- c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
- d. This source is subject to a current NSPS (40 CFR 60, Subpart I).
- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Century will be a minor source of emissions as defined under Title V because Century requested to take federally enforceable limitations to keep them out of the Title V Operating Permit Program. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Century will be required to obtain a Title V Operating Permit.

- h. 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 by ARM 17.8.1204(3) 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. Best Available Control Technology

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

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

### IV. Emissions Inventory

Emission Source	Emissions Tons/Year [PTE]						
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	NOx	SO <sub>2</sub>	VOC
Drum Mix Asphalt Dryer	13.49	10.53	10.53	55.09	23.31	4.66	13.56
Cold Aggregate Storage Piles	6.33	2.99	0.45	--	--	--	--
Aggregate Screening & Conveying	1.05	0.35	0.03	--	--	--	--
Asphalt Storage & Handling	0.25	0.25	0.25	0.50	--	--	5.16
Asphalt Load-Out	0.22	0.22	0.22	0.57	--	--	1.76
Diesel Generator Up to 192 hp	1.19	1.19	1.19	3.62	16.81	1.11	1.36
Diesel Generator up to 450 hp	2.80	2.80	2.80	8.49	39.41	2.61	3.20
Unpaved Roadways	10.98	3.03	0.30	--	--	--	--
<b>TOTAL EMISSIONS &gt;</b>	<b>36.31</b>	<b>21.37</b>	<b>15.78</b>	<b>68.27</b>	<b>79.53</b>	<b>8.38</b>	<b>25.05</b>

a. Emission Inventory reflects enforceable limits on hours of operation and production output to keep allowable emissions below the Title V threshold as well as below 80 tpy level.

CO, carbon monoxide  
 NO<sub>x</sub>, oxides of nitrogen  
 PM, particulate matter  
 PM<sub>10</sub>, particulate matter with an aerodynamic diameter of 10 microns or less  
 PM<sub>2.5</sub>, particulate matter with an aerodynamic diameter of 2.5 microns or less  
 SO<sub>2</sub>, oxides of sulfur  
 TPY, tons per year  
 VOC, volatile organic compounds

#### 1994 AI Mix Drum Mix Asphalt Plant with Venturi Scrubber [SCC 3-05-002-55]

Production Rate: 150 Tons/Hour (Maximum) 1314000 tons/year (Maximum)

847500 tons/year (Restricted Maximum)

Operating Schedule: 5650 Hours/Year (Restricted Maximum)

Power Plant: 450 hp Diesel Generator  
 80 hp Diesel Generator

Note: Asphalt Plant May Operate On Utility/commercial Power

Air Flow[Volume] 13,924.00 dscfm [corrected] See previous permit EI calcs for airflow calculation.

#### Particulate Emissions: Emission Factor Determination

PM Emissions (controlled):

Emission Rate 0.04 gr/dscf [AP-42 Table 11.1-3 3/04]  
 Calculations (0.04 gr/dscf) \* (13924 dscfm) \* (60 min/hr) \* (0.000143 lb/gr) = 4.77 lbs/hr  
 (4.77 lbs/hr) \* (5650 hrs/yr) \* (0.0005 tons/lb) = 13.49 TPY

PM<sub>10</sub> Emissions (controlled):

Emission Factor	0.023 lbs/ton Processed	[AP-42 Table 11.1-3, 3/04] Used PM10 for Fabric Filter	
Calculations	(0.023 lbs/ton) * (150 tons/hour) =		3.45 lbs/hr
	(3.45 lbs/hr) * (5650 hours/year) * (0.0005 tons/lbs) =		9.75 TPY
			10.53 Adjusted to PM <sub>2.5</sub>

Filterable PM (controlled)

Emission Factor	0.026 lbs/ton Processed	[AP-42 Table 11.1-3, 3/04]	
Calculations	(0.026 lbs/ton) * (150 tons/hour) =		3.90 lbs/hr
	(3.90 lbs/hr) * (5650 hours/year) * (0.0005 tons/lbs) =		11.02 TPY

Condensable PM (controlled)

Emission Factor	0.0194 lbs/ton Processed	[AP-42 Table 11.1-3, 3/04]	
Calculations	(0.0194 lbs/ton) * (150 tons/hour) =		2.91 lbs/hr
	(2.91 lbs/hr) * (5650 hours/year) * (0.0005 tons/lbs) =		8.22 TPY

PM<sub>2.5</sub> (controlled) 21% of Filterable PM plus Condensable from Fabric Filter Table 11.1-4 even though this is a scrubber.

Emission Factor	0.02486 lbs/ton Processed	[AP-42 Table 11.1-3, 3/04]	
Calculations	(0.02486 lbs/ton) * (150 tons/hour) =		3.73 lbs/hr
	(3.73 lbs/hr) * (5650 hours/year) * (0.0005 tons/lbs) =		10.53 TPY

**CO Emissions:**

Emission Factor	0.13 lbs/ton processed	[AP-42 Table 11.1-7, 3/04; EF based on Fuel Oil]	
Calculations	(0.13 lbs/ton) * (150 tons/hr) =		19.50 lbs/hr
	(19.50 lbs/hr) * (5650 hrs/yr) * (0.0005 tons/lb) =		55.09 TPY

**NO<sub>x</sub> Emissions:**

Emission Factor	0.055 lbs/ton processed	[AP-42 Table 11.1-7, 3/04; EF based on Fuel Oil.]	
Calculations	(0.055 lbs/ton) * (150 tons/hr) =		8.25 lbs/hr
	(8.25 lbs/hr) * (5650 hrs/yr) * (0.0005 tons/lb) =		23.31 TPY

**SO<sub>2</sub> Emissions:**

Emission Factor	0.0110 lbs/ton processed	[AP-42 Table 11.1-7, 3/04; EF based on Fuel Oil]	
Calculations	(0.011 lbs/ton) * (150 tons/hr) =		1.65 lbs/hr
	(1.65 lbs/hr) * (5650 hrs/yr) * (0.0005 tons/lb) =		4.66 TPY

**VOC Emissions:**

Emission Factor	0.032 lbs/ton processed	[AP-42 Table 11.1-8, 3/04; EF based on Fuel Oil]	
Calculations	$(0.032 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$		4.80 lbs/hr
	$(4.80 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		13.56 TPY

**Cold Aggregate Storage Piles**

Process Rate:	150 tons/hour
Number of Piles:	3 pile Transfers Assumed
Operating Hours:	5650 hour/year

**Particulate Emissions:**

Emission Factor	$EF = k (0.0032) * (U/5)^{1.3} / (M / 2)^{1.4}$	[AP-42 13.2.4, 11/06]
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where:	EF, Emission Factor = lbs Emitted / ton Processed	
	k, Dimensionless Particle Size Multiplier PM =	0.74 [AP-42 13.2.4, 11/06]
	k, Dimensionless Particle Size Multiplier PM <sub>10</sub> =	0.35 [AP-42 13.2.4, 11/06]
	k, Dimensionless Particle Size Multiplier PM <sub>2.5</sub> =	0.053 [AP-42 13.2.4, 11/06]
	U, Mean Wind Speed (mph)	9.3 [Estimate]
	=	
	M, Material Moisture Content (%) =	2.1 [AP-42 13.2.4-1, 11/06]

**PM Emissions:**

Emission Factor	$EF = 0.74 * (0.0032) * (9.3/5)^{1.3} / (2.1 / 2)^{1.4} =$	0.0050 lbs/ton
Calculations	$(0.0050 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (3 \text{ pile}) =$	2.24 lbs/hr
	$(2.24 \text{ lbs/hr}) * (5650 \text{ hrs/year}) * (0.0005 \text{ lbs/ton}) =$	6.33 TPY

**PM<sub>10</sub> Emissions:**

Emission Factor	$EF = 0.35 * (0.0032) * (9.3/5)^{1.3} / (2.1 / 2)^{1.4} =$	0.0024 lbs/ton
Calculations	$(0.0024 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (3 \text{ pile}) =$	1.06 lbs/hr
	$(1.06 \text{ lbs/hr}) * (5650 \text{ hrs/year}) * (0.0005 \text{ lbs/ton}) =$	2.99 TPY

**PM<sub>2.5</sub> Emissions:**

Emission Factor	$EF = 0.053 * (0.0032) * (9.3/5)^{1.3} / (2.1 / 2)^{1.4} =$	0.0004 lbs/ton
Calculations	$(0.0004 \text{ lbs/ton}) * (150 \text{ tons/hr}) * (3 \text{ pile}) =$	0.16 lbs/hr
	$(0.16 \text{ lbs/hr}) * (5650 \text{ hrs/year}) * (0.0005 \text{ lbs/ton}) =$	0.45 TPY

**Aggregate Screening [SCC 3-05-020-02]**

<b>Process Rate:</b>	150 tons/hour
<b>Operating Hours:</b>	5650 hours/year

**PM Emissions (controlled):**

**Emission Factor** 0.0022 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.0022 lbs/ton) \* (150 tons/hr) = 0.33 lbs/hr  
(0.33 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.93225 TPY

**PM<sub>10</sub> Emissions (controlled):**

**Emission Factor** 0.00074 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.00074 lbs/ton) \* (150 tons/hr) = 0.111 lbs/hr  
= (0.11 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.31358 TPY

**PM<sub>2.5</sub> Emissions (controlled):**

**Emission Factor** 0.00005 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.00005 lbs/ton) \* (150 tons/hr) = 0.0075 lbs/hr  
= (0.01 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.02119 TPY

**Aggregate Conveying [SCC 3-05-020-06]**

Process Rate: 150 tons/hour  
Number of Transfers: 2 Conveyor Transfers [Based on process flow diagram]  
Operating Hours: 5650 hours/year

**PM Emissions (controlled):**

**Emission Factor** 0.00014 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.00014 lbs/ton) \* (150 tons/hr) \* (2 Transfers) = 0.04 lbs/hr  
(0.04 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.12 TPY

**PM<sub>10</sub> Emissions (controlled):**

**Emission Factor** 0.00005 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.000046 lbs/ton) \* (150 tons/hr) \* (2 Transfers) = 0.01 lbs/hr  
(0.01 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.04 TPY

**PM<sub>2.5</sub> Emissions (controlled):**

**Emission Factor** 0.00001 lbs/ton transferred [AP-42 Table 11.19.2-2, 8/04]  
**Calculations** (0.000013 lbs/ton) \* (150 tons/hr) \* (2 Transfers) = 0.00 lbs/hr  
(0.00 lbs/hr) \* (5650 hrs/year) \* (0.0005 lbs/ton) = 0.01 TPY

**Asphalt Storage & Silo Filling [SCC 3-05-002-13]**

Process Rate: 150 tons/hour  
Operating Schedule: 5650 tons/year

**Particulate Emissions:**

Emission Factor  $EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$  [AP-42 Table 11.1-14, 3/04]

where: EF, Emission Factor = lbs emitted / ton HMA produced  
V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]  
T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]

**PM Emissions:**

Emission Factor  $EF = 0.000332 + 0.00105 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$  0.00059 lbs/ton HMA

Calculations  $(0.00059 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$  0.09 lbs/hr

$=$

$(0.09 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$  0.25 TPY

**PM<sub>10</sub> Emissions:**

Emission Factor  $EF = 0.000332 + 0.00105 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$  0.00059 lbs/ton HMA

Calculations  $(0.00059 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$  0.09 lbs/hr

$=$

$(0.09 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$  0.25 TPY

**PM<sub>2.5</sub> Emissions:**

Emission Factor  $EF = 0.000332 + 0.00105 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$  0.00059 lbs/ton HMA

Calculations  $(0.00059 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$  0.09 lbs/hr

$=$

$(0.09 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$  0.25 TPY

**CO Emissions:**

Emission Factor  $EF = 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$  [AP-42 Table 11.1-14, 3/04]

where: EF, Emission Factor = lbs Emitted / ton Processed  
V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]  
T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]

Emission Factor  $EF = 0.00488 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$  0.0012 lbs/ton HMA

Calculations  $(0.0012 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$  0.18 lbs/hr

$(0.18 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$  0.50 TPY

**VOC Emissions:**

Emission Factor  $EF = 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$  [AP-42 Table 11.1-14, 3/04]

where: EF, Emission Factor = lbs Emitted / ton Processed  
V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]  
T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]

Emission Factor	$EF = 0.0504 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.0122	lbs/ton HMA
Calculations	$(0.0122 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	1.83	lbs/hr
	$(1.83 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	5.16	TPY

**Asphalt Plant Load-Out [SCC 3-05-002-14]**

Process Rate: 150 tons/hour  
 Operating Schedule: 5650 hours/year

**Particulate Emissions:**

Emission Factor	$EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$	[AP-42 Table 11.1-14, 3/04]
where:	EF, Emission Factor = lbs emitted / ton HMA produced	
	V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]	
	T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]	

**PM Emissions:**

Emission Factor	$EF = 0.000181 + 0.00141 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.00052	lbs/ton HMA
Calculations	$(0.00052 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.08	lbs/hr
	$(0.08 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	0.22	TPY

**PM<sub>10</sub> Emissions:**

Emission Factor	$EF = 0.000181 + 0.00141 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.00052	lbs/ton HMA
Calculations	$(0.00052 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.08	lbs/hr
	$(0.08 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	0.22	TPY

**PM<sub>2.5</sub> Emissions:**

Emission Factor	$EF = 0.000181 + 0.00141 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.00052	lbs/ton HMA
Calculations	$(0.00052 \text{ lbs/ton}) * (150 \text{ tons/hr}) =$	0.08	lbs/hr
	$(0.08 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	0.22	TPY

**CO Emissions:**

Emission Factor	$EF = 0.00558(-V)e^{((0.0251)(T+460)-20.43)}$	[AP-42 Table 11.1-14, 3/04]
where:	EF, Emission Factor = lbs Emitted / ton Processed	
	V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]	
	T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]	

**CO Emissions:**

Emission Factor	$EF = 0.00558 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.00135	lbs/ton HMA
Calculations	$(0.00135 \text{ lbs/ton}) * (150 \text{ tons/hr})$	0.20	lbs/hr
	$=$		
	$(0.20 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	0.57	TPY

**VOC Emissions:**

Emission Factor	$EF = 0.0172(-V)e^{((0.0251)(T+460)-20.43)}$	[AP-42 Table 11.1-14, 3/04]
where:	EF, Emission Factor = lbs Emitted / ton Processed	
	V, Asphalt Volatility = -0.05 [Default value AP-42 Table 11.1-14, 3/04]	
	T, HMA temperature = 325°F [Default value AP-42 Table 11.1-14, 3/04]	

VOC Emissions:

Emission Factor	$EF = 0.0172 * (0.05) * e^{((0.0251) * (325 + 460) - 20.43)} =$	0.00416	lbs/ton HMA produced
Calculations	$(0.00416 \text{ lbs/ton}) * (150 \text{ tons/hr})$	0.62	lbs/hr
	$=$		
	$(0.62 \text{ lbs/hr}) * (5650 \text{ tons/year}) * (0.0005 \text{ lbs/ton}) =$	1.76	TPY

**Diesel Engines:**

**Primary Diesel Engine Generator Up to 192 hp**

Engine Rating:	192	hp
Hours of Operation:	5650	hours/year

**Particulate Emissions:**

PM Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96]
Calculations	$(0.0022 \text{ lb/hp-hr}) * (192 \text{ hp}) =$	0.42 lbs/hr
	$(0.42 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	1.19 TPY

PM<sub>10</sub> Emissions:

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96]
Calculations	$(0.0022 \text{ lb/hp-hr}) * (192 \text{ hp}) =$	0.42 lbs/hr
	$(0.42 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	1.19 TPY

PM<sub>2.5</sub> Emissions

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96]
Calculations	$(0.0022 \text{ lb/hp-hr}) * (192 \text{ hp}) =$	0.422 lbs/hr
	$(0.42 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	1.19 TPY

**CO**

**Emissions:**

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.00668 \text{ lb/hp-hr}) * (192 \text{ hp}) =$		1.28 lbs/hr
	$(1.28 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		3.62 TPY

**NOx****Emissions:**

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.031 \text{ lb/hp-hr}) * (192 \text{ hp}) =$		5.95 lbs/hr
	$(5.95 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		16.81 TPY

**SO<sub>2</sub>****Emissions:**

Emission Factor	0.00205 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0021 \text{ lb/hp-hr}) * (192 \text{ hp}) =$		0.39 lbs/hr
	$(0.39 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		1.11 TPY

**VOC****Emissions:**

Emission Factor	0.002514 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0025 \text{ lb/hp-hr}) * (192 \text{ hp}) =$		0.48 lbs/hr
	$(0.48 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		1.36 TPY

**Diesel Engine Generator: Up to 450 hp**

Engine Rating:	450 hp
Hours of Operation:	5650 hours/year

**Particulate Emissions:**

PM Emissions:			
Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0022 \text{ lb/hp-hr}) * (450 \text{ hp}) =$		0.99 lbs/hr
	$(0.99 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		2.80 TPY

**PM<sub>10</sub>****Emissions:**

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0022 \text{ lb/hp-hr}) * (450 \text{ hp}) =$		0.99 lbs/hr
	$(0.99 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$		2.80 TPY

**PM<sub>2.5</sub> Emissions:**

Emission Factor	0.0022 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
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Calculations	$(0.0022 \text{ lb/hp-hr}) * (450 \text{ hp}) =$	0.99	lbs/hr
	$(0.99 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	2.80	TPY

**CO**

**Emissions:**

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.00668 \text{ lb/hp-hr}) * (\text{lb/hp-hr [AP-42 3.3-1, 10/96 ] hp}) =$	3.01	lbs/hr
	$(3.01 \text{ lbs/hr}) * (\text{hrs/yr}) * (0.0005 \text{ tons/lb}) =$	8.49	TPY

**NOx**

**Emissions:**

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.031 \text{ lb/hp-hr}) * (\text{lb/hp-hr [AP-42 3.3-1, 10/96 ] hp}) =$	13.95	lbs/hr
	$(13.95 \text{ lbs/hr}) * (\text{hrs/yr}) * (0.0005 \text{ tons/lb}) =$	39.41	TPY
	=		

**SO<sub>2</sub>**

**Emissions:**

Emission Factor	0.00205 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0021 \text{ lb/hp-hr}) * (450 \text{ hp}) =$	0.92	lbs/hr
	$(0.92 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	2.61	TPY

**VOC**

**Emissions:**

Emission Factor	0.002514 lb/hp-hr	[AP-42 3.3-1, 10/96 ]	
Calculations	$(0.0025 \text{ lb/hp-hr}) * (450 \text{ hp}) =$	1.13	lbs/hr
	$(1.13 \text{ lbs/hr}) * (5650 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	3.20	TPY

**Unpaved Roadways (Haul Roads)**

Miles Travelled: 5 Miles/Day [Estimate]

Vehicle Weight: < 50 Tons

Emission Factor  $EF = k(s/12)^a * (W/3)^b$  [AP-42 13.2.2.2, 11/06]

where: EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)

k, Empirical Constant PM	=	4.9	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM <sub>10</sub>	=	1.5	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM <sub>2.5</sub>	=	0.15	[AP-42 Table 13.2.2-2, 11/06]
s, Surface Material Silt Content (%)	=	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons)	=	50	[ Provided Data]
a, Empirical Constant PM	=	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant PM <sub>10</sub> /PM <sub>2.5</sub>	=	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - PM <sub>2.5</sub>	=	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor Calculations  
 $EF = 4.9 * (7.1/12)^{0.7} * (50/3)^{0.45} = 12.04 \text{ lbs/VMT}$   
 $(12.04 \text{ lbs/VMT}) * (5 \text{ miles/day}) = 60.18 \text{ lbs/day}$   
 $(60.18 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 10.98 \text{ TPY}$

PM<sub>10</sub> Emissions:

Emission Factor Calculations  
 $EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45} = 3.32 \text{ lbs/VMT}$   
 $(3.32 \text{ lbs/VMT}) * (5 \text{ miles/day}) = 16.59 \text{ lbs/day}$   
 $(16.59 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 3.03 \text{ TPY}$

PM<sub>2.5</sub> Emissions:

Emission Factor Calculations  
 $EF = 0.15 * (7.1/12)^{0.9} * (50/3)^{0.45} = 0.33 \text{ lbs/VMT}$   
 $(0.33 \text{ lbs/VMT}) * (5 \text{ miles/day}) = 1.66 \text{ lbs/day}$   
 $(1.66 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 0.30 \text{ TPY}$

V. Existing Air Quality

Permit #2839-04 is issued for the operation of a portable hot mix asphalt plant to be originally located in the SW<sup>1</sup>/<sub>4</sub> of Section 23, Township 32 North, Range 2 West, in Toole County, Montana. Permit #2839-04 will cover the plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program. The locations in which the facility is permitted to operate has been designated unclassified/attainment with all ambient air quality standards and there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

MAQP #2839-04 covers operation of this portable drum mix asphalt plant while operating in areas within Montana that are classified as being in attainment with federal ambient air quality standards and areas not yet classified, excluding counties that have a Department-approved permitting program and areas that are tribal lands. This permit contains conditions and limitations that would protect air quality for the site and surrounding area, and that would limit the facility's emissions below the major source threshold. Based on the information provided, the amount of controlled emissions generated by this facility will not exceed any ambient air quality standard.

VII. Ambient Air Impact Analysis

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?

YES	NO	
	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)

IX. Environmental Assessment

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

*Analysis prepared by: Craig Henrikson*

*Date: January 17, 2012*